

Journal of Attention Disorders

<http://jad.sagepub.com/>

Maternal ADHD, Parenting, and Psychopathology Among Mothers of Adolescents With ADHD

Dara E. Babinski, William E. Pelham, Brooke S. G. Molina, Elizabeth M. Gnagy, Daniel A. Waschbusch, Brian T. Wymbs,
Margaret H. Sibley, Karen J. Derefinko and Aparajita B. Kuriyan

Journal of Attention Disorders published online 15 November 2012

DOI: 10.1177/1087054712461688

The online version of this article can be found at:

<http://jad.sagepub.com/content/early/2012/11/14/1087054712461688.citation>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Journal of Attention Disorders* can be found at:

Email Alerts: <http://jad.sagepub.com/cgi/alerts>

Subscriptions: <http://jad.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

>> [OnlineFirst Version of Record](#) - Nov 15, 2012

[What is This?](#)

Maternal ADHD, Parenting, and Psychopathology Among Mothers of Adolescents With ADHD

Journal of Attention Disorders
 XX(X) 1–11
 © 2012 SAGE Publications
 Reprints and permission:
sagepub.com/journalsPermissions.nav
 DOI: 10.1177/1087054712461688
<http://jad.sagepub.com>


Dara E. Babinski^{1,2}, William E. Pelham Jr.¹, Brooke S. G. Molina², Elizabeth M. Gnagy¹, Daniel A. Waschbusch¹, Brian T. Wymbs³, Margaret H. Sibley¹, Karen J. Derefinko¹, and Aparajita B. Kuriyan¹

Abstract

Objective: This study describes the parenting and psychopathology of mothers with ADHD of adolescents with ADHD (MCA), non-ADHD mothers of adolescents with ADHD (CA), and non-ADHD mothers of adolescents without ADHD (COMP). **Method:** Two sets of pairwise comparisons: (a) COMP versus CA and (b) CA versus MCA were conducted. We hypothesized that CA would experience greater distress in parenting and psychopathology compared with COMP and that MCA would experience even more impairment compared with CA. **Results:** Few differences emerged in comparisons of CA and COMP, with the exception of CA reporting greater parent–adolescent conflict and internalizing problems. In contrast, differences consistently emerged in comparisons of MCA and CA showing more difficulty for MCA in parenting and psychopathology. **Conclusion:** These findings underscore the need for treatments that address parental ADHD when adolescent ADHD is the intended target. (*J. of Att. Dis.* 2012; XX(X) 1–XX)

Keywords

mothers, ADHD, adolescent

The stress of raising a child with ADHD has been related to a range of difficulties for parents (see Johnston & Mash, 2001, for a review). Given that mothers are more than nine times more likely to be the primary caregivers of children (U.S. Bureau of the Census, 2011), more often responsible for day-to-day caretaking, discipline, and treatment seeking and implementation for their children compared with fathers, the stress and the associated problems of raising a child with ADHD are a particular concern for mothers. Mothers of children with ADHD experience higher rates of marital conflict and divorce (Wymbs, Pelham, Molina, & Gnagy, 2008), mood problems (Elgar, Waschbusch, McGrath, Stewart, & Curtis, 2004), and substance use disorders (Chronis et al., 2003), and each of these negative outcomes is related to further impairment to maternal and child functioning (e.g., Johnston & Mash, 2001).

Although efforts to understand the manifestation and treatment of these maternal difficulties in ADHD families have grown, there is little research on mothers of children with ADHD, who have ADHD themselves. This is surprising considering that ADHD is one of the most heritable mental health disorders, and it is estimated that at least one out of

every four children with ADHD has a mother with the same disorder (Chronis et al., 2003). Given the prevalence of maternal ADHD, most studies of mothers of children with ADHD likely include a significant proportion of mothers with ADHD, although their co-occurring ADHD is almost never identified. Furthermore, emerging studies have shown that ADHD is a relevant disorder for some adult women (at least 3.6% of the population; Kessler et al., 2006). Many women with ADHD experience problems related to inattention, hyperactivity, and impulsivity in addition to many of the same difficulties that have been investigated individually for mothers raising a child with ADHD, including depression, anxiety, and single-parent status (Babinski, Pelham,

¹Florida International University, Miami, USA

²University of Pittsburgh Medical Center, PA, USA

³Seattle Children's Research Institute, WA, USA

Corresponding Author:

Dara E. Babinski, Center for Children and Families, Florida International University, AHC 1, Room 146, 11200 SW 8th Street, Miami, FL 33186, USA

Email: dbabinski@fiu.edu; deb24@buffalo.edu

Molina, Waschbusch, et al., 2011; Biederman et al., 2010). However, in studies of ADHD in adult women, whether the women were mothers has rarely been considered. Altogether, these studies suggest that mothers with ADHD who also have a child with ADHD may be a particularly impaired population in need of further study.

Recently, some studies of mothers with ADHD have emerged. These studies provide consistent evidence that parenting problems exist for these mothers of children in early through middle childhood. For example, in a study of first time expecting mothers, high levels of maternal ADHD symptomatology were related to less positive expectations of parenting, less perceived control about parenting, and less attendance at prenatal examinations (Ninowski, Mash, & Benzie, 2007). In a sample of mothers of children ages 3 to 6 years old, maternal ADHD was related to lax parenting, greater overreactivity with children, and lower parental control and satisfaction by self and collateral reports (Banks, Ninowski, Mash, & Semple, 2008), and studies of mothers with school-age children with and without ADHD show a similar pattern of findings (e.g., Chen & Johnston, 2007; Chronis-Tuscano, Raggi, et al., 2008). Despite the relative consistency in these studies of maternal ADHD and parenting children, to our knowledge, no studies have explored the daily life functioning of mothers with ADHD who are parenting adolescent children.

Adolescence is often described as a time marked by significant conflict and disruption in the parent-child relationship (Robin & Foster, 2002; Steinberg & Morris, 2001). The adolescent's push for autonomy from the parent, as well as the parent's entrance into middle age, have been related to negative family outcomes and stress (Steinberg & Morris, 2001). There is some evidence that parent-adolescent relationships for adolescents with ADHD are particularly high in conflict (Edwards, Barkley, Laneri, Fletcher, & Metevia, 2001; Walther et al., 2012), but the influence of co-occurring maternal ADHD has not been studied at this age. Furthermore, it is unknown whether ineffective parenting strategies used by mothers with ADHD with children continue into adolescence. Effective parenting strategies for adolescents (e.g., consistent discipline, parental awareness, parental involvement) have been related to a range of adaptive outcomes, including resistance to substance use initiation as well as better academic achievement (Hill et al., 2004; Pettit, Laird, Dodge, Bates, & Criss, 2001; Walther et al., 2012). These effective parenting strategies involve consistent limit-setting, but also promote adolescent autonomy, which may be a challenge for mothers with ADHD, given the problems noted for mothers with ADHD who have younger children. It may well be expected that the combination of maternal ADHD and related impairments with the adolescent's ADHD and related impairments contributes to high conflict and that parenting an adolescent with ADHD may be particularly stressful and difficult for mothers with ADHD.

