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Journal of Family Nursing 2008 14: 181 originally published online 7 April 2008

DOI: 10.1177/1074840708315673

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Family Management Styles and ADHD

Utility and Treatment Implications

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A previous study identified four family management styles (FMSs) exhibited in families with children with attention-deficit/hyperactivity disorder (ADHD) and suggested that understanding how families deal with a child's ADHD would provide additional information from which to create effective interventions. The present study used the FMS typology with a sample of children and adolescents with ADHD with the aims of demonstrating that FMSs could be reliably identified in a different clinical sample and clarifying changes in FMS that occur with treatment. All four FMSs were reliably identified in the sample and more than half of the families (56.3%) improved to a higher functioning FMS with treatment. The findings suggest that FMSs can elicit important information about family functioning and may assist clinical understanding of the child-family interaction that in turn facilitates treatment.

Keywords: *intervention research; family management style; ADHD; families and illness; chart review*

Attention-deficit/hyperactivity disorder (ADHD) is a common childhood disorder estimated to occur in about 3% to 7% of school-age children

Authors' Note: This research was conducted while Kyle E. Conlon and Doc Vinh were students at York College of Pennsylvania under the supervision of Dr. Carla G. Strassle. The authors would like to thank Jennifer Engler for her valuable comments on drafts of this article and Kate Fruhman and Jake Murray for their assistance with data collection. Address all correspondence to: Kyle E. Conlon, BS, Southern Illinois University Edwardsville, Edwardsville, IL; e-mail: kconlon2@gmail.com.

and is more frequently diagnosed in males than in females, with ratios of 2:1 to 9:1 being reported, respectively (American Psychiatric Association, 2000). It is characterized by a persistent pattern of inattentive and/or hyperactive-impulsive behavior that is considered inappropriate for the child's age. These behaviors may be manifested in academic, social, familial, or occupational settings and frequently interfere with the child's ability to appropriately function in one or more of these areas. In addition, ADHD is frequently comorbid with other psychiatric disorders, including oppositional defiant disorder, conduct disorder, mood disorders, anxiety disorders, learning disabilities, and tic disorders (Angold, Costello, & Erkanli, 1999; Barkley & Biederman, 1997; Brown, 2000; Pliszka, 2003). Extensive research has examined the nature of ADHD across multiple domains, and one important area that has received considerable attention in recent years is how parents and children with ADHD interact and influence one another within the home environment.

Given the difficulties related to the disorder, a diagnosis of ADHD can exert a considerable amount of stress on family members, which often results in a significant amount of familial tension or number of relational problems. Indeed, parents of children with ADHD experience greater parenting stress than parents of children without ADHD (Baker, 1994; DuPaul, McGoey, Eckert, & VanBrakle, 2001). This stress appears to be multifaceted; research indicates that parental conflict (Murphy & Barkley, 1996), marital dissatisfaction (Gowers & Bryan, 2005), the child's behavioral disturbance (Harrison & Sofronoff, 2002), and stress from interactional difficulties between the child and his/her siblings (Taylor, Sandberg, Thorley, & Giles, 1991) all contribute to the amount of stress reported by parents. Furthermore, as some research (Harrison & Sofronoff, 2002; Podolski & Nigg, 2001) indicates, these factors can result from the child's ADHD and an inability to effectively manage the child's conduct problems and oppositional behaviors. Parents of children with ADHD also report less helpful social support (Lange et al., 2005), and having fewer outside resources may increase the family burden of effectively overcoming the child's disruptive behaviors. In addition, mothers of children with ADHD report feeling less competent in their parenting ability (Hoza et al., 2000), and other research (Chronis et al., 2003; Nigg & Hinshaw, 1998) suggests that both mothers and fathers of children with ADHD experience elevated rates of depression and anxiety compared with parents of children without ADHD. Overall, it appears that a child's ADHD and resultant behaviors can have a considerable impact on the level of parental and family stress as well as how parents view their competency in managing their child's difficulties.

