

**PSYCHIATRIC DIAGNOSES AND CONCOMITANT DRUG TREATMENT IN THE
EARLY CHILDHOOD SPECIAL EDUCATION POPULATION**

**Sara Totten,
William Frankenberger,
and
Jennifer Stroh**

University of Wisconsin-Eau Claire

The purpose of this study was to determine the types of psychiatric disorders and the corresponding medications prescribed to children enrolled in Early Childhood Special Education Programs (ECSE) and to ascertain teacher attitudes related to this topic. Data were collected via surveys disseminated to five hundred-twenty five Early Childhood Special Education teachers in Wisconsin, Minnesota, and Iowa. Approximately 40% of the teachers surveyed provided information on children enrolled in their ECSE class. Two hundred and eleven (8%) children enrolled in ECSE Programs were identified as having a psychiatric disorder with 84% of those identified receiving one or more psychiatric medications for their diagnose(s). Overall, teachers tended to agree that psychotropic medication helped students maintain control of their behavior. The more strongly teachers believed that medication aided in classroom control, the more likely children in their classes were receiving psychiatric medication.

Prescriptions for psychiatric medications to treat children ages six and under have become increasingly more prominent over the past decade (Zito, Safer, dosReis, & Gardner et al., 2000). Today, young children are frequently prescribed medication to manage psychiatric disorders such as Attention Deficit Hyperactivity Disorder (ADHD), depression, anxiety, etc. (Brophy, 1995; Francis & Hemmat, 1996; Lemonick & Park, 1999; Portner, 1998; Zito et al., 2000). As a result of short-term stimulant treatment for ADHD, academic productivity, time on-task, and social perceptions have consistently shown improvement in school age (5 years and older) children (Moline & Frankenberger, 2001; Schachar et al., 2002). However, children are prescribed psychiatric drugs without researchers having data related to long-term effects and risks. As a result, learning and behavior of children taking psychiatric medications may potentially be adversely affected (Coyle, 2000). Despite potential adverse effects, the prescription rates of psychiatric medication for children continue to rise (Coyle, 2000; Fritz, 2000; Hall, Bowman, & Frankenberger, 2006; Wiznitzer & Findling, 2003; Zito et al., 2000).

Psychiatric Diagnosis

Roberts, Attkisson, and Rosenblatt (1998) reported prevalence rates of psychopathology at 8% in preschool age children. With respect to specific disorders, McDonnell and Glod (2003) reported anxiety, simple phobia, and oppositional defiant disorders as the most prominent among this age group. However, Zito et al., (2000) suggested ADHD was likely the most commonly diagnosed disorder in early childhood. Disorders with less prevalence in the study were post-traumatic stress disorder and major depressive disorder. Further, the authors cited high rates of comorbidity among preschoolers with anxiety and emotional disorders (Zito et al., 2000).

Types of Medications Prescribed and Rates of Use

There are several psychopharmacological medications frequently used for treatment of school age youth (Olfson, Marcus, Weissman, & Jensen, 2002). The most commonly prescribed medications among children are stimulants, and the rate of stimulant use has increased dramatically over the past decade (Zito, et. al., 2000). For example, Frankenberger, Lozar, and Dallas (1990), in a national sample of 33,000 children in grades K-6, reported 1.47% utilized stimulants. However, more current estimates of stimulant use among students in grades one through five in North Carolina public schools were 7% (Rowland, Sandler, Umbach, Stallone, Bohlig, & Naftel, 2002).

Little direct information is available related to the prevalence of preschool age children treated with stimulant medication. However, Rappley, Eneli, and Mullan et al. (2002) reported that in a group of 223 children diagnosed with ADHD ages three and younger, over half were receiving psychiatric medication. According to Medco (2004), the use of these drugs among preschoolers went up 49% between 2000 and 2003. Zito et al., (2000) stated 3000 prescriptions of fluoxetine hydrochloride (Zoloft) were written for youth under one year of age in 1994, while Armstrong (2004) reported the rate of antidepressant prescriptions for preschoolers doubled between 1998 and 2002.

