The Darker Side of Family Communication

The Harmful, the Morally Suspect, and the Socially Inappropriate

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The ADHD-Diagnosed Child

Does Family Communication Environment Contribute to the Decision to Medicate?¹

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Children can behave in unexpected ways. When such behaviors are associated with an ambiguous disorder, such as attention deficit/hyperactivity disorder (ADHD), parents may seek diagnosis and treatment, including the administration of powerful medications. Given the potential long-term, negative impact of medications such as Ritalin, parents face difficult treatment decisions. In an attempt to understand what conditions accompany parental willingness to medicate ADHD children, we surveyed and interviewed a stratified random sample of 48 mothers of 1st, 2nd, and 3rd grade children in rural Tennessee. Half the mothers had children clinically-diagnosed with ADHD and half did not. We queried simply whether the ADHD diagnosis was associated with willingness to medicate or, alternatively, whether certain patterns of communication within the family were more strongly associated with willingness to medicate. Could certain family communication patterns accompany the tendency to seek medication?
ADHD ETIOLOGY, DIAGNOSIS, AND TREATMENT

To date, childhood ADHD remains an ambiguous disorder with no single definitive test and no agreed upon etiology (APA, 2013; Breggin, 2011; Sadek, 2013). Because ADHD is a medical diagnosis, lay people might assume its etiology is physiological. In contrast, scholars believe that many factors might contribute to its development and diagnosis (APA, 2013; Anderson, Barabasz, Barabasz, & Warner, 2000; Breggin, 2007, 2008; Doggett, 2004; Iudici, Faccio, Belloni, & Costa, 2014; Hoagwood, Kelleher, Feil, & Conner, 2000), including the following:

• physical environment (e.g., exposure to toxic metals and diet);
• biology (e.g., genetic pre-disposition, heredity, medical problems, brain damage resulting from head trauma, and bacterial or viral infections);
• neurology (e.g., depressed activity of frontal lobes, brain's inability to stop receiving messages, and slow brain wave activity);
• culture (e.g., differences in frequency of diagnoses and preference of treatment types among different populations);
• social considerations (e.g., personal, parental, or societal reasons for preferring an ADHD diagnosis and particular treatment types); and
• family environment (e.g., parental standard for acceptable behavior and the orderliness/chaos within the household).

In the absence of a medical test for ADHD, diagnosis remains subjective in terms of the behavioral symptoms that constitute evidence of ADHD as well as who must observe the behaviors and under what conditions (Anderson et al., 2000; Baughman, 2006; Doggett, 2004). In addition to the subjective diagnosis, multiple treatment methods exist to address ADHD symptoms, including medication, behavior modification, neurological therapy, and change of environment or diet; treatments can be used individually and in combinations such that each treatment method can incorporate medication (Anderson, et al., 2000; Baughman, 2006; Breggin, 2000; Diller, 1998; Diller & Goldstein, 2006; Doggett, 2004). Currently, there is no established procedure for determining, before medication is prescribed, which drugs, if any, will be useful for a given child's symptomology (Breggin, 2013).

Despite the potential of dangerous side effects associated with prescribe medications (depression, sleeplessness, nervousness, loss of appetite, abdominal pain, weight loss, abnormal heartbeat, blood pressure changes, chest pains, dizziness, fever, headaches, hives, jerking, joint pain, Tourette's Syndrome, seizures, and drug tolerance; see Breggin, 2000; Diller, 1996), powerful amphetamine-like stimulant drugs, such as Ritalin, remain the treatment of choice in over 40% of ADHD cases (Breggin, 2008). Moreover, ADHD medication information typically fails to include the warning that 50% to 65% of the medicated children will
remain medicated throughout adulthood (Breggin, 2013). As children on Ritalin mature, their diagnoses and medication treatment often change; nonetheless, they typically remain on medication across the lifespan (Breggin, 1994, 2008, 2011; Diller, 1998; Diller & Goldstein, 2006).