Although the child's ADHD behaviors can cause significant familial distress and thus impede family functioning, the family-environmental context may also exacerbate the child's ADHD symptoms (Biederman et al., 1995). Specifically, the manner in which the family manages the child's ADHD and disruptive behaviors can influence the course and severity of the disorder (Johnston & Mash, 2001). Maladaptive coping strategies are associated with less constructive discipline practices, such as permissive and authoritarian parenting styles (McKee, Harvey, Danforth, Ulaszek, & Friedman, 2004), which may contribute to more disruptive and less compliant behavior in children with ADHD (DuPaul et al., 2001). Other research (Greenberg, Speltz, & DeKlyen, 1993) suggests that parenting styles influence the child's self-regulatory development. Given the self-regulation deficits of some children with ADHD, family dysfunction and maladaptive parenting styles may serve to create, maintain, or exacerbate the child's poor self-regulatory behavior (Johnston & Mash, 2001). Thus, not only can the child's ADHD characteristics affect overall family functioning (see Barkley, 2006) but, conversely, parenting and family behavior can affect the course, if not the development, of the child's ADHD symptoms (Johnston & Mash, 2001).

Despite the valuable gains from research on family functioning in relation to ADHD, understanding of the interplay of child and family characteristics remains difficult because of the complexity of the family-child interaction. In their extensive review of families of children with ADHD, Johnston and Mash (2001) outlined several areas that have not been addressed in the literature, including if the family environment may affect and predict the development of ADHD over time, specific ways that parenting may interact with the child's experiences to produce and shape the course of ADHD, and the actual degree of difficulty across various domains of functioning that families with children diagnosed with ADHD experience. Kendall and Shelton (2003) reinforced the need for information on this last area and noted that although little effort has been made to typify how families of children with ADHD manage the child's illness and specific difficulties, there is a related literature (e.g., Knafl, Breitmayer, Gallo, & Zoeller, 1996; Rolland, 1994; Wamboldt & Wamboldt, 2000) examining family functioning related to a child's chronic (medical) illness from which this investigation could proceed. To this end, Kendall and Shelton developed a typology that applied the general concept of family management style (FMS) to families with children and adolescents with ADHD.

Familial characteristics were explored in 15 families that self-selected by responding to recruitment advertisements at various establishments including health clinics, community health agencies, schools, parent support

groups, and pediatric offices (Kendall & Shelton, 2003). There were 59 family members who comprised the 15 families and each individual was interviewed separately and within the family. The authors asked each family member to describe how ADHD affected them and the overall functioning of the family. Family member responses were used to classify the families into four FMSs related to ADHD: chaotic, ADHD-controlled, surviving, or reinvested. Similar to other FMS typologies (e.g., Knafl & Deatrck, 2003, 2006; Knafl et al., 1996), Kendall and Shelton used a hierarchical model to rank the four FMSs, so that the chaotic family is the lowest functioning family, followed by the ADHD-controlled family and the surviving family, with the reinvested family demonstrating the highest functioning in the typology.

Kendall and Shelton's (2003) FMSs capture the dominant characteristics of the family, such as strengths, difficulties, and activities, thereby providing a descriptive account of the level of family dysfunction. The chaotic family is characterized by extreme stress and disorder, receives little outside support, maintains little if any internal structure (i.e., there may be spousal violence, economic instability), and experiences a general lack of responsiveness alternating with extremely rigid parenting strategies to deal with the child's ADHD behavior. The distinguishing characteristic of the ADHD-controlled family is centralization of the child's disorder, for example, through reinforcement of the child's negative behaviors by ignoring, justifying, or excusing the child's behavior because of familial exhaustion. This family is both powerless and hopeless as a result of the child's ADHD symptoms and behaviors.

The surviving family, unlike the ADHD-controlled family, moves beyond the child's ADHD by focusing on other aspects of family life, gaining insight through social support and family counseling and managing the ADHD symptoms through diverse parenting and perspective-taking strategies. Parents in the surviving family also try to separate their child's experience from their own in an effort to identify appropriately with the child's difficulties. The reinvested family, then, expresses a renewed sense of energy in managing the child's ADHD symptoms. Through familial reinvestment, the parents use adaptive coping strategies that allow the family to feel restored and in control rather than merely surviving the child's negative behavior. Kendall and Shelton noted that in their sample the reinvested FMS comprised families in which the child diagnosed with ADHD was now an adolescent and that these families had experienced characteristics of at least the ADHD-controlled and surviving FMSs in the past. Thus, they hypothesized that the reinvested FMS might be most clearly a result of change over time as opposed to a separate FMS per se.