There are no known studies addressing the use of multiple prescriptions of psychiatric medication for preschool age children. However, there has been an increase in the prescription of multiple psychiatric medications for school age youth. Safer, Zito, and dosReis (2003) found that approximately 20% of outpatient youth in the 1990s were taking multiple psychiatric medications, while estimates in clinic settings suggest the use of medication combinations at over 50%. Other studies, such as Moline and Frankenberger (2001), found 21% of secondary students diagnosed with ADHD were taking combinations of medications. Further, Hall, Bowman, & Frankenberger (2006) found, in a sample of 600 elementary students in emotional/behavioral disturbed (EBD) classrooms located in Midwestern schools, 15.1% of children were taking two or more psychiatric medications. Additionally, 6.2% of children in the sample were taking combinations of three or more psychiatric medications.

Issues Related to Medication Treatment with Children

Overall, there is a dearth of research with regard to possible adverse effects of psychiatric medication in preschool age children. However, Safer, Zito, & dosReis (2003) reported that the potential for adverse effects among children younger than nine is considerably higher compared to older children and adolescents. Furthermore, the majority of medication prescribed to young children to treat psychological disorders has not been approved by the FDA (Lemonick & Park, 1999; Portner, 1997; Sweeney & Forness, 1997). Additionally, the FDA does not evaluate the effects on children who are taking psychiatric medications prior to their prescription, nor does it track the amount of psychiatric medications being prescribed to them (Shogren, 2004).

Studies have demonstrated differences in the neurotransmitter systems of children's brains, as well as alterations in brain functioning associated with the age and maturation of children receiving psychiatric medication (Wiznitzer & Findling, 2003). Wiznitzer and Findling (2003) also suggested differences in the effectiveness of psychiatric medication to be a result of brain variances in a child's brain compared to that of an adult. For example, the norepinephrine and dopamine systems continue to develop until adulthood. Consequently, this malleability may explain the difference in efficacy of psychiatric medications such as antidepressants in adults compared to children. Early childhood specifically, includes brain development of areas such as visual processing, language, and motor skill. Moreover, the lack of development in a child's brain may present enhanced susceptibility to the potential negative effects of psychiatric medication (Fritz, 2000).

Andersen (2005) reported chronic pre-adolescent exposure to stimulant medication altered the expected development of brain structure and function and resulted in a different topography in adulthood. The timing of the exposure and the age of examination along with the sex of the individual influence the observable effects on the brain. Animal studies corroborate these findings. Researchers at Harvard Medical School (Carlezon & Konradi, 2004) found that two daily injections of methylphenidate in pre-adolescent rats led to depressive behavior patterns in adulthood. Additionally, they found adult rats previously

administered methylphenidate in pre-adolescence were less receptive to “natural rewards” (i.e. sugar), and hypersensitive to stressful circumstances.

Teacher Attitudes Regarding the Use of Psychiatric Medication

While there is little information on teacher attitudes regarding the use of psychiatric medication with young children (those under five years of age), research has documented teacher support for use of medication with school age children (Glass & Wegar, 2001). Glass and Wegar (2001) reported that teachers tended to believe ADHD was influenced by a child’s environment but their most preferred treatment for students was medication.

Further, Epstein, Singh, Luebke, and Stout (1991) found teachers tended to believe hyperactivity, in school aged children, most warranted psychiatric drug treatment. When asked about knowledge of psychiatric drug side effects, 39% of teachers believed there were no negative effects. Finally, 80% of teachers felt they should be involved with the initiation or discontinuation of psychiatric medication, but only 25% reported actually having been consulted occasionally.