Currently, stimulant medication is prescribed yearly to more than 6.4 million U.S. children (Visser et al., 2014). As the prescription numbers rise, so too have the drug options for treating ADHD, which now include Ritalin, Amphetamine (Adderall), Dextroamphetaine (Dexedrine), Atomoxetine (Strattera), and Lisdexametamine Dimesylate (Vyvanse) (National Institute of Mental Health, 2008).

Research suggests that approximately 11 percent of U.S. children actually suffer from ADHD, yet as many as 50% of the children in certain grades in some school districts are on ADHD medication (Breggin, 2008, 2011). During the past decade, the number of times U.S. children saw physicians for suspected ADHD and were not prescribed drugs decreased 45% (Hoagwood et al., 2000); thus, U.S. physicians are increasingly prescribing medication to children suspected of having ADHD. Such statistics may have encouraged the United Nations' International Narcotics Control Board to issue a warning to the U.S. against the over-diagnosis of ADHD. Furman (2005) argued that the increase in ADHD diagnoses is due to less parental tolerance of associated childhood behaviors. Similarly, Panksepp (2004) noted that with the exception of rare medical problems (i.e., hyperthyroidism and explicit brain injuries), the majority of normal, highly playful children who have difficulties adjusting to certain institutional expectations are erroneously diagnosed with ADHD. Thus, there appears to be an increased willingness to pursue medical treatment and to treat ADHD with such stimulants as Ritalin among parents, doctors, and teachers.

A COMMUNICATIVE PERSPECTIVE ON ADHD

Given the lack of agreement on ADHD etiology and concerns about the long-term effects of medication on children, many scholars search for an environmental cause of children’s ADHD-like behaviors. Recent speculation has turned to the family and home environment, especially family communication, as a catalyst for the ADHD diagnosis and medication (Breggin, 2013; Cohen, Dillon, Gladwin, & De La Rosa, 2013; McLaughlin & Harrison, 2006). Some families may exhibit greater tolerance for unusual behaviors and for active children; others may exhibit less tolerance. Some families may enact a lifestyle so chaotic that children may identify hyperactivity as the only pattern of behavior that garners adult attention. Alternatively, in families that believe that children should be seen but not heard, adults might label even modest activity by children as ADHD. Could certain beliefs about or patterns of family communication facilitate children to behave in ways that become labelled ADHD? Such a chain of events could allow parents to
turn to medication as a means of controlling what is perceived as an out-of-control child whose behavior negatively impacts the parents and/or the family.

Our study seeks to understand the family communication dynamics that might surround the decision to medicate an ADHD-diagnosed or misdiagnosed child. To better understand parental willingness to medicate, we examined mothers' perceptions of the communication within their families of creation. We elected to examine family communication environment, with the use of a widely employed assessment of internal family communication dynamics.

FAMILY COMMUNICATION ENVIRONMENT

The family social environment can serve as the primary socialization agent for children (Webb, Ledbetter, & Norwood, 2014). Rules for interaction are established in the family and reinforced by parents and siblings, ultimately creating normative family communication behavior. Parents typically serve as children's first communicative role models; thus, the interactions with parents can have great impact on a child's communicative development (Koesten, 2004; Koesten & Anderson, 2004). However, not all families socialize children to communicate in the same ways. Fitzpatrick and Koerner (1997) concluded, “Family communication environments differentially foster the development of various functional communication skills” (p. 1).

Koerner and Fitzpatrick's (2002) theory of family communication schema explains both the differences and similarities in families' communication patterns. The theory posits that family communication behaviors are governed by cognitive schemas or orientations to family communication and that the schemas can vary from family to family. “These schemata emerge from working models of how parents and children interact; and, ultimately, they shape how family members perceive their social environment and communicate within and outside the family” (Schrodt & Carr, 2012, p. 55). Thus, Koerner and Fitzpatrick's (2002) family communication schema and its accompanying family communication environments or patterns can influence children's communication behaviors in the family and outside the family into the children's adulthood, long after they leave their family of origin (Koerner & Fitzpatrick, 1997).