These four FMSs (see Kendall & Shelton, 2003, for further explication of each FMS) provide a useful framework for organizing specific characteristics displayed in families that include a child diagnosed with ADHD. Through their creation of an ADHD-specific FMS typology, Kendall and Shelton substantially advanced the understanding of family functioning in relation to ADHD. It is important to note, however, that the FMS typology does not provide a complete picture of overall functioning within the family because the typology does not assess all aspects of family functioning. The typology does not, for example, assess the family's financial stability, although this indicator of family functioning most likely affects levels of parental stress and overall functioning within the family. Furthermore, it is important to recognize that the FMS typology, which is based on family member's responses during interviews, assesses the family member's perceptions of functioning rather than actual functioning within the family.

Nevertheless, Kendall and Shelton (2003) pointed out that understanding more about the interaction between ADHD symptoms in a child and family management of ADHD is the beginning step to understanding what types of family interventions would be most useful to treating ADHD. By deriving their typology from patterns of family functioning based on qualitative data obtained from family interviews, Kendall and Shelton provided an initial conceptualization of the ADHD-related difficulties with which families struggle. However, they urged additional research to "confirm or disconfirm the typology" (p. 261). In further study of the typology, attention can be paid to strengthening potential limitations of the Kendall and Shelton study, including issues related to sample selection and the nature of FMSs over time. (We will more fully explore how the present study addresses these limitations in the discussion section.) Thus, the current study addressed Kendall and Shelton's call for continued research while improving on several of the methodological limitations of their study. Specifically, this study was designed to (a) apply Kendall and Shelton's ADHD family management typology to a new sample of families in which there is a child with ADHD and (b) explore the stability of the family's ADHD management style over the course of treatment.

Method

Participants

Archival data were collected from psychological evaluations in terminated case files from a private, nonprofit, community-based mental health

agency in southeastern Pennsylvania. Specifically, case files were examined from the Wraparound Division, an intensive service specializing in treating children and adolescents in the home, school, and community. To qualify for wraparound care, a client must display a level of impairment that significantly interferes with normal functioning, including the risk to self or others. Representative symptoms of children who present for wraparound care include impulsivity, aggression, and difficulties in emotional expression (for a full description of criteria see Pennsylvania Department of Public Welfare, n.d., *Severity Levels and Service Correlates, MH-Level 3 [Intensive]* section ¶ 1). Furthermore, less intensive services will not suffice to help improve the child's functioning.

To be included in the study, all children (a) underwent a first psychological evaluation (with input from at least one caregiver who also provided information), defined as an evaluation conducted at the commencement of wraparound services, with the same licensed, masters-level therapist and (b) had an Axis I diagnosis of ADHD (not necessarily the only Axis I diagnosis). Additionally, based on the aim of the study to apply the typology, case files meeting the above criteria were included in the analysis designed to apply Kendall and Shelton's typology if (c) there were no discrepancies concerning the ADHD diagnoses on evaluations within the same case file and (d) there was a consistent sequence of or timeframe for the evaluations (i.e., typically there is a 3-5 month window between reevaluations). Based on the aim of the study to extend understanding of change in FMS with treatment, case files meeting all the aforementioned inclusion criteria were included in the analysis pertaining to change in FMS from the outset of treatment if (e) a final psychological evaluation, defined as an evaluation that indicated that the child was either leaving wraparound services for different (usually less intensive) services within the agency or was terminating services altogether, was included in the file.

Materials and Procedure

We used Kendall and Shelton's (2003) narrative description of each FMS to construct a coding sheet (see Table 1) for summarizing information contained in the psychological evaluations. The coding format included themes that characterized all families (e.g., family strengths, personal activities) and a description of how these themes manifested in each FMS (see Table 2). The final characteristic for each FMS on the coding sheet was added to act as a summary interpretation of the overall family functioning for that FMS, which could be assessed by the coder on completion of the

Table 1
Descriptive Characteristics of Family Management Styles (FMSs)