In addition to exploring the parenting behavior of mothers with ADHD, it is also important to explore psychopathology in mothers with and without ADHD. Although it appears that many mothers raising a child with ADHD (even without separating for presence or absence of maternal ADHD) experience a range of psychopathology, including depression, anxiety, and substance use disorders (Chronis et al., 2003), mothers with ADHD may likely experience even higher rates of psychopathology. The few existing studies of mothers with ADHD raising children in middle childhood have generally not extended their analyses to functioning in areas outside of parenting behavior. When they have reported psychopathology outcomes, they have shown that mothers with ADHD experience more comorbid psychopathology, including more internalizing problems, compared with mothers without ADHD (Minde et al., 2003). The existing studies of females with ADHD, from preadolescence into adulthood have clearly shown that females with ADHD experience a range of psychopathology more than females without ADHD, including higher rates of depression and anxiety disorders (Biederman et al., 2010). Some studies have also shown that women with ADHD are more likely to experience substance use problems (Biederman et al., 2010), but other studies have not (Babinski, Pelham, Molina, Waschbusch, et al., 2011). However, in these studies, the females have generally not been mothers or have included such a small number of mothers that the role of maternal ADHD in comorbid psychopathology could not be assessed. The combined stress of raising an adolescent with ADHD and managing their own ADHD may well increase their risk of experiencing comorbid psychopathology.

The goal of this study is to describe the parenting and psychopathology of mothers with ADHD who also have an adolescent child with ADHD (MCA). Given the large literature on the difficulties of parents of children with ADHD compared with parents of children without ADHD (e.g., Chronis et al., 2003; Johnston & Mash, 2001), we planned to first compare non-ADHD mothers with and without an adolescent with ADHD (CA and COMP, respectively) and hypothesized that CA would experience greater impairment in parenting and psychopathology compared with COMP. Then, we compared MCA with CA and hypothesized that MCA would experience even greater impairment in parenting and psychopathology compared with CA.

Method

Participants

Participants in the current study were mothers of adolescents from the Pittsburgh ADHD Longitudinal Study (PALS). The PALS is a prospective longitudinal study of 364 adolescents and young adults with childhood ADHD who were diagnosed with *Diagnostic and Statistical Manual of Mental*

Disorders (3rd ed., rev.; *DSM-III-R*; American Psychiatric Association [APA], 1987) or *DSM-IV* (APA, 1994) ADHD at the ADD Clinic and Western Psychiatric Institute and Clinic (WPIC) in Pittsburgh, PA, during the years from 1987 to 1996, and 240 non-ADHD participants, who were recruited from the greater Pittsburgh area between 1999 and 2001 for their demographic similarity (i.e., age within 1 year, ethnicity, and parental education) to the ADHD group.

All adolescents with ADHD in this study met diagnostic criteria for ADHD in childhood according to the guidelines in the *DSM-III-R* or *DSM-IV* depending on their year of assessment. Diagnostic information was collected through a standard battery of multi-method, multi-informant assessments, including the Disruptive Behavior Disorder (DBD) Rating Scale to assess *DSM-III-R* and *DSM-IV* symptoms of the disruptive behavior disorders (Pelham, Gnagy, Greenslade, & Milich, 1992), and parent reports on a semistructured diagnostic interview with a PhD level clinician consisting of *DSM-III-R* or *DSM-IV* descriptors for ADHD, oppositional defiant disorder (ODD), and conduct disorder (CD) with supplemental probe questions regarding situational and severity factors. The interview also included queries about other comorbidities to determine whether additional assessment was needed (instrument available at <http://ccf.fiu.edu>). Following *DSM* guidelines, diagnoses were made if a sufficient number of symptoms were endorsed (considering information from parents and teachers) to result in diagnosis. Two PhD level clinicians independently reviewed all ratings and interviews to confirm *DSM* diagnoses and when disagreement occurred, a third clinician reviewed the file and the majority decision was used. Exclusionary criteria were assessed in childhood, including a full-scale IQ < 80, a history of seizures or other neurological problems, and/or a history of pervasive developmental disorder, schizophrenia, or other psychotic or organic mental disorder. All children with ADHD participated in the Summer Treatment Program (STP), an 8-week intervention that included behavioral modification, parent training, and psychoactive medication trials where indicated (Pelham & Hoza, 1996). Ages at initial evaluation and treatment ranged from 5 to 16 years of age, with over 90% of individuals in the ADHD group within elementary school age.

These same families were recontacted and admitted to the PALS follow-up study on a rolling basis between the years of 1999 and 2003 and completed their first follow-up interview immediately upon enrollment. At the initial PALS follow-up interview, participants with ADHD were between the ages of 11 and 28; an average of 8.3 years had passed since their initial childhood evaluation at referral to the STP (baseline).

In addition to the adolescents with ADHD, 240 demographically similar adolescents and young adults without ADHD (controls) and their parents were recruited locally from 1999-2001 to participate in the PALS. Most adolescent controls were recruited through several large pediatric

practices (40.8% of control sample) that serve patients from diverse socioeconomic backgrounds. The remaining controls were recruited via advertisements in local newspapers and the university hospital newsletter (27.5%), local universities and colleges (20.8%), and other methods (e.g., word of mouth). A telephone screening interview administered to parents of potential controls gathered basic demographic characteristics, presence of exclusionary criteria, and a checklist of ADHD symptoms. Comparison recruitment lagged 3 months behind recruitment of adolescents and young adults with ADHD to facilitate efforts to obtain demographic similarity. Comparison participants were selected based on four demographic characteristics: age (within 1 year), gender, race, and parent education level. A comparison individual was eligible if his or her enrollment increased the comparison groups' demographic similarity to the ADHD group. Individuals who met *DSM-III-R* criteria for ADHD—either currently or historically—were excluded. Control participants were not excluded on the basis of sub-threshold ADHD or other psychiatric disorders.

There was a total of 147 mothers with an adolescent child with ADHD (ages 11-18) and 107 mothers of non-ADHD adolescents (COMP) who provided information on their own symptoms and functioning in the current study. Because the purpose of the current study was to explore associations between maternal ADHD and relevant areas of psychosocial functioning, fathers were not included. Although there are some participating fathers in the PALS, the small number of fathers precludes a comprehensive understanding of paternal ADHD and adult functioning.