McLeod and Chaffee (1972) developed, and Ritchie and Fitzpatrick (1990) later refined, the concept of Family Communication Patterns also known as Family Communication Environments (FCE; Fitzpatrick & Ritchie, 1994). FCE has become among the most studied notions in family communication scholarship; the most recent meta-analysis on FCE documents its efficacy in explaining outcomes, particularly in children (Schrodt, Witt, & Messersmith, 2008).

FCE describes two dimensions of family communication: conformity-orientation and conversation-orientation. Conversation-orientation refers to the
dialectic between a family's tendency to encourage discussion versus the tendency
to encourage members to remain silent and to speak only when necessary. Con­
versation-orientation correlated positively with adolescent adjustment (Ruetter &
Koerner, 2008), the development of interpersonal skills (Babin & Palazzolo, 2012;
Koesten & Anderson, 2004), emotional connections and self-esteem (Schrod
t Ledbetter, & Ohrt, 2007), daughters' relational closeness with fathers (Scott,
Webb, & Amason, 2012), as well as positive relational endeavors including friend­
ship closeness (Ledbetter, 2009) and maintenance behaviors (Ledbetter & Beck,
2014). In sum, conversation-orientation may play a pivotal role in interpersonal
interactions inside and outside the family.

The second dimension, conformity-orientation, refers to the dialectic between
a family's tendency to stress harmony, children's obedience to parents, and high lev­
els of agreement between parents and children on attitudes, beliefs, and values ver­
sus the tendency to respect and encourage the development of individual thought
among family members that typically result in the acceptable expression of diverse
viewpoints. High conformity families focus on harmonious relationships and uniform­
ity of opinion, allowing little room for individuality (Fitzpatrick & Ritchie 1994).
High conformity socialization can result in lower self-esteem, higher stress, and
more common instances of communication apprehension and depression (Schrodt
et al., 2007) as well as low levels of relational maintenance (Ledbetter, 2009).

Researchers have linked FCE to a variety of communicative outcomes includ­
ing perspective taking (Koerner & Cvancara, 2002); behavioral outcomes, such as
interpersonal competence (Koesten & Anderson, 2004; Koesten, 2004); as well
as psychosocial outcomes, such as family adjustment among adopted children
(Rueter & Koerner, 2008).

FCE is a parent-driven construct. Indeed, it could be argued that any parental
communication behavior is simply a part of FCE—a way for parents to reinforce,
enforce, and maintain the FCE they desire for their children, and to socialize
parental notions of appropriate communication behaviors embodied in the FCE
they advocate. Of course, all family members use communication with other fam­
ily members (Saphir & McChaffee, 2002) to teach FCE and the specific com­
munication behaviors associated with the parental advocated FCE. Given that
communication is omnipresent in the process (the agent, means, and outcome), it
seems reasonable to assert the possibility that FCE might influence how parents
label their children's talkativeness.

**FCE AND ADHD**

Research suggests that children's behaviors outside the family can reflect communi­
cation in the family environment. For example, a child growing up in a family that
values authority over conversation is more likely to exhibit an abrasive, aggressive, and dominating style with peers and be less popular than children from homes that privilege open expression of ideas through conversation (Koerner & Fitzpatrick, 1997; Koesten, 2004; Koesten & Anderson, 2004). When abrasive, aggressive, and dominating antisocial behaviors are associated with a child, they can become part of the symptomology for a childhood malady recognized as ADHD. Children with ADHD are characterized by excessive activity and an inability to self-regulate focused attention (APA, 2013; Anderson et al., 2000; Sadek, 2013). However, those same characteristics can be used to describe children from certain FCE. While ADHD is widely researched, the link between ADHD and FCE has received no attention to date.