Family Management Style	Description
Chaotic FMS	Extremely stressed/multiple stressors Little external support (immediate or external family) Little internal structure Parental conflict, role confusion, lack of consistency No coping strategies Family is emotionally unhealthy Derailment of "family train"
ADHD-controlled FMS	Child is clear identified patient Family is helpless (victimization) ADHD runs the show Reinforcement of negative behavior as a consistent pattern Ignore/blame others for aggression/behavior Accept behavior as normal Overemphasize good/ no accountability for bad behavior Parent is pushover Allow child to be too dependent Justify negative behaviors Family is exhausted Family is disengaged "Family train" is running slowly
Surviving FMS	Family looks at other issues to deal with Family is emotionally healthier Family is engaged Clear attempts at external support exist Family, school, and community Learns and implements perspective-building strategies (not just symptom management) "Family train" is on tracks and moving (will get off tracks but work to get back on)
Reinvested FMS	ADHD is present but not paramount Family uses adaptive coping strategies No saving behaviors Child accepts responsibility for actions "Family train" rarely gets off tracks

Note: ADHD = attention-deficit/hyperactivity disorder.

coding process for that evaluation. This coding sheet was used as a checklist when reviewing each psychological evaluation.

Three coders read the psychological evaluations and indicated the presence of any FMS characteristics that were evident in the descriptions of family background, personal interests and activities, and family strengths

Table 2
Descriptive Summaries and Examples of Family Management Style (FMS) Characteristics

FMS	Summary (Coding Characteristics of Respective FMS in Italics)
Chaotic	<p>This family, comprising the child (4-year-old male), mother, father, and sibling, is wrought with present distress. Child was recently kicked out of preschool for physical aggression, throwing furniture, and not listening to teachers (<i>extremely stressed/multiple stressors</i>). Father gets upset with and yells at child when child does not listen to his commands “the very first time.” Father works night hours and sees child infrequently, which upsets the child (<i>little internal structure</i>). Child has few friends with whom he can interact; when he plays, he is verbally and physically aggressive. Mother takes care of her father, who had a stroke, but has limited resources to do so (<i>extremely stressed/multiple stressors</i>). Child is physically aggressive with sibling, who has Lyme disease, which adds to parental stress (<i>extremely stressed/multiple stressors</i>). Mother reports that family is not active in the community (<i>little external support</i>). Mother reports that disciplinary practices are generally ineffective (<i>no coping strategies</i>; “<i>family train</i>” is <i>derailed</i>).</p>
ADHD controlled	<p>This family, comprising the child (5-year-old female), mother, father, and two siblings, appears overwhelmed. Child is controlling and fights with the mother over completing daily household tasks. Child also yells and hits her siblings. Mother reports that disciplinary practices, ranging from time-outs to loss of privileges, have been ineffective (<i>family is helpless</i>). Child has stated to family members “You’re going to do what I say no matter what.” Mother reports that child is disruptive in school, fights with peers, and attempts to boss them around (<i>child is clear identified patient; ADHD “runs the show”</i>). Family has some natural supports (e.g., grandfather, uncle) but does not participate in the community. Natural supports reluctant to watch after child because of her not following directions (<i>family is disengaged</i>). Mother reports that she feels overwhelmed (<i>family is exhausted</i>; “<i>family train</i>” is <i>running slowly</i>).</p>

(continued)

Table 2 (continued)

FMS	Summary (Coding Characteristics of Respective FMS in Italics)
Surviving	<p>This family comprised the child (12-year-old male) and mother; the father is incarcerated. Since services began, child has listened to directions from mother and expressed interest in spending time with her (<i>family is engaged</i>). Mother reports improvement in child's behavior, particularly his anxious outbursts and relationships with peers. Child was teased by classmates for his speech impediment, but, after moving to a different state and experiencing improvement with his speech problems, child has been able to make friends (<i>attempts at external support</i>). His anxiety has diminished as a result. Child occasionally refuses mother's directions and becomes physically impatient with her in public. Child is performing better in the classroom. Mother reports learning basic parenting skills and attempting to become more organized in the home (<i>learning strategies beyond symptom management; family is emotionally healthier; "family train" is on tracks and moving</i>).</p>
Reinvested	<p>This family comprised the child (10-year-old female) and grandparents. Mother and father are divorced. Grandmother reports that child's behavior has really improved since services began. Child has been performing well academically, taking responsibility for her school assignments. Child has also taken responsibility of caring for her household items (<i>no saving behaviors</i>). Child has difficulty interacting with peers because of lack of age-appropriate interpersonal skills, but grandmother encourages child to interact (appropriately) with same age peers, which child attempts. Grandmother reports that child has increased self-confidence, independence, and organizational skills (<i>ADHD is present but not paramount</i>). Grandmother reports that she is happy and relieved that child's behavior has improved in the home and school (<i>"family train" rarely gets off tracks</i>).</p>