Mothers reported on their current *DSM* ADHD symptoms using an adult ADHD scale developed by Barkley (Barkley, 2006). This questionnaire assessed all *DSM-IV* symptoms of ADHD from 0 (*rarely or not at all*) to 3 (*very much*). Total symptom scores and separate inattention and hyperactivity/impulsivity total scores were calculated for the purposes of the study. For the current study, if mothers rated themselves as having at least four current *DSM* symptoms of inattention or hyperactivity/impulsivity at the threshold level (2 or 3) on the measure developed by Barkley (2006), they were coded as having a current ADHD diagnosis, and all other mothers were coded as not having a current ADHD diagnosis. Internal consistency was .93 for inattentive symptoms, .90 for hyperactive/impulsive symptoms, and .94 for the total current symptom score. Evidence-based guidelines do not yet exist regarding diagnosis of adult ADHD, but a four-symptom diagnostic threshold has been shown to be diagnostically relevant for adults with ADHD (McGough & Barkley, 2004), and this criterion has been used frequently in recent research on mothers with ADHD (e.g., Chronis-Tuscano, Seymour, et al., 2008). Out of 147 mothers of adolescents with ADHD, 37 (25.17%) reported four or more current ADHD symptoms. No mothers of adolescents without ADHD met maternal ADHD

Table 1. Demographic Characteristics and Maternal ADHD Symptomatology

	COMP (1) N = 107	CA (2) N = 110	MCA (3) N = 37	Significance	
				1 vs. 2	2 vs. 3
Maternal age, <i>M</i> (<i>SD</i>)	45.32 (5.45)	44.27 (5.88)	46.57 (6.44)	.114	.508
Child age, <i>M</i> (<i>SD</i>)	15.50 (2.09)	15.16 (2.07)	17.30 (1.38)	.858	.000
Caucasian (%)	85.29	86.39	86.49	.834	.886
Mother married (%)	67.16	65.09	51.35	.249	.085
Maternal education (% post high school)	80.98	84.52	78.38	.371	.447
Child gender (% male)	90.60	92.98	86.49	.834	.060
Child ODD/CD diagnosis (%)	—	81.62	82.86	—	.445
Current hyperactivity score	1.41 (1.76)	3.30 (2.93)	13.75 (6.03)	.000	.000
Current inattention score	2.03 (2.73)	3.41 (3.00)	17.00 (3.74)	.000	.000
Current total score	3.45 (3.83)	6.70 (5.29)	30.75 (8.77)	.000	.000

Note: COMP = non-ADHD mothers of adolescents without ADHD; CA = non-ADHD mothers of adolescents with ADHD; MCA = mothers with ADHD and adolescents with ADHD; ODD = oppositional defiant disorder; CD = conduct disorder. Child ODD/CD diagnosis was assessed by the Disruptive Behaviors Interview and Rating Scale (Pelham, Gnagy, Greenslade, & Milich, 1992) from baseline. Current hyperactivity, inattention, and total scores were calculated from the sum of the respective DSM symptoms for ADHD, measured from 0 (*rarely or not at all*) to 3 (*very much*) on the adult ADHD symptom scale developed by Barkley (2006).

criteria. Demographic comparisons between these three groups of mothers (i.e., MCA, CA, and COMP) were conducted in pairwise comparisons (COMP vs. CA and CA vs. MCA), and revealed significant differences regarding current ADHD symptoms, including total symptoms, and symptoms of inattention and hyperactivity, separately (see Table 1). In addition, a significant difference was found regarding adolescent age in comparison of CA with MCA.

Procedure

Follow-up interviews were conducted annually in the ADD program offices by postbaccalaureate research staff, and included parent and child assessments of functioning. Interviewers were not blind to recruitment source (i.e., presence or absence of ADHD in childhood), but they were trained to avoid bias in data collection. Moreover, many of the questionnaires were completed privately by participants (e.g., substance use measures) to minimize interviewer contamination. Informed consent was obtained and all participants were assured confidentiality of all disclosed materials, except in cases of impending danger or harm to self or others (reinforced with a DHHS Certificate of Confidentiality). In cases where distance prevented participant travel to WPIC, information was collected through a combination of mailed and telephone correspondence; home visits were offered as need dictated. Parent self-report questionnaires were completed either with paper and pencil or computerized versions. For the current study, follow-up data were collected from the first wave of data follow-up, which included the most comprehensive data on maternal and parenting variables.

Measures

Parenting. The degree of conflict and communication difficulty in the mother–adolescent relationship was measured by self-report on the 20-item Conflict Behavior Questionnaire (CBQ-20; Robin & Foster, 2002). Mothers were asked to answer “true” or “false” to statements about the parent–adolescent relationship. Higher scores are indicative of higher levels of conflict, and parent ratings had an internal consistency estimate of .94.

Parental knowledge and attempted monitoring of their adolescents’ activities and interests were assessed using parent reports on an adapted 10-item measure by Steinberg (Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, Lamborn, Dornbusch, & Darling, 1992). Five items are about attempted monitoring (i.e., how well the parent tries to know the adolescent’s activities) and have a response scale from 1 “didn’t try” to 5 “tried all of the time.” In addition, five items are about parental knowledge (i.e., how well the parent really knows the adolescent’s activities) and are scaled from 1 “didn’t know” to 5 “knew all of the time.” Internal consistency estimates for attempted monitoring and parental knowledge were .86 and .90, respectively.

Discipline practices were adapted from the parenting scale used in the Pittsburgh Youth Study (Loeber, 1989), which has been used in assessing parenting practices in at-risk families (Tarter, Blackson, Martin, Loeber, & Moss, 1993). This scale includes 18 items to reflect three domains—effective discipline (e.g., problem-solving discussions, changing antecedents, assigning chores or extra work), ineffective discipline (e.g., scolding, slapping or hitting, locking

him or her out), and consistency. Items have a response scale from 1 “never” to 5 “always.” Internal consistency estimates for mother reports were .71 for effective discipline, .59 for negative discipline, and .61 for consistency.

Parental involvement was assessed using items from measures developed for the Adolescent and Family Development Project (e.g., Chassin & Barrera, 1987). On this measure, parents rated the degree of their involvement (e.g., helped with homework or checked over homework when son/daughter asked, went to school programs for parents) on a 5-point scale ranging from 1 (*never*) to 5 (*always*). Parent ratings had an internal consistency estimate of .75.