Purpose of the Study

Due to the lack of research pertaining to very young children, this study focuses on children enrolled in Early Childhood Special Education. The purposes of this study were: 1) to determine the psychiatric diagnoses associated with children enrolled in early childhood special education programs, 2) to ascertain the types of medication prescribed for children diagnosed with psychological disorders, and 3) to determine the number of children receiving multiple medications for their diagnosis. Finally, the study investigated the attitudes of teachers with regard to the use of psychiatric medication(s) in children enrolled in early childhood special education programs.

Method

Participants

Subjects for the study included 525 early childhood special education (ECSE) teachers from school districts in the Midwest. States were selected based upon Drug Enforcement Agency (DEA) data from January to December, 1999. Specifically, selections were made to represent use rates typical for Midwestern states. DEA data provided amounts of methylphenidate and amphetamine (drugs typically used to treat ADHD) distribution by state. Of the Midwestern states, Minnesota, Iowa, and Wisconsin were noted to have stimulant use rates similar to those of other Midwestern states (Frontline, 2001).

Measure

A four page questionnaire was adapted from that used in the Hall, Bowman, Ley, & Frankenberger (2006) study. The questionnaire was designed to gather information through a series of Likert-type questions that assessed the teachers’ attitudes about the incidence of childhood psychiatric disorders, and the use of psychiatric medication to treat young children. In addition, the teachers were asked to provide demographic data and information regarding their class size and number of students receiving medication for a psychiatric disorder(s). For each reported student receiving medication, the teachers were asked to supply the type of psychiatric disorder(s) and the particular psychiatric medication(s) administered to treat the corresponding disorder. The survey was designed to be directly comparable to the survey used in the Hall, Bowman, Ley, & Frankenberger (2006) study.

Procedure

ECSE teacher lists were obtained through state educational records departments. The teachers were then randomly assigned a number and 175 of these numbers (teachers) were randomly selected from each of the three states. Teachers were then mailed surveys to complete and return in the envelope provided. The cover letter served as an informed consent. Approximately two weeks later, a second survey was mailed to those who had not yet returned their surveys.

Results

Of the 525 surveys mailed out, 28 were returned not completed because the teachers were no longer teaching early childhood classes. An additional 20 were returned due to invalid mailing addresses, and

therefore subtracted from the total number of surveys. Of the remaining 477 surveys, 194 (~ 41%) teachers from Wisconsin (n=81), Iowa (n=32), and Minnesota (n=81) completed questions that included information about 2,659 students enrolled in their early childhood special education classrooms. At the beginning of the survey participants were asked to identify the number of children in their class and the number receiving treatment with psychiatric medication. Nearly 8% (211) of the children in the sample were identified as taking one or more psychiatric medications. The percent of children receiving psychiatric medications by state is presented in Table 1. It should be noted that the rate of medication use for Iowa was much greater than for the other states.

Table 1
Percentage of Students Taking Psychiatric Medication by State

State	Percentage
Iowa	16.88
Minnesota	6.77
Wisconsin	6.34

Psychiatric Diagnoses of Children Enrolled in Early Childhood Special Education (ECSE) Programs

The second portion of the survey asked participants to provide specific information about the types of psychiatric diagnoses and corresponding medication for individual children in their classroom. Teachers provided information regarding psychiatric diagnoses for 203 children for this portion of the survey.

For children diagnosed with a psychiatric disorder, Table 2 reveals ADHD was the most common diagnosis (55.2%), followed by Seizure Disorder (16.7%), Anxiety (8.4%), Bipolar (3%), and Depression (3%). Other low incidence disorders such as Oppositional Defiant Disorder and those not specified accounted for the remaining 36% of the diagnoses. Due to the possibility a child could have more than one disorder, the percentages total more than 100%.

Table 2
Percent of Children Diagnosed with Multiple Psychiatric Disorders

Disorder	Number	Percentage
ADHD	112	55.2
Seizure Disorder	34	16.7
Anxiety	17	8.4
Bipolar	6	3.0
Depression	6	3.0
Other Low incidence	73	36.0

Note. Percentages include all children that were diagnosed with either a single or multiple disorders.