Note: ADHD = attention-deficit/hyperactivity disorder.

and/or natural supports sections of the evaluation on the coding sheet. Psychological evaluations were independently coded by three raters to establish interrater reliability by calculating an absolute agreement intraclass correlation coefficient using a two-way random effects model. After the raters compared their codes and resolved discrepancies related to differing interpretations of characteristics, an intraclass correlation coefficient of .79 or excellent (Cicchetti, 1994; Fleis, 1981) reliability was achieved. Because it was possible for a family to have characteristics from several different FMSs and because each FMS had a different number of descriptors, once each evaluation was coded, the FMS with the highest percentage of characteristics selected was designated as the primary management style used in the family at the time of evaluation. Change in FMS from the outset to the end of treatment was examined for the subset of case files where both evaluations were present.

Results

The sample used to apply the FMS typology of Kendall and Shelton (2003) consisted of 123 children and adolescents (87 males and 36 females) between the ages of 3 years, 6 months and 18 years, 3 months (Mean [M] = 10 years, 6 months; standard deviation [SD] = 3 years, 2 months; Median = 10 years, 10 months) who were diagnosed with ADHD as an Axis I diagnosis in accordance with *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*) classification criteria (diagnosis dates ranged from 1994 to 2004). In the sample, 105 participants were Caucasian, 5 were African American, 1 was Spanish American, and 1 was Puerto Rican. The ethnicity of the remaining 11 participants was classified as other or could not be identified.

A subset of the sample for which both first and final psychological evaluations were available was assessed to evaluate change in FMS over the course of treatment. This sample consisted of 71 (51 males and 20 females) of the original 123 children and adolescents between the ages of 3 years, 6 months and 18 years, 3 months (M = 10 years, 10 months; SD = 3 years, 2 months; Median = 11 years). Sixty-two of the identified patients were Caucasian, 2 were African American, and 1 was Spanish American. The ethnicity of the remaining 6 participants was classified as other or could not be identified.

Frequency tabulations of FMS (see Table 3), type of ADHD diagnosis, and comorbid disorders by FMS were conducted. The ADHD-controlled

Table 3
Frequencies and Percentages for Family Management Style at First Evaluation

Family Management Style	<i>N</i>	Percentage
Chaotic	29	23.6
ADHD controlled	82	66.7
Surviving	12	9.8
Reinvested	0	0

Note: ADHD = attention-deficit/hyperactivity disorder.

family was the most common FMS in the current study, with the second and third most common FMSs being the chaotic and surviving families, respectively. There were no reinvested families identified in the current sample. Twenty-three of the 29 chaotic families (79.3%), 69 of the 82 ADHD-controlled families (84.1%), and 7 of the 12 surviving families (58.3%) had a child diagnosed with a comorbid Axis I disorder. Chi-square tests of independence comparing FMS with ADHD diagnostic type, $\chi^2(4) = 2.09, p > .05$, and FMS with comorbid Axis I diagnoses, $\chi^2(4) = 5.04, p > .05$, produced nonsignificant results.

At the outset of treatment, the families were classified into the following FMS categories: 17 chaotic families, 46 ADHD-controlled families, 8 surviving families, and 0 reinvested families. At the end of treatment, the following FMS categories were identified: 4 chaotic families, 31 ADHD-controlled families, 33 surviving families, and 3 reinvested families. When looking at change in FMS with treatment, 40 (56.3%) of the families demonstrated improvement, meaning the designated FMS at the end of treatment was higher functioning than at the outset of treatment; 25 (35.2%) of the families demonstrated no discernable change; and 6 (8.5%) demonstrated a regression in FMS functioning, meaning the designated FMS at the end of treatment was lower functioning than at the outset of treatment. A Wilcoxin signed ranks test indicated that the improvement in functioning with treatment was significant ($Z = -4.998; p < .01$).