Psychopathology. The Beck Depression Inventory (BDI; Beck & Steer, 1987) was used to assess symptoms of depression. The BDI includes 21 self-report items measuring depressive symptomatology. Responses range from 0 (e.g., “I do not feel sad”) to 3 (e.g., “I am so sad or unhappy that I can’t stand it”), and level of depression is measured based on the sum total of the items. Higher scores are indicative of greater levels of depression and total scores range from 0 to 63. The BDI has been used in previous studies of adult ADHD (e.g., Safren et al., 2005) and studies of parents with children with ADHD (e.g., Chacko et al., 2009; Chronis, Gamble, Roberts, & Pelham, 2006), and has been shown to have good reliability and construct validity in clinical and nonclinical populations (Beck & Steer, 1987). In the current sample, internal consistency was .89.

The Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) is a 16-item measure used to assess symptoms related to generalized anxiety disorder. The PSWQ is recommended for assessing the central feature of generalized anxiety disorder (i.e., worry; Crits-Christoph & Connolly, 1997). It shows high internal consistency and has been found to be highly related to trait anxiety, state anxiety, and emotionality (Brown, Antony, & Barlow, 1992; Meyer et al., 1990). Scores range from 16 to 80, with higher scores indicating higher levels of worry. Internal consistency in the current sample was .80.

The Structured Clinical Interview for *DSM-IV*–Nonpatient Edition (SCID-NP; First, Spitzer, Gibbon, & Williams, 1997) was used to assess psychiatric symptoms and diagnose the mothers according to *DSM-IV* criteria. The SCID-NP utilizes an open-ended format designed to approximate the differential diagnosis of an experienced clinician during a clinical diagnostic interview. Axis I current and lifetime disorders from the mood (i.e., depression, bipolar, dysthymia), anxiety (i.e., panic, agoraphobia, social, specific, obsessive-compulsive disorder [OCD], posttraumatic stress disorder [PTSD]), and substance use (i.e., alcohol, sedative, cannabis, stimulant, opioid, cocaine, phencyclidine [PCP], polydrug, other) modules were included for the current study. Interrater agreement for psychiatric diagnoses was conducted by comparing independent ratings of tape-recorded interviews of 137 cases, sampled

across young adult and parents within the PALS. Kappa coefficients ranged from 0.47 to 0.70 for depressive disorders, 0.55 to 0.70 for anxiety disorders, and 0.79 to 1.00 for substance use disorders.

Data Analytic Plan

Two sets of planned comparisons—(a) COMP versus CA and (b) CA versus MCA—were conducted. In comparisons between CA and MCA, adolescent age was used as a covariate to control for the group difference (see Table 1). Effect sizes (Cohen’s *d*) are also presented to assist the reader in the interpretation of the results. Analysis of psychological functioning from the SCID was determined using binary logistic regressions of the presence or absence of the disorders. Prevalence rates and odds ratios are presented to assist the reader in interpreting the findings.

Results

Parenting

Compared with COMP, CA experienced more parent–child conflict (see Table 2, for parenting and internalizing symptom results). However, no differences emerged regarding parental knowledge, monitoring, ineffective, effective, and consistent discipline, or parental involvement. Compared with CA, MCA reported more parent–adolescent conflict, less parental knowledge, monitoring, and consistent discipline, and more ineffective discipline. No differences emerged regarding effective discipline and involvement.

Psychopathology

Compared with COMP, CA reported more depressive symptoms (i.e., BDI), but no differences emerged regarding anxiety symptoms. Compared with CA, MCA reported more depressive and anxiety symptoms.

On the SCID mood, anxiety, and substance use modules, no differences emerged between COMP and CA. However, MCA were more likely to experience current mood disorders compared with CA. No other differences emerged in comparisons (see Table 3, for diagnostic prevalence rates for all mothers). Because the data suggested increasing likelihood of maternal psychopathology with increasing ADHD in the family, we additionally explored the presence of group differences between COMP and MCA. When compared with COMP, MCA were more likely to experience current (OR = 4.03 95% confidence interval CI = [1.22, 13.37], $p < .05$) and lifetime (OR = 2.18 95% CI = [1.03, 4.60], $p < .05$) mood disorders, as well as current (OR = 3.98 95% CI = [1.36, 1.61], $p < .05$) and lifetime (OR = 3.24 95% CI = [1.41, 7.41], $p < .05$) anxiety disorders, but no

Table 2. Parenting, Relationship Functioning, and Internalizing Problems for Mothers With and Without ADHD

	COMP (1)	CA (2)	MCA (3)	Effect sizes	
	N = 107 M (SD)	N = 110 M (SD)	N = 37 M (SD)	1 vs. 2	2 vs. 3
Parenting					
CBQ	2.14 (0.59)	2.77 (0.74)	3.14 (0.63)	0.94***	0.54***
Parental knowledge	4.36 (0.55)	4.23 (0.73)	3.63 (0.77)	0.20	0.80***
Monitoring	4.56 (0.56)	4.48 (0.68)	3.96 (0.83)	0.13	0.69***
Ineffective discipline	1.68 (0.32)	1.77 (0.40)	2.00 (0.58)	0.25	0.46**
Consistent discipline	3.62 (0.51)	3.55 (0.52)	3.18 (0.55)	0.14	0.69**
Effective discipline	3.05 (0.57)	3.16 (0.46)	2.93 (0.81)	0.21	0.35
Involvement	3.91 (0.77)	3.72 (1.01)	3.44 (0.98)	0.21	0.28
Internalizing problems					
BDI	5.45 (6.12)	6.79 (6.62)	10.57 (9.51)	0.21**	0.46**
PSWQ	37.42 (8.65)	38.04 (9.54)	43.56 (9.14)	0.07	0.59**

Note: COMP = non-ADHD mothers of adolescents without ADHD; CA = non-ADHD mothers of adolescents with ADHD; MCA = mothers with ADHD and adolescents with ADHD; CBQ = Conflict Behavior Questionnaire (Robin & Foster, 2002); BDI = Beck Depression Inventory (Beck & Steer, 1987); PSWQ = Penn State Worry Questionnaire. Parental knowledge and monitoring were measured on a scale by Steinberg, Lamborn, Dornbusch, and Darling (1992). Ineffective, consistent, and effective discipline were measured on the Parenting Scale (Loeber, 1989). Involvement was assessed by measures from the Adolescent and Family Development Project (Chassin & Barrera, 1987). On knowledge, monitoring, involvement, and effective discipline, higher scores indicate better functioning, and on the remaining measures, higher scores indicate poorer functioning. Effect sizes are computed by Cohen's *d*.

* $p < .10$. ** $p < .05$. *** $p < .01$.