Of those diagnosed, approximately 22.3% (45) were identified as having two or more psychiatric disorders. The most frequently reported multiple diagnoses were ADHD along with some other disorder which accounted for 13.9% of the 22.3% of children with multiple psychiatric disorders. Other combinations occurred at low frequencies.

Medication Prescribed for ECSE Populations

In the second portion of the survey teachers provided data regarding psychiatric medication for 171 children. Of the 203 children identified as having one or more psychiatric disorders, 84% (171) were identified as receiving one or more psychiatric medication(s).

Table 3
Percent of Diagnosed Children Receiving Psychiatric Medications (by drug class)

Drug Class	Number	Percentage
Stimulant	112	65.5
Antiseizure/Mood Stabilizers	41	24.0
Antipsychotic	24	14.0
Antianxiety	15	8.8

Antidepressant	13	7.6
Other Low Incidence	21	12.3

Note. Percentages include all children that were receiving either single or multiple medications.

Table 3 indicates stimulants were the most commonly prescribed medication (65.5%) followed by antiseizure/moodstabilizers (24%), antipsychotics (14%), antianxiety medications (8.8%), and antidepressants (7.6%). Other medications accounted for the remaining 12.3% of those prescribed. Again, because a child could have been taking more than one type of medication, the percentages total more than 100%.

Of children receiving medication, approximately 32.4% (55) were receiving two or more medications, while 16.4% (28) were receiving three or more medications. Table 4 reveals the most common combination was an antipsychotic along with a stimulant (4.7%), followed by a stimulant and an anti-seizure/mood stabilizer (2.3%). The most common three-medication prescription was a stimulant, antipsychotic, and an unknown/other (2.9%).

Table 4
Percent of Children on Multiple Psychiatric Medications (by drug class)

Drug Class	Number	Percentage
Antipsychotic + Stimulant	8	4.7
Stimulant + Antiseizure/mood stabilizer	4	2.3
Antidepressant + Stimulant	3	1.8
Antipsychotic + Antiseizure/mood stabilizer	3	1.8
Stimulant + Stimulant	3	1.8
Antianxiety + Stimulant	3	1.8
Antiseizure + Antiseizure	2	1.2
Other/not specified	5	2.9
Stimulant + Antipsychotic + other low incidence	5	2.9
Stimulant + Stimulant + other low incidence	3	1.8
Stimulant + Antipsychotic + Antianxiety	2	1.2
Antiseizure + other low incidence + other low incidence	2	1.2
Other low incidence/not specified	12	7.0
<i>Total</i>	55	32.4

Note. 14% (24 students) of children were identified as receiving three or more medications.

Teacher Attitudes Regarding the Use of Psychiatric Medication

Early Childhood Special Education (ECSE) teachers were asked to respond to 12 questions that assessed their attitudes/beliefs regarding use of psychiatric medication in children. A Likert (1 to 5) scale was used to indicate teacher responses. Mean and standard deviations were calculated for each question. Answers between 1.00 and 2.00 were labeled as *disagree/strongly disagree*, those between 2.01 to 2.49 were labeled *tendency to disagree*, means between 2.50 and 3.49 were labeled *neutral*, those between 3.50 and 3.99 were labeled *tendency to agree*, and means between 4.00 and 5.00 were labeled as *agree/strongly agree*.

Questions 3, 4, and 5 assessed teacher attitudes about whether medication tended to improve academic performance and behavior. Question 3, *Medication significantly improves academic performance in young children*, elicited a neutral (M=3.41, SD=.864) response. Questions 4 and 5 measured whether the teachers thought medication improved children's behavior, the mean responses for these questions fell within the tendency to agree range (M=3.69, SD=.846 and M=3.59, SD=.823).