Nature of Change in FMS

In trying to understand the nature of change in FMS in our subsample, we qualitatively analyzed the major themes (e.g., family strengths) in which there were significant changes reported by either the family member(s) or

the therapist in the final psychological evaluation. Although this methodology is highly interpretive, we believe that providing a qualitative analysis is important both for understanding the nature of change in our subsample and for comparing our findings with future research in which quantifiable reasons for change with treatment are investigated. We realize, however, that there are likely several factors responsible for change in FMS, including factors not captured by the psychological evaluations on which we base our speculation, and our analysis includes only the themes for which we can demonstrate reported change with treatment.

A subsample of 15 case files was randomly selected from the larger subsample of 71 participants for whom first and last psychological evaluations were available to assess the nature of change with treatment. Included in the analysis were five families that improved with treatment (i.e., higher functioning FMS from treatment outset), five families that regressed with treatment (i.e., lower functioning FMS from treatment outset), and five families that demonstrated no discernable change in FMS functioning with treatment. For families that improved with treatment, the child's progress in forming and maintaining peer and school relationships appeared most directly related to reported familial improvement. Additionally, these children were reportedly learning social skills from these relationships and accepting responsibility for household tasks, which improved the overall home environment. It is also important to note that many of these children were receiving stimulant medication while in therapy, which surely facilitated their ability to cultivate social relationships, to learn new social skills, and to behave more agreeably in the household.

For families that regressed with treatment, the child's continual aggression and conflict with siblings and peers seemed most directly related to reported familial deterioration. Parents of these children not only reported extreme stress and powerlessness over the child's behavior but also mentioned that the child's conflict often occurred at school, exacerbating relationships between the child, parents, and teachers. Indeed, positive and negative peer relationships seemed to be largely responsible for improvement and regression in treatment, respectively. However, it is difficult to speculate with any reasonable degree of certainty the reasons why families demonstrated no discernable change in FMS functioning with treatment. Based on our qualitative analysis, it appeared that these families were (a) dealing with the same or similar problems (e.g., child's aggressive behavior) at both the beginning and end of treatment and/or (b) had experienced very minor change in one or more themes, but this change was not significant enough to move their FMS in either direction.

Discussion

The present study examined whether Kendall and Shelton's (2003) FMS typology could apply to a new sample of families in which there is a child with ADHD and explored the stability of the family's ADHD management over time. Additionally, there were several methodological limitations of the Kendall and Shelton study on which the current study improved. Because of the intensive interviewing format of their methodology, they examined only 15 families with children with ADHD. This interviewing method is similar to how others (e.g., Knafl et al., 1996) collected data for their FMS typology and is particularly useful in collecting large amounts of detailed information from various family members. However, the time-consuming nature of this data collection technique potentially limits the amount and therefore the applicability of the data to be generalized to the larger population of children with ADHD and to the usefulness of this methodology for most treating professionals. A second limitation of the Kendall and Shelton study was that the families self-selected to participate in the research, which leads to the possibility that the characteristics of the participating families were somehow different from families who chose not to participate. Another limitation of the Kendall and Shelton study was that the child's level of pathology was unclear in the sample. As ADHD symptomatology exists on a continuum of severity, ambiguity in terms of severity level further limits the utility of these data. Finally, Kendall and Shelton did not directly track changes in FMS over the course of treatment, which may have provided important information relating to change (i.e., improvement) in FMS over time.

The results of this study provide further evidence of the ability to categorize families based on an ADHD-FMS typology (Kendall & Shelton, 2003) in that three of the four FMSs were reliably identified in our first sample and all four FMSs were identified in our subsample. Although the predominant FMS (ADHD-controlled) was the same for both the Kendall and Shelton sample and our sample, there were discrepancies related to percentages of families meeting criteria for the various FMSs (notably, our sample had higher percentages of chaotic and ADHD-controlled families, lower percentages of surviving families, and no reinvested families). The differences in percentages for the various FMSs, however, cannot be accounted for by simple differences in the demographic composition of the two samples, as age, $t(122) = -1.61, p > .05$, and gender, $\chi^2(1) = .245, p > .05$, were relatively similar across the two studies. Instead, we believe the differences obtained between the two samples relate directly to the actual pathology, which was unclear in the Kendall and Shelton study but was severe enough in our study

to make the child eligible for intensive services in our sample. Taking into account level of pathology likely explains the discrepancies seen between the numbers of families meeting criteria for each FMS between the two studies. Because our participants were not self-selected but instead comprised a complete sample of files meeting the inclusion criteria specified, it is to be expected that a greater number of chaotic and ADHD-controlled families in need of intensive care might initiate wraparound services specifically for that purpose. Similarly, the low numbers of surviving families is the likely result of the surviving family being less likely to initiate, be recommended for, or continue with wraparound care. It is also not surprising, therefore, that the reinvested FMS was not identified in our sample, as, based on the characteristics of the reinvested family and the qualifications for wraparound care, the level of functioning in this family would not qualify for intensive services.