Table 3. Psychopathology Outcomes of Mothers With and Without ADHD

	COMP (1) N = 107	CA (2) N = 110	MCA (3) N = 37	(1) vs. (2) OR	(2) vs. (3) OR
Current mood disorder (%)	4.55	7.02	16.23	2.48, CI = [0.78, 7.91]	3.48**, CI = [1.01, 10.49]
Lifetime mood disorder (%)	35.87	49.71	56.71	1.22, CI = [0.57, 2.60]	1.30, CI = [0.63, 2.66]
Current anxiety disorder (%)	6.52	17.64	18.92	1.33, CI = [0.49, 3.61]	1.10, CI = [0.44, 2.73]
Lifetime anxiety disorder (%)	16.85	26.71	35.14	1.96, CI = [0.86, 4.46]	1.47, CI = [0.69, 3.13]
Current substance use disorder (%)	0.54	1.76	2.70	1.21, CI = [0.10, 14.41]	1.56, CI = [0.16, 5.39]
Lifetime substance use disorder (%)	8.70	10.58	16.22	1.66, CI = [0.56, 4.90]	1.65, CI = [0.60, 4.48]

Note: COMP = non-ADHD mothers of adolescents without ADHD; CA = non-ADHD mothers of adolescents with ADHD; MCA = mothers with ADHD and adolescents with ADHD; Diagnoses were assessed on the SCID (First, Spitzer, Gibbon, & Williams, 1997); OR = odds ratio of mother diagnosis. Mood disorders include major depression, bipolar disorder, and dysthymia. Anxiety disorders include panic, agoraphobia, social, specific, obsessive-compulsive disorder, posttraumatic stress disorder, and generalized anxiety disorder. Substance use disorders include alcohol, sedative, cannabis, stimulant, opioid, cocaine, PCP, polydrug, and other substance use disorders. CI = 95% confidence interval of odds ratio.

** $p < .05$.

differences regarding current (OR = 3.84 95% CI = [0.21, 69.46], $p > .05$) and lifetime (OR = 1.92 95% CI = [0.66, 5.64], $p > .05$) substance use disorders emerged.

Discussion

The goal of this study was to explore the parenting and psychopathology of MCA. In our sample of mothers of adolescents with ADHD, 25.17% of mothers were given a diagnosis of ADHD, which is consistent with other samples of mothers of children with ADHD (Chronis et al., 2003). Planned comparisons between MCA and CA, and between CA and COMP were conducted. Compared with COMP, CA reported few differences in parenting

and psychopathology with the exception of more conflict with their adolescent and more depressive symptoms. In contrast, MCA were consistently more impaired in parenting and psychopathology compared with CA, with the exception of substance use disorders. This study extends findings of maternal ADHD and impaired parenting from previous studies (e.g., Chen & Johnston, 2007; Chronis-Tuscano, Raggi, et al., 2008) to understand maternal ADHD and parenting adolescents with childhood ADHD. Furthermore, this study evaluated another area of psychosocial functioning (i.e., psychopathology) for mothers with ADHD, which has not specifically been explored for mothers with adolescent children, and found some evidence of additional impairments.

Results regarding parent-reported use of parenting practices generally reflected previous studies of maternal ADHD and parenting younger children, which find that maternal ADHD is associated with less adaptive parenting (Chen & Johnston, 2007; Chronis-Tuscano, Raggi, et al., 2008; Murray & Johnston, 2006), and extended previous research by focusing on adolescent-specific measures of parenting. Compared with CA, MCA reported higher levels of conflict in their relationship with their adolescent child, less knowledge and monitoring of their adolescent's whereabouts, less consistent discipline, and more ineffective discipline strategies. At the same time, differences were not found regarding effective discipline, or involvement, which is somewhat consistent with previous studies of maternal ADHD which have not reported differences in some areas of parenting. For example, Chronis-Tuscano, Raggi, et al. (2008) did not find a relation between maternal ADHD and monitoring and supervisory behaviors. In addition, some research suggests that mothers with higher levels of ADHD symptomatology are more positive and affectionate with their children (Psychogiou, Daley, Thompson, & Sonuga-Barke, 2008), as parents with ADHD may be more sensitive to understanding of their children's ADHD-related impairments. No differences in parenting were found in comparisons of CA and COMP with the exception of CA reporting more parent-adolescent conflict, which is consistent with a large body of literature on parent-adolescent conflict within ADHD families (Edwards et al., 2001) and with the focus on parent-child communication and negotiation in treatments for adolescents with ADHD (e.g., Edwards et al., 2001). The lack of differences in most areas of parenting may reflect that CA in this study, as reflected in their enrollment of their children in an intensive treatment in childhood, are also mothers who may give greater attention to the use of effective parenting skills. In addition, these parenting variables were assessed by maternal report, and there is some evidence that parents may overestimate their parenting skills to provide more socially desirable responses (Molina, Donovan, & Belendiuk, 2010; Schwarz, Barton-Henry, & Pruzinsky, 1985).

The higher rates of psychopathology, particularly internalizing problems, among MCA, were consistent with studies of parents with ADHD raising younger children (Minde et al., 2003) and studies of adult women with ADHD (Biederman et al., 2010). MCA reported higher levels of depressive (i.e., BDI) and anxiety (i.e., PSWQ) symptoms compared with CA, and differences were even more pronounced when rates of psychopathology were explored in comparison with COMP. CA reported experiencing more depressive symptoms compared with COMP, but no other statistically significant differences emerged on other items. Although the pattern of findings generally shows that CA experience greater psychopathology compared with COMP, the lack of statistically

significant findings may be due to the age of the adolescents. Adolescence is often regarded as a time of considerable family stress for all families, regardless of the adolescent's ADHD status (Steinberg & Morris, 2001). The rates of psychopathology reported among CA and COMP in our study are generally higher than those reported in clinic-referred ADHD samples of mothers of younger children (e.g., Chronis et al., 2003), and the increase in internalizing problems among women during middle age (i.e., the age of the mothers of adolescents in this study) in general (Olfson et al., 2000) suggests that internalizing problems may be a concern for some mothers of adolescents regardless of their adolescent's ADHD status at this age.