Given its ambiguous etiology, leading literature, such as the Diagnostic and Statistical Handbook of Mental Disorders (APA, 2013) warns against assigning an ADHD diagnosis to children from certain chaotic family environments, as they may display hyperactivity and inattention as learned behaviors (Breggin, 1994, 2008; Diller, 1996, 2011; Sadek, 2013). In light of the possible effects of the family environment, some experts argue that an ADHD diagnosis should be reserved for children reared in a stable social environment (Breggin, 1994; Diller, 1998; Sadek, 2013).

**DARK SIDE OF FAMILY COMMUNICATION**

We do not question the existence of ADHD; however, we place family communication at the heart of its etiology, an issue that extant literature only alludes to in hints and suggestions: What role, if any, could FCE play in producing ADHD-diagnosed children? What purposes could medication serve within these environments, given that some parents view ADHD medication as an “easy and effective way to obtain child compliance” (Eberstadt, 1999, p. 14; Diller, 2011; Iudici et al., 2014). By making a child more agreeable and less argumentative, the drug might accomplish what the parents could not without the medication. If a child is medicated, the parents may feel relieved of pressure (either communicated or perceived) from educators, friends, and family to “control” the child’s unruly behavior. Additionally, some parents may view medication as an effective way to help children conform to expectations, thereby absolving the parents of responsibility and blame when children fail to conform to expectations both inside and outside the home (Breggin, 2011; Diller, 2011; Iudici et al., 2014). When focusing attention on an ADHD-diagnosed child receiving medication, attention is focused away from parental behaviors, family concerns, and the potential need to examine or change behaviors within the family. Breggin notes that ADHD “is almost always either Teacher Attention Disorder (TAD) or Parent Attention Disorder (PAD). These children need the adults in their lives to give them improved
attention” (2011, para. 2). He warns that the diagnosis and medication treatment provide an excuse for some parents to avoid the issue of family dynamics.

**PURPOSE AND RESEARCH QUESTIONS**

Unlike other approaches to ADHD etiology (e.g., environmental, biological, neurological, cultural, and social), this chapter directly addresses family communication. No previous research has tested for a direct link between family communication and the ADHD phenomenon (diagnosis and willingness to medicate) in children. The purpose of our study was to explore the potential relationship between FCE and mothers’ willingness to pursue a medication treatment for an ADHD-diagnosed child. To this end, we posed four research questions:

RQ1. Do mothers with (versus without) ADHD-diagnosed children differ in their willingness to medicate ADHD-diagnosed children?

RQ2. Do mothers with (versus without) ADHD-diagnosed children differ in their FCE?

RQ3. Do mothers from the four FCE types differ in their willingness to medicate?

RQ4. Is conformity- or conversation-orientation directly associated with mothers’ willingness to medicate an ADHD-diagnosed child?

**METHOD**

**Sample**

*Focus on mothers.* Mothers’ communication continues to attract the attention of communication researchers as a meaningful object of study (e.g., Colander & Rittenour, 2015). Most relevant to our study, mothers spend over twice as much time with their children as fathers (Caumont & Wang, 2014) and thus are in a position to monitor children’s behavior, including behaviors associated with the ADHD diagnosis, as well as interact with their children’s teachers and coaches who may point out behavioral abnormalities, if they exist. Thus, our study continues the line of research examining mothers’ communication patterns. However, given the purpose of our study, we limited our sample to mothers of 1st, 2nd, and 3rd grade students (N = 60) enrolled in a rural, county school system in rural Tennessee.

*Recruitment of mothers.* A university Institutional Review Board and a county Board of Education approved the research before data collection began. We selected participants, hereafter called mothers, from responses to a “Willingness to Participate” letter sent home with each 1st, 2nd, and 3rd grade child in the school
district. We sent 650 letters; 300 mothers indicated their willingness to participate in the study by signing and returning the letters (a return rate of 46.2%). During an initial telephone call, we notified mothers that we received their letters and asked them if their child had any clinically diagnosed learning problems, behavior disorders, or combination of both (e.g., ADHD). Based on the mothers’ reports, we categorized children as either non-ADHD-diagnosed or ADHD-diagnosed. All children in the latter group had been clinically diagnosed, at least according to the reports of their mothers.