Another useful component that the present study adds to the concept of FMSs is to understand FMSs in terms of where the child was in the course of treatment (e.g., beginning, middle, or end), which was not addressed in the Kendall and Shelton (2003) study. The current study identified children who were just beginning intensive (wraparound) treatment. Although just starting intensive services does not imply that the child recently began services, as the child may have undergone other treatment in previous years, because all data were collected from the first psychological evaluation, the FMS designation reflects the level of family management at the outset of a new treatment and not during later periods in treatment where both surviving and reinvested FMSs might be more likely to be present. Thus, although our findings do not provide a complete parallel to the findings of Kendall and Shelton, this study supports the previous findings of the predominant type of family that will be involved in treatment (ADHD controlled) and provides additional information related to the types of FMSs that can be expected at the outset of treatment when the child's ADHD symptoms are severe, as opposed to an unspecified point in treatment with unspecified severity levels of ADHD, as in the Kendall and Shelton study.

With respect to the second aim of examining stability of FMSs with treatment, all four FMSs (Kendall & Shelton, 2003) were reliably identified at the final evaluation, thereby demonstrating the full range of FMSs proposed by Kendall and Shelton. This result would be expected because change in ADHD symptoms during treatment might facilitate change within FMSs, leading to the transition to more adaptive (i.e., reinvested) FMSs. Furthermore, based on the qualifications for wraparound care, adaptive FMSs such as the reinvested FMS would not be expected to be present in the early stages of treatment but could be reasonably expected to emerge in

later stages of treatment. Finally, this result seems to support Kendall and Shelton's hypothesis that the reinvested FMS may be a function of change over time.

In addition to identifying all four FMSs, there was also significant positive change in FMS with treatment, with over one half of families moving to the next level of family management (i.e., higher functioning FMS). Interestingly, these results are contrary to research on family management related to chronic childhood medical illness. Knafl et al. (1996) examined the relative stability of FMS across a 12-month period and found that 48% of families maintained their previous FMS designation, with the remaining families split evenly between a more negative or positive FMS than in the first data collection session. Potential explanations for the positive change in FMS in our subsample include the difference in type of diagnoses of the two samples (over half of the sample in the study by Knafl et al. had diagnoses of diabetes) and the related prognoses of such disorders with treatment, the difference of time in treatment (Knafl et al. conducted all follow-ups after 12 months; the length of treatment in our sample was $M = 10$ months, $SD = 7$ months, Median = 8.5 months), or the impact of wraparound treatment, which may more directly involve the parents as home visits are part of the treatment regimen. Regardless of the reason for more positive change in our subsample, however, the positive change in FMS over time indicates that treatment of ADHD symptomatology may also positively affect this selected aspect of family functioning and provide another focal point in treatment.

Although our findings suggest that Kendall and Shelton's (2003) FMS typology is an efficient and useful classification scheme that can apply across different methods of data collection (e.g., family interviews, psychological evaluations), there are limitations to our study that should be taken into account. First, our study relied solely on data collected from psychological evaluations in terminated case files. Thus, information about the child and family's level of functioning was accessed from the evaluator's report in the file without any direct or additional insight provided by family members, as was done in the Kendall and Shelton study. This information may have been less detailed than what Kendall and Shelton amassed in the interviews with family members. However, we should note that even with limited information the typology was successfully applied, which means that information gathered in a traditional treatment intake can provide useful information related to family functioning. Second, it is unclear whether the statistically significant results of FMS change during treatment (e.g., our second sample) represent clinically significant change, although

we believe our findings to be an important initial step in understanding how families of children with ADHD endure with treatment. Finally, our study included children and adolescents who qualified for intensive services. Although knowing the severity level of the ADHD provides a cleaner sample from which conclusions can be drawn, it is ambiguous whether the frequency of FMSs found in our study would be similar to frequencies found in the general population because a large portion of children with ADHD may not require intensive treatment.