Significant group differences were not found regarding current or lifetime substance use disorders. Although some evidence of substance use problems has emerged in the literature on parents with ADHD (Minde et al., 2003), women with ADHD (Biederman et al., 2010), and parents of children with ADHD (Chronis et al., 2003; Pelham et al., 1997), other studies, including exploration of the daughters of these mothers within the PALS during late adolescence and young adulthood have not found evidence of substance use problems at a statistically significant level (Babinski, Pelham, Molina, Gnagy, et al., 2011; Babinski, Pelham, Molina, Waschbusch, et al., 2011). It may be that only some substances are relevant for women with ADHD, and grouping all of the substance use categories into one broad category may conceal larger group differences at the individual substance level. For example, in a study of young women with ADHD within the PALS sample (Babinski, Pelham, Molina, Waschbusch, et al., 2011), women with and without ADHD reported relatively similar rates of problematic alcohol and cigarette use, but the rates of marijuana use for women with ADHD were approximately three times that of women without ADHD. In addition, Minde and colleagues (2003) reported that parents with ADHD compared with non-ADHD parents experienced more alcohol use disorders but not other drug disorders, although mothers were not analyzed separately from fathers. The results found in the current study, in light of other studies showing some evidence of substance use problems among women with ADHD (Biederman et al., 2010) and mothers of children with ADHD (Chronis et al., 2003; Pelham et al., 1997), suggest that substance use disorders for mothers with ADHD who also have an adolescent with ADHD may still be a relevant issue in need of further exploration.

The majority of variables assessed in this study were self-reported. Individuals with ADHD have been shown to have problems with self-perception and have been found to underestimate their impairments (e.g., Hoza et al., 2004; Sibley et al., 2010). However, several marked differences were found in this study between MCA compared with CA, which suggests that at least some mothers with ADHD are

more aware of their impairments compared with individuals referred for treatment in childhood. Using the SCID in addition to self-report measures in this study is a strength of the current investigation, and future studies of maternal ADHD may benefit from multi-method, multi-informant assessment procedures, including collateral reports (Belendiuk, Clarke, Chronic, & Raggi, 2007) as well as observational methods, such as laboratory-based parent-child interactions (Chronis-Tuscano, Raggi, et al., 2008; Mash, Johnston, & Kovitz, 1983; Wymbs & Pelham, 2010).

We are limited in our ability to determine whether the women in this study would meet diagnostic criteria for ADHD in adulthood. The women in the study were parental informants in a longitudinal study of childhood ADHD, who were categorized on maternal ADHD status based on post hoc self-ratings. We categorized mothers with a diagnosis of ADHD if they endorsed four or more symptoms of ADHD. Although there is mounting evidence that a four-symptom diagnosis may be appropriate for adults with ADHD (www.dsm5.org; McGough & Barkley, 2004), a four-symptom diagnosis is less stringent than the current *DSM-IV* criterion of six or more symptoms of inattention or hyperactivity/impulsivity. We also relied only on their current self-reports and do not have collateral reports from family members or significant others familiar with their functioning, and did not require a childhood history of ADHD, which is consistent with current *DSM* guidelines. Some research suggests that women who endorse ADHD symptomatology in adulthood are less impaired and have greater insight into their problems than women diagnosed in childhood with ADHD (Barkley, 2006). In fact, the women in the current study are likely more aware of their difficulties, as they initially sought treatment at WPIC for their children's difficulties. Therefore, the results of this study may actually provide an underestimation of the problems that mothers with ADHD who have had a childhood diagnosis of ADHD may experience. Furthermore, although we did not assess the impact of paternal ADHD in maternal and adolescent functioning, it is important that future studies address the role of paternal ADHD to further clarify the family impairment associated with raising an adolescent with ADHD.

To our knowledge, this is the first study to explore the functioning of mothers with ADHD who also have adolescents with ADHD, and one of very few studies exploring functioning among non-ADHD mothers of adolescents with ADHD. Mothers with ADHD and adolescents with ADHD consistently reported difficulties parenting their adolescent and internalizing problems. These findings underscore the need for treatments that address parental ADHD when adolescent ADHD is the intended target, especially when parenting behavior has been shown to moderate ADHD-related risk for outcomes such as delinquency and alcohol use (Molina et al., 2012). Few difficulties in functioning emerged for non-ADHD

mothers of adolescents with ADHD in comparisons with non-ADHD mothers of adolescents without ADHD, with the exception of mothers of adolescents with ADHD reporting higher parent-adolescent conflict. These findings highlight the impaired parent-adolescent relationship for adolescents with ADHD regardless of maternal ADHD status. Currently, few treatments exist to address parent-adolescent conflict in families with ADHD (e.g., Edwards et al., 2001), and these studies find only modest evidence for the efficacy of these interventions. In addition, there is little research on effective treatments for adults and parents with ADHD other than medication (Adler & Chua, 2002; Chronis-Tuscano, Seymour, et al., 2008) and some very recent research on psychosocial approaches (Chronis-Tuscano et al., 2011; Safren et al., 2005). Our results suggest that interventions tailored to families of adolescents with ADHD, particularly families in which the mother and adolescent have ADHD, are greatly needed.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by Grant AA11873 from the National Institute of Alcohol Abuse and Alcoholism. Research was also supported in part by Grants AA00202, AA08746, AA12342, AA0626, and grants from the National Institute on Drug Abuse (DA12414, DA05605, F31 DA017546), the National Institute on Mental Health (MH12010, MH4815, MH47390, MH45576, MH50467, MH53554, MH069614), the National Institute of Environmental Health Sciences (ES0515-08), and Institute of Education Sciences (IESLO3000665A, IESR324B060045).

References

- Adler, L. A., & Chua, H. C. (2002). Management of ADHD in adults. *Journal of Clinical Psychiatry*, *63*, 29-35.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed., Rev.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Babinski, D. E., Pelham, W. E., Molina, B. S. G., Gnagy, E. M., Waschbusch, D. A., Yu, J., & Karch, K. M. (2011). Late adolescent and young adult outcomes of girls diagnosed with ADHD in childhood: An exploratory investigation. *Journal of Attention Disorders*, *15*, 204-214. doi:10.1177/1087054710361586
- Babinski, D. E., Pelham, W. E., Molina, B. S. G., Waschbusch, D. A., Gnagy, E. M., Yu, J., & Biswas, A. (2011). Women with childhood ADHD: Comparisons by diagnostic group and gender. *Journal of Psychopathology and Behavioral Assessment*, *33*, 420-429. doi:10.1007/s10862-011-9247-4