Question 6 evaluated whether teachers were aware when a child had received his/her medication. Teachers tended to agree they could tell when a child had received his/her medication (M=4.06, SD=.829). Questions 10 and 11 assessed whether the teachers felt antidepressants and stimulants had few side effects. Answers to these questions fell in the tendency to disagree category (M=2.47, SD=.814 and M=2.36, SD=.785).

Questions 7 through 9 assessed whether teachers felt medication promoted classroom control. All three questions evoked responses in the neutral range ($M=3.32$, $SD=.953$; $M=3.48$, $SD=1.029$; and $M=3.12$, $SD=1.022$). Question 13, *Medication tends to change a child's natural personality*, elicited a mean response of 3.23 (neutral, $SD=1.026$).

Question 12 evaluated whether teachers were concerned with the long-term impact of medication on children. Teachers' responses fell within the agree range ($M=4.13$, $SD=.938$) on this question. Question 14, *Medication tends to improve a child's social adjustment*, resulted in a mean response of 3.51 (tendency to agree, $SD=.790$). Finally, a multiple regression was done to determine whether any of the teacher's responses could predict the number of students in a particular teacher's class that would be on medication. Question 9, *Classroom behavior control would be more difficult for me if children were not treated with prescription medication*, was the only significant predictor (accounting for 9% of the variance) of the number of children in a class receiving medication.

Table 5
Survey Questions with Means and Standard Deviations
Children and Psychiatric Disorders/Medication Survey

THE FOLLOWING SCALE WAS USED TO RESPOND TO THE QUESTIONS BELOW:

1= Strongly disagree 2=Disagree 3= Neutral 4= Agree 5= Strongly agree

Question	N	M	SD
3. Medication significantly improves academic performance in young children.	172	3.41	.864
4. Medication significantly benefits students in terms of controlling their own behavior.	173	3.69	.846
5. Young children receiving medication behave more appropriately in social situations than they would without medication.	172	3.59	.823
6. I am aware when a child has not taken his/her medication.	172	4.06	.829
7. In my experience, medication has helped maintain classroom control.	172	3.32	.953
8. Behavioral interventions can be as effective as medication for maintaining classroom control.	172	3.48	1.029
9. Classroom behavior control would be more difficult for me if children were not treated with prescription medication.	173	3.12	1.022
10. I believe that stimulant medication (e.g. Adderall) has few side effects.	171	2.47	.814
11. I believe that antidepressant medication (e.g. Paxil) has few side effects.	168	2.36	.785
12. I am concerned with the long-term impact of medication on children.	175	4.13	.938
13. Medication tends to change a child's natural personality.	172	3.23	1.026
14. Medication tends to improve a child's social adjustment.	173	3.51	.790

Discussion

The results of the current study are consistent with those of Roberts, Attkisson, and Rosenblatt's (1998) review of children in the United States and United Kingdom diagnosed with a psychiatric disorder. Similar to the rate found in this study, results of their study identified 8% of preschool age children in the United States and United Kingdom as having a psychiatric disorder. The results of the current study are also consistent with data reported by McDonnell and Glod (2003) in their review of rates of co-morbidity of psychological disorders among preschool age children. McDonnell and Glod found co-morbidity between ADHD and Conduct Disorder ranged from 20 to 50%, 25% between ADHD and Anxiety, and up to 40% between ADHD and Oppositional Defiant Disorder (ODD). The current study found that of children with a psychiatric diagnosis, approximately 22% were reported to have two or more diagnoses, with ADHD and another disorder accounting for 13.9% of multiple diagnoses.

Psychiatric Diagnoses of Children Enrolled in ECSE Programs

Attention Deficit Hyperactivity Disorder (ADHD) was the most common disorder found among children enrolled in early childhood special education programs; approximately 55% of children identified with one or more disorders had a diagnosis of ADHD, consistent with Zito, et al.'s (2000) findings. Seizure disorder was the next most prominent disorder (16.7%), followed by anxiety disorder (8.4%). Although

clear estimates of seizure disorder are not well known among the preschool age population, rates of anxiety disorder among young children average between .3 and 11.5% (McDonnell & Glod, 2003).