Although these limitations should be considered when interpreting our findings, we believe that the present study furthers the work on this ADHD-specific FMS typology and provides additional impetus for continued work in this area. In recent years, growing research on family management and relatives with mental illness (e.g., Walton-Moss, Gerson, & Rose, 2005) has called attention to the importance of understanding client functioning within the family context. Our first goal was to apply the existing ADHD typology of Kendall and Shelton (2003), as opposed to altering or expanding the typology per se, as a way to move the field forward in our use of a potential tool to aid in understanding of the types of difficulties that families with children diagnosed with ADHD experience. To that end, the present study, to our knowledge, is the first to examine a sample of children and adolescents with severe ADHD using an established FMS typology (Kendall & Shelton, 2003). Despite the limitations inherent in archival research, many of which have already been noted, this study is contributive in its ability to provide valuable data on family management of ADHD for an underrepresented population (severe ADHD) and for using data that is routinely collected as part of treatment. A second potential contribution comes from the coding sheet constructed for this study, which provides a checklist-type format that could be used by others to evaluate this selected aspect of family functioning based on the original descriptions provided by Kendall and Shelton.

Based on the success of applying the FMS typology and the demonstrated change in FMS as treatment progresses, further research on the typology and its utility for treatment planning and outcomes assessment seems appropriate. In terms of typology-specific research, because the Kendall and Shelton study and the study presented here both have specific methodological shortcomings, an ideal study of the FMS typology might assimilate both data collection methodologies in a sample of children with a range of ADHD severity to gain a comprehensive understanding of the child and family. Given Johnston and Mash's (2001) observation that little research has focused on the family environment and progression of ADHD over time, it

would also be interesting to examine whether FMSs serve as reliable predictors of variables associated with the development of ADHD, such as impairment in academic or vocational achievement (American Psychiatric Association, 2000).

Once the relevance of the typology in capturing useful information about family management with diagnoses of ADHD is further supported, future research is then needed to incorporate understanding of FMSs into the larger treatment picture. Ideally, the FMS typology should be used in conjunction with other assessment measures to aid the overall assessment of family functioning related to ADHD. By knowing where the child currently is in the treatment process, how severe his or her ADHD symptoms are, and what general themes emerge for the family in managing ADHD-related difficulties, the prominent familial characteristics can be isolated and attention can be directed toward how these characteristics interact to affect the child's diagnosis. Knowing which FMS a family employs can provide the clinician with important initial information about the family-child interaction from which tailored treatment interventions can develop. Furthermore, using FMSs to gauge improvement with treatment might allow clinicians and researchers to better understand the specific family factors that underlie treatment progression. Knowing, for instance, that an ADHD-controlled family that has not progressed with treatment typically experiences exhaustion, disengagement, and victimization can provide important therapeutic content in addition to the child's ADHD symptoms.

In a similar vein, gauging improvement with treatment might allow the clinician to distinguish between modifiable and nonmodifiable family-management factors. It seems intuitively obvious that most if not all of the FMS characteristics are modifiable (i.e., relieving stressors, reducing saving behaviors), but any FMS characteristic that does not lend itself to change as treatment progresses would be of both empirical and clinical interest. Future research should also attempt to pinpoint when in the treatment process changes in FMS occur and to assess both the nature and stability of such changes. Given the intricate nature of the family-child interaction, the incorporation of an ADHD-specific FMS typology into treatment for children and adolescents with ADHD could offer additional avenues to explore with the goal of reducing overall pathology in the identified patient. Another potential research avenue would be to attempt to disentangle the type of treatment received to better understand which treatments more clearly lend themselves to FMS change. A matched sample in terms of ADHD severity that had either wraparound or treatment as usual could provide such information.

Conclusion

The FMS typology (Kendall & Shelton, 2003), whether used in research or clinical settings, may add useful information to the conceptualization and treatment of ADHD as well as affect family functioning on a global level. The results of the research presented here, coupled with earlier work on ADHD FMSs (Kendall & Shelton, 2003), support the applicability and potential treatment utility of using a FMS typology with families of children and adolescents with ADHD. Given the utility of this typology to provide additional information that may be useful in ADHD interventions, future research on family management and ADHD to assist treating professionals in helping families better manage the experience of ADHD is warranted.

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