- Banks, T., Ninowski, J. E., Mash, E. J., & Semple, D. L. (2008). Parenting behavior and cognitions in a community sample of mothers with and without symptoms of attention-deficit/hyperactivity disorder. *Journal of Child and Family Studies, 17*, 28-43. doi:10.1007/s10826-007-9139-0
- Barkley, R. A. (2006). ADHD in adults: Developmental course and outcome of children with ADHD, and ADHD in clinic-referred adults. In R. A. Barkley (Ed.), *Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment* (pp. 248-296). New York, NY: Guilford.
- Beck, A. T., & Steer, R. A. (1987). *Beck Depression Inventory manual*. New York, NY: The Psychological Corporation.
- Belendiuk, K. A., Clarke, T. L., Chronis, A. M., & Raggi, V. L. (2007). Assessing the concordance of measures used to diagnose adult ADHD. *Journal of Attention Disorders, 10*, 276-287. doi:10.1177/1087054706289941
- Biederman, J., Petty, C. R., Monuteaux, M. C., Fried, R., Byrne, D., Mirro, T., & Faraone, S. V. (2010). Adult psychiatric outcomes of girls with attention deficit hyperactivity disorder: 11 year follow-up in a longitudinal case-control study. *American Journal of Psychiatry, 167*, 409-417. doi:10.1176/appi.ajp.2009.09050736
- Brown, T. A., Antony, M. M., & Barlow, D. H. (1992). Psychometric properties of the Penn State Worry Questionnaire in a clinical anxiety disorders sample. *Behaviour Research and Therapy, 30*, 33-37. doi:10.1016/0005-7967(92)90093-V
- Chacko, A., Wymbs, B. T., Wymbs, F. A., Pelham, W. E., Swanger-Gagne, M. S., Girio, E., & O'Connor, B. (2009). Enhancing traditional behavioral parent training for single mothers of children with ADHD. *Journal of Clinical Child & Adolescent Psychology, 38*, 206-218. doi:10.1080/15374410802698388
- Chassin, L., & Barrera, M. (1987). *Adolescent and family development project* (Battery for Waves 1-3). Tempe: Arizona State University.
- Chen, M., & Johnston, C. (2007). Maternal inattention and impulsivity and parenting behaviors. *Journal of Clinical Child & Adolescent Psychology, 36*, 455-468. doi:10.1080/15374410701448570
- Chronis, A. M., Gamble, S. A., Roberts, J. E., & Pelham, W. E. (2006). Cognitive-behavioral depression treatment for mothers of children with attention-deficit/hyperactivity disorder. *Behavior Therapy, 37*, 143-158. doi:10.1016/j.beth.2005.08.001
- Chronis, A. M., Lahey, B. B., Pelham, W. E., Kipp, H., Baumann, B., & Lee, S. S. (2003). Psychopathology and substance abuse in parents of young children with ADHD. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*, 1424-1432. doi:10.1097/00004583-200312000-00009
- Chronis-Tuscano, A., O'Brien, K. A., Johnston, C., Jones, H. A., Clarke, T. L., Raggi, V. L., & Seymour, K. E. (2011). The relation between maternal ADHD symptoms and improvement in child behavior following brief parent training is mediated by change in negative parenting. *Journal of Abnormal Child Psychology, 39*, 1047-1057. doi:10.1007/s10802-011-9518-2
- Chronis-Tuscano, A., Raggi, V. L., Clarke, T. L., Rooney, M. E., Diaz, Y., & Pian, J. (2008). Associations between maternal attention-deficit/hyperactivity disorder symptoms and parenting. *Journal of Abnormal Child Psychology, 36*, 1237-1250. doi:10.1007/s10802-008-9246-4
- Chronis-Tuscano, A., Seymour, K. E., Stein, M. A., Jones, H. A., Jiles, C. D., Rooney, M. E., & Robb, A. S. (2008). Efficacy of osmotic-release oral system (OROS) methylphenidate for mothers with attention-deficit/hyperactivity disorder (ADHD): Preliminary reports of effects on ADHD symptoms and parenting. *Journal of Clinical Psychiatry, 69*, 1938-1947.
- Crits-Christoph, P., & Connolly, M. B. (1997). Measuring change in patients following psychological and pharmacological interventions: Anxiety disorders. In H. H. Strupp, L. M. Horowitz, & M. J. Lambert (Eds.), *Measuring patient changes in mood, anxiety, and personality disorders* (pp. 155-188). Washington, DC: APA.
- Edwards, G., Barkley, R. A., Laneri, M., Fletcher, K., & Metevia, L. (2001). Parent-adolescent conflict in teenagers with ADHD and ODD. *Journal of Abnormal Child Psychology, 29*, 557-572. doi:10.1023/A:1012285326937
- Elgar, F. J., Waschbusch, D. A., McGrath, P. J., Stewart, S. H., & Curtis, L. J. (2004). Temporal relations in daily-reported maternal mood and disruptive child behaviour. *Journal of Abnormal Child Psychology, 32*, 237-247. doi:10.1023/B:JACP.0000026138.95860.81
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. G. W. (1997). *Structured clinical interview for DSM-IV axis I disorders-clinical version (SCID-CV)*. Washington, DC: American Psychiatric Press.
- Hill, N. E., Castellino, D. R., Lansford, J. E., Nowlin, P., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Parent academic involvement as related to school behavior, achievement, and aspirations: Demographic variations across adolescence. *Child Development, 75*, 1491-1509. doi:10.1111/j.1467-8624.2004.00753.x
- Hoza, B., Gerdes, A. C., Hinshaw, S. P., Arnold, L. E., Pelham, W. E., Molina, B. S. G., & Wigal, T. (2004). Self-perceptions of competence in children with ADHD and comparison children. *Journal of Consulting and Clinical Psychology, 72*, 382-391. doi:10.1037/0022-006X.72.3.382
- Johnston, C., & Mash, E. J. (2001). Families of children with attention-deficit/hyperactivity disorder: Review and recommendations for future research. *Clinical Child and Family Psychology Review, 4*, 183-207. doi:10.1023/A:1017592030434
- Kessler, R. C., Adler, L., Barkley, R., Biederman, J., Conners, C. K., Demler, O., & Zaslavsky, A. M. (2006). The prevalence and correlates of adult ADHD in the United States: Results from the national comorbidity survey replication. *American Journal of Psychiatry, 163*, 716-723. doi:10.1176/appi.ajp.163.4.716
- Lamborn, S., Mounts, N. S., Steinberg, L., & Dornbusch, S. (1991). Patterns of competence and adjustment among adolescents from