The potential research participant list contained 88 mothers of an ADHD child and 212 mothers of non-ADHD-diagnosed children. Given that we administered the written instruments in a one-on-one format, and given the difficulties of scheduling one-on-one meetings with busy (often single) mothers, we could not conduct administrations with each volunteer mother. Therefore, to keep the project a manageable size, we randomly selected 60 mothers (30 ADHD and 30 non-ADHD) to participate in the study. We notified mothers of their selection and scheduled mutually agreeable dates and times for the 90-minute, data-collection sessions.

Narrowing of the sample. A series of $t$-tests compared the scores from the mothers of male versus female target children across the variables of interest. The $t$-test provides a robust comparison between two groups in situations where the sizes of the groups are uneven and relatively small (Winter, 2013) as well as when scores on the dependent variables are not normally distributed (Kariya, Sinha, & Giri, 1986). The analyses yielded no significant differences. Therefore, we combined data from mothers of sons and daughters for subsequent analyses.

Next, we conducted $t$-tests to assess potential differences between the scores of Caucasian versus non-Caucasian mothers ($N = 48$ and 12, respectively). One of the three analyses yielded significant results ($t_{(58)}$ willingness to mediate $= -2.14, p = .04$; $M_{\text{Caucasian}} = 3.23; SD = 1.35; M_{\text{non-Caucasian}} = 4.19; SD = 1.59$) and another result demonstrated a trend toward significance ($t_{(58)}$ perception of Priming $= 1.93, p = .06$; $M_{\text{Caucasian}} = 59.67; SD = 13.14; M_{\text{non-Caucasian}} = 51.25; SD = 14.96$). A conservative interpretation of these findings would be that the Caucasian versus non-Caucasian mothers’ scores potentially differ across the variables of interest. Therefore, we elected to not combine the ethnic subsamples for subsequent analyses. Due to the relatively small number of ethnic minorities participating in the study ($N = 12$), we included data from only Caucasian mothers ($N = 48$) in the subsequent analyses. Thus, 48 Caucasian mothers served as the research sample for the study.

Description of the sample. Mothers’ mean age was 34.85 years ($SD = 4.55$, range = 26–43). Mothers reported completing, on average, 11.77 years of education ($SD = 0.63$) and giving birth to their first child at the age of 24.23 ($SD = 4.25$, range = 16–36). Mothers’ self-reported employment statuses were as follows:
(a) 71% employed outside of the home (n = 34); (b) 21% full-time homemakers (n = 10); and (c) 8% employed part-time outside of the home (n = 4). Mothers’ reported marital statuses as follows: (a) 56.25% married; (b) 27.08% divorced; (c) 12.50% widowed or separated from their spouse; and (d) 4.17% never married. Although 54% (n = 26) of the research sample did not report an ADHD-diagnosed child in the home, 40% (n = 19) reported one ADHD-diagnosed child and 6% (n = 3) reported having two ADHD-diagnosed children. Finally, the 22 mothers with at least one ADHD-diagnosed child self-reported the children’s treatment as: (a) 68.18% stimulant medication; (b) 22.72% counseling; (c) 4.55% behavior modification; and (d) 4.55% a combination of medication and counseling. This sample’s self-reported treatments are consistent with other U.S. samples. For example, Hoagwood et al. (2000) reported that ADHD treatment with stimulant prescriptions increased to 75.4%, and counseling treatment dropped just below 25%.

Instruments

Each mother completed written, counter-balanced questionnaires. All data were collected in the mothers’ homes. Although we employed extant written instruments, we conducted a factor analysis of the items using principal components varimax rotation with Kaiser Normalization to assess the validity of the instruments with our sample. The factor analysis across every item of all instruments yielded the anticipated factors with acceptable Cronbach’s alphas ranging from .87 to .96.

Demographic variables. The mothers completed a 29-item questionnaire that requested information used to describe the sample (e.g., age, ethnicity, marital status). Mothers who reported being the parent of an ADHD-diagnosed child received a version of the questionnaire that asked about their preferred treatment options: (a) medicine treatment, (b) behavior modification, (c) counseling treatment, and/or (d) other.

Family Communication Environment. Ritchie and Fitzpatrick’s (1990) Revised Family Communication Pattern (RFCP) instrument assessed the mothers’ perceived FCE. Designed to measure perceptions of family conversation (questions 1–15) and conformity (questions 16–26) orientations, the RFCP allows responses of 1 to 5 to the 26 items, where 1 indicates “always” true of the family and 5 indicates “never” true of the family. Typical items include the following: “In our family, we often talk about our future” and “In my family, I feel it is important for my children to obey me without question.” The Cronbach alphas for conversation-orientation (a = .96) and for conformity-orientation (a = .87) compared favorably to those reported by Ritchie and Fitzpatrick (1990).
Following the standard scoring procedure for the RFCP, we categorized the scores into four types, via a median split along the two underlying dimensions of conversation- and conformity- orientations, employing the medians of our research sample as the mid-points for the categories: laissez-faire (low in both conversation and conformity), protective (low in conversation and high in conformity), consensual (high in both conversation and conformity), and pluralistic (high in conversation and low in conformity). Our 48 mothers were distributed across the four categories as follows: laissez-faire \((n = 9)\), protective \((n = 10)\), consensual \((n = 12)\), and pluralistic \((n = 17)\).

**Willingness to Medicate.** The ADHD Knowledge and Opinion Scale (AKOS-R; Bennett, Power, Rostain, & Carr, 1996) measured mothers' willingness to medicate their ADHD-diagnosed child, hereafter called "willingness to medicate." Response scales for the individual items on the AKOS-R instrument ranged from 1 to 6, where 1 indicates *strongly disagree* and 6 indicates *strongly agree.* To allow for direct comparisons between groups as well as to follow the procedure employed by Bennett et al. (1996), mothers of non-ADHD-diagnosed children were requested to respond to the questions as if their child was diagnosed with ADHD. In our sample, the Cronbach alpha for the instrument was .95.

**Procedures**

**Administration of Questionnaires and Interviews.** Following selection, each mother signed a consent form. We informed the mothers that their participation in the study was voluntary and guaranteed confidentiality within the limits of the law. We conducted the data-collection sessions in the mothers' homes. To avoid possible distraction or confidentiality concerns, an assistant removed children from the interview room either to play outside or to view an age-appropriate movie in another room of the home.

On arriving at the interviewee's home, the first author allowed a few minutes for introductions and to explain the study to the mother. The research was characterized as a study of challenges families face with elementary school-age children and how mothers communicate about those challenges. Then, explanations and instructions were provided for each instrument and mothers were encouraged to ask questions whenever clarification was needed. Following data collection, each mother received $5.00 compensation for her participation.

**Pretest.** Before data collection, we pretested the instruments, interview protocol, and procedures with ten mothers randomly selected from the subject pool (i.e., five mothers of ADHD children and five mothers of non-ADHD children). Based on pretest feedback as well as our experiences during the pretest, we made minor
spelling and grammatical changes to the written questionnaires. However, we made no changes to the administrative protocol.

RESULTS

Differences between mothers with versus without ADHD-diagnosed children. A series of $t$-tests compared the scores of mothers with ADHD-diagnosed versus non-ADHD-diagnosed children across the variables of interest. The analyses yielded no significant results. These results answer RQ1 and 2 in the negative. Mothers with (versus without) ADHD-diagnosed children did not differ in their willingness to medicate their ADHD-diagnosed children, their conversation-orientations, nor their conformity-orientations.

Differences in willingness to medicate an ADHD-diagnosed child by FCE types. A univariate analysis of variance revealed that mothers from the four FCE subsamples differed significantly in their willingness-to-medicate scores ($F_{(3,30)} = 13.21, p < .01$), thus answering RQ3 in the affirmative. Parents from some FCE types reported significantly higher willingness to medicate scores than those from other FCE types. Post hoc Bonferroni multiple comparisons revealed a pattern of significant differences between Laissez-faire and Protective mothers versus Consensual and Pluralistic mothers. As a means of summarizing our results and profiling the FCE types, we constructed the table below to depict the results for each

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<td>Willingness to Medicate Score:</td>
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Note: Overall willingness-to-medicate scores were $M = 3.23$, $SD = 3.23$. 
FCE type. Please note that one-way analysis of variance is tolerant of small and uneven group sizes (Kastenbaum, Hoel, & Bowman, 1970) when the dependent variable approximates a normal distribution, as was the case with willingness to medicate.

Associations between conformity-orientation, conversation-orientation, and willingness-to-medicate scores. We examined the frequency distributions of our three variables (i.e., conformity-orientation, conversation-orientation, and willingness-to-medicate scores); only one distribution was normally distributed (i.e., willingness-to-medicate scores). Therefore, we calculated a series of non-parametric Spearman's rho statistics to assess the potential associations the three variables of interest. "The efficiency of the Spearman rank correlation when compared to the most powerful parametric correlation, the Pearson r, is about 91 percent" (Siegel, 1956, p. 213). Two of the correlations were nonsignificant. However, the analysis revealed one significant negative correlation ($\rho = -0.72$, $p = .00$, $r^2 = .51$) between conversation-orientation and willingness to medicate. The lower the conversation among orientation, the more willing to medicate. These mixed results provided a clear answer to RQ1: The analyses documented a significant negative association between conversation-orientation and willingness to medicate. The analyses relevant to both RQ3 and 4 revealed consistent results: Willingness-to-medicate was negatively associated with conversation-orientation and the two FCE types with low conversation-orientation (Protective and Laissez-faire families) displayed the highest willingness-to-medicate scores. The more families promoted conversation, the less likely they were to mediate their ADHD-diagnosed children.

**DISCUSSION**

A Communicative Explanation for Willingness to Medicate

Overall, the results of this study provide support for a communication-based understanding of ADHD diagnosis and treatment. It seems rational to assume that mothers' willingness to medicate would be differentiated by the diagnosis of ADHD (rather FCE). That was not the case in our sample. Instead, mothers' willingness to medicate their ADHD-diagnosed child was significantly and negatively correlated with their family conversation-orientation. In this sample, the more mothers valued conversation and open discussion in the family, the less likely they reported being willing to medicate. Conversely, the less the mothers privileged family conversation, the more willing they were to medicate their ADHD children, perhaps medicating the children into silence.
The results of the one-way analysis of variance provided further support that conversation-orientation may be the critical variable at play in willingness to medicate. The Laissez-faire and Protective mothers posted significantly higher willingness-to-medicate scores than the Consensual and Pluralistic mothers. Recall that the major difference between the Laissez-faire and Protective versus the Consensual and Pluralistic family types is that the former two types are low in conversation-orientation, whereas the latter two are high in conversation-orientation. Support for these results can be found in additional family communication research that also documents the significant impact of conversation-orientation on the thoughts and behaviors of family members (Fitzpatrick et al., 1996; Koesten & Anderson, 2004; Ledbetter, 2009; Ledbetter & Beck, 2014; Rueter & Koerner, 2008; Schrodt et al., 2007; Scott et al., 2012).

For example, previous research documents that when families encounter challenging situations (e.g., exposure to violence, conflict, or deployment), members from high-conversation-oriented families did not display some of the more negative results of living in a troubled family (Babin & Palazzolo, 2012; Sillers, Holman, Richards, Jacobs, Koerner, & Reynolds-Dyk, 2014; Wilson, Chernichky, Wilkum, & Owlett, 2014). In such cases, the higher conversation-orientation may allow family members to talk through and appropriately address their problems. Conversely, mothers from low-conversation-oriented families may refrain from engaging in talk necessary to problem solving.

Members of low-conversation-oriented families are more likely to possess fewer social interaction skills and to withdraw from conversation (Koerner & Fitzpatrick, 1997, 2002, 2004; Koesten & Anderson, 2004). Given these tendencies, it is reasonable to believe that low-conversation mothers might shy away from the more conversation-oriented ADHD treatment programs (e.g., counseling or behavior modification). Thus, mothers from low-conversation families may co-construct their children’s ADHD diagnosis with their pediatrician by communicating less tolerance for their children’s talkativeness, showing more willingness to recognize that behavior as a disorder, and desiring a quick and effective treatment of the ambiguous disorder via medication.

Note that conformity-orientation was unrelated to willingness to medicate across multiple analyses. Indeed, all parents might desire their children to conform to a reasonable extent to family and household norms. But what are the family norms for conversation? Conversational norms seem to differentiate mothers who are willing to medicate from mothers who are not.

Our results lend credence to the notion that certain FCEs may create affordances that encourage medicating ADHD-diagnosed children. Indeed, the consistencies of the findings lend credence to a notion of a communicative etiology to the tendency to medicate the ADHD-diagnosed child. We report correlations here and do not document causation or predict behavior. Nonetheless, our findings
provide a warrant for a line of research testing for causal relationships. Such findings would provide further support for Koerner and Fitzpatrick's (2002) theory of family communication schema and their claim that FCE can influence behaviors inside and outside the family.

Limitations

Conclusions drawn from this study must be tempered with an understanding of the study's limitations. Our study's sample, although randomly drawn from among volunteers, contained multiple characteristics that limit the generalizability of the findings. Our relatively small sample contained only Caucasian mothers living in a rural area in one Southern state in the United States. Furthermore, we employed self-report methods and such methods can be negatively influenced by social desirability and recall issues. We also allowed mothers with no ADHD-diagnosed child to participate in the sample and in some assessments to report projected behavior if her child was diagnosed with ADHD. Here we asked mothers to engage in hypothetical thinking; when faced with an actual diagnosis, mothers may behave quite differently than they here reported that they would.

Conclusions

Our study provides evidence that a communication perspective on ADHD can be useful in providing insight into mothers' willingness to medicate their ADHD-diagnosed children. Despite our study's limitations, it contributes to knowledge about the dark side of family communication. The study provides the first evidence that specific FCEs (i.e., Laissez-Faire, Protective) are associated with willingness to medicate ADHD-diagnosed children. Second, the study identifies conversation-orientation as strongly associated with mothers' willingness to medicate their ADHD-diagnosed children. Third, these findings may point to the need for psychological assessment of an entire family, when parents request an ADHD evaluation for a child. Given that lower conversation-orientation scores would be associated with lower adolescent adjustment (Rueter & Koerner, 2008), less developed interpersonal skills (Babin & Palazzolo, 2012; Koesten & Anderson, 2004), fewer emotional connections and lower self-esteem (Schrodt, Ledbetter, & Ohrt, 2007), as well as fewer relational endeavors including friendship closeness (Ledbetter, 2009) and maintenance behaviors (Ledbetter & Beck, 2014), these parents may lack communication skills and/or experience psychological problems. Fourth, the study suggests fruitful directions for further communication-based research on ADHD.
REFERENCES


**NOTES**

1. This chapter is based on the first author's PhD dissertation. The authors thank Joann Keyton (PhD, 1987, Ohio University) who chaired the defense of the dissertation as well as Dixie R. Crase (PhD, 1967, Ohio State University), Walter G. Kirkpatrick (PhD, 1974, University of Iowa), and D. Gray Mathews (PhD, 1993, Pennsylvania State University) who also served as members of Ms. Gibson's dissertation committee.

2. For a more detailed list of outcomes associated with FCE, please see Schrodt et al. (2008).

3. The findings here reported are drawn from a larger data collection. One of the instruments used in that larger data collection was designed to assess communication in public venues and had not previously been employed to assess communication in a family setting. Given that the instrument was significantly modified in wording and context to address the focus of this study, we opted to employ a rigorous form of factor analysis.