Medication Prescribed for ECSE Populations

Consistent with previous research (Zito, et. al., 2000), stimulants were the most frequent drug prescribed to children in early childhood classes (65% of those taking one or more medications). In light of recent research, the potential risks associated with use of stimulants with young children may be more significant than previously believed. If older children are at risk for side effects such as height and growth suppression, liver damage, and developmental neurological effects as a result of stimulant use, the risk to young children, while unknown, may be substantial (Andersen, 2005; MTA Cooperative Group, 2004).

Antiseizure/mood stabilizing medication was the next most prevalent medication taken by children in the study (24% of the children receiving medication). The risks and benefits of these medications has also been a topic of debate by researchers. Lawrence (2003) stated that treatment with antiepileptic medication is not recommended for the majority of children who have had only one seizure because of the medication's tendency to interfere with critical cognitive processes, specifically learning (Aldenkamp, DeKrom, & Reijns, 2003).

Antipsychotics were the third most commonly prescribed medication, consisting of 14% of those treated with psychiatric medications. Similar to antiseizure medication, anti-psychotics have been associated with sedation and adverse cognitive effects (Posey & McDougle, 2000) in addition to parkinsonian symptoms, tardive dyskinesia, and changes in heart rate and blood pressure (Bower, 1991; McKim, 2003; Posey & McDougle, 2000). More recently the FDA has placed boxed warnings on all atypical antipsychotics, including Abilify, Risperdal, and Zyprexa (Janssen Pharmaceutica Inc., 2005), citing an increased risk of death in elderly patients. Though the warning pertains to elderly patients, atypical antipsychotics are not approved for use in child populations; however, the current study found them to be the third most commonly prescribed drug for young children.

Finally, the effects of polypharmacy are not well researched, especially with respect to young children (Safer et al., 2003). Despite this, psychiatric medication is often utilized concomitantly for treatment of one or more psychiatric disorders (Safer et al., 2003; Wagner, 2003; Wilkinson, Taylor, & Holt, 2002). The current study found that of the children taking psychiatric medication, approximately 32% were taking combinations of two or more. Among the combinations, an antipsychotic-stimulant pairing was most prominent (5%) followed by a stimulant, antipsychotic, and other/not specified grouping (3%). This finding varies from that of Safer et al. (2003), where methylphenidate and clonidine tended to be the most common combination among youth ages 0-19.

Teacher Attitudes Regarding the Use of Psychiatric Medication

Overall, teachers tended to view medication as an asset to students controlling their own behavior, behaving more appropriately in social situations, and improving students' overall social adjustment. Further, teacher attitudes with regard to medication's effectiveness on behavioral control significantly predicted whether a teacher's class would have one or more children in the class taking medication. Specifically, if a teacher held the belief that medication significantly improved classroom control, the more likely students in his/her class would be taking medication. Another potential explanation is that as teachers become more familiar with possible advantageous effects of medication, they may be more likely to recommend the same line of treatment for other children in their classroom.

Alternatively, teachers in the current study tended to indicate concern with regard to side effects and long-term impact of medication in children. This finding is in concordance with earlier findings by Epstein, Singh, Luebke, and Stout (1991) who found that teachers did not feel they had adequate training with respect to side effects and/or general knowledge of psycho-pharmacotherapy for children with learning disabilities/behavioral issues. Teachers in the Epstein, Singh, Luebke, and Stout (1991) study further stated a need for more school personnel to be involved with tracking changes and effects of medication in children.

Implications

The current study raises concern about the number of young children taking single and multiple doses of psychiatric medication(s). In the current study, the percentage of preschool age children taking psychiatric medication approached that of pre-adolescent and adolescents reported by Roberts, Attkisson, and Rosenblatt (