- authoritative, authoritarian indulgent and neglectful families. *Child Development*, 62, 1049-1055. doi:10.1111/j.1467-8624.1991.tb01588.x
- Loeber, R. (1989). *Pittsburgh youth study*. Pittsburgh, PA: Department of Psychiatry, University of Pittsburgh.
- Mash, E. J., Johnston, C., & Kovitz, K. (1983). A comparison of the mother-child interactions of physically abused and non-abused children during play and task situations. *Journal of Clinical Child Psychology*, 12, 337-346. doi:10.1080/15374418309533154
- McGough, J. J., & Barkley, R. A. (2004). Diagnostic controversies in adult attention deficit hyperactivity disorder. *American Journal of Psychiatry*, 161, 1948-1956. doi:10.1176/appi.ajp.161.11.1948
- Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn state worry questionnaire. *Behaviour Research and Therapy*, 28, 487-495. doi:10.1016/005-7967(90)90135-6
- Minde, K., Eakin, L., Hechtman, L., Ochs, E., Bouffard, R., Greenfield, B., & Loooper, K. (2003). The psychosocial functioning of children and spouses of adults with ADHD. *Journal of Child Psychology and Psychiatry*, 44, 637-646. doi:10.1111/1469-7610.00150
- Molina, B. S. G., Donovan, J. E., & Belendiuk, K. A. (2010). Familial loading for alcoholism and offspring behavior: Mediating and moderating influences. *Alcoholism: Clinical & Experimental Research*, 34, 1972-1984. doi:10.1111/j.1530-0277.2010.01287.x
- Molina, B. S. G., Pelham, W. E., Cheong, J., Mashal, M. P., Gnagy, E. M., & Curran, P. J. (2012). Childhood Attention-Deficit/Hyperactivity Disorder (ADHD) and growth in adolescent alcohol use: the roles of functional impairments, ADHD symptom persistence, and parental knowledge. *Journal of Abnormal Psychology*. Advance online publication. doi: 10.1037/a0028260
- Ninowski, J. E., Mash, E. J., & Benzie, K. M. (2007). Symptoms of attention-deficit/hyperactivity disorder in first-time expectant women: Relations with parenting cognitions and behaviors. *Infant Mental Health Journal*, 28, 54-75. doi:10.1002/imhj.20122
- Olfson, M., Shea, S., Feder, A., Fuentes, M., Nomura, Y., Gameroff, M., & Weissman, M. M. (2000). Prevalence of anxiety, depression, and substance use disorders in an urban general medicine practice. *Archives of Family Medicine*, 9, 876-883.
- Pelham, W. E., Gnagy, E. M., Greenslade, K. E., & Milich, R. (1992). Teacher ratings of *DSM-III-R* symptoms for the disruptive behavior disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31, 210-218. doi:10.1097/00004583-199203000-00006
- Pelham, W. E., & Hoza, B. (1996). Intensive treatment: A summer treatment program for children with ADHD. In E. Hibbs & P. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice* (pp. 311-340). New York, NY: APA Press.
- Pelham, W. E., Lang, A. R., Atkeson, B., Murphy, D. A., Gnagy, E. M., Greiner, A. R., & Greenslade, K. E. (1997). Effects of deviant child behavior on parental distress and alcohol consumption in laboratory interactions. *Journal of Abnormal Child Psychology*, 25, 413-424. doi:10.1023/A:1025789108958
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development*, 72, 583-598. doi:10.1111/1467-8624.00298
- Psychogiou, L., Daley, D. M., Thompson, M. J., & Sonuga-Barke, E. J. S. (2008). Do maternal attention-deficit/hyperactivity disorder symptoms exacerbate or ameliorate the negative effect of child attention-deficit/hyperactivity disorder symptoms on parenting? *Development and Psychopathology*, 20, 121-137. doi:10.1017/S0954579408000060
- Robin, A. L., & Foster, S. (2002). *Negotiating parent-adolescent conflict*. New York, NY: Guilford.
- Safren, S. A., Otto, M. W., Sprich, S., Winett, C. L., Wilens, T. E., & Biederman, J. J. (2005). Cognitive-behavioral therapy for ADHD in medication-treated adults with continued symptoms. *Behavioral Research and Therapy*, 43, 831-842. doi:10.1016/j.brat.2004.07.001
- Schwarz, J. C., Barton-Henry, M. L., & Pruzinsky, T. (1985). Assessing child-rearing behaviors: A comparison of ratings made by mother, father, child, and sibling on the CRPBI. *Child Development*, 56, 462-479.
- Sibley, M. H., Pelham, W. E., Molina, B. S. G., Waschbusch, D. A., Gnagy, E. M., Babinski, D. E., & Biswas, A. (2010). Inconsistent self-report of delinquency by adolescents and young adults with ADHD. *Journal of Abnormal Child Psychology*, 3, 645-656. doi:10.1007/s10802-010-940-4-3
- Steinberg, L., Lamborn, S., Dornbusch, S., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, 63, 1266-1281. doi:10.1111/j.1467-8624.1992.tb01694.x
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology*, 52, 83-110.
- Tarter, R. E., Blackson, T., Martin, C., Loeber, R., & Moss, H. (1993). Characteristics and correlates of child discipline practices in substance abuse and normal families. *American Journal on Addictions*, 2, 18-25. doi:10.1111/j.1521-0391.1993.tb00366.x
- U.S. Bureau of the Census. (2011). Table C2: Household relationship and living arrangements of children under 18 years, by age and sex: 2011. America's Family and Living Arrangements. Retrieved from http://www2.census.gov/census_2010/03-Demographic_Profile/National/
- Walther, C. A. P., Cheong, J., Molina, B. S. G., Pelham, W. E., Wymbs, B. T., Belendiuk, K. A., & Pederson, S. A. (2012). Substance use and delinquency among adolescents with childhood ADHD: The protective role of parenting. *Psychology of Addictive Behaviors*, 26, 585-598.

Wymbs, B. T., & Pelham, W. E. (2010). Child effects on communication between parents of youth with and without ADHD. *Journal of Abnormal Psychology, 119*, 366-375. doi:10.1037/a0019034

Wymbs, B. T., Pelham, W. E., Molina, B. S. G., & Gnagy, E. M. (2008). Mother and adolescent reports of interparental discord among adolescents with and without attention-deficit hyperactivity disorder. *Journal of Emotional and Behavioral Disorders, 16*, 29-41. doi:10.1177/1063426607310849

Bios

Dara E. Babinski, MA, is a graduate student at the University at Buffalo. She is currently completing her internship at University of Florida.

William E. Pelham Jr., is a professor of psychology and psychiatry. He is also the director of the Center for Children at Families at Florida International University.

Brooke S. G. Molina, PhD, is an associate professor of psychiatry and psychology at the University of Pittsburgh.

Elizabeth M. Gnagy, BS, is a senior research associate at Florida International University.

Daniel A. Waschbusch, PhD, is a professor of psychology at Florida International University.

Brian T. Wymbs, PhD, is an associate professor of psychology at Ohio University.

Margaret H. Sibley, PhD, is a research assistant professor of psychiatry at Florida International University.

Karen J. Derefinko, PhD, is a postdoctoral fellow at Florida International University.

Aparajita B. Kuriyan, MA, is an advanced graduate student at Florida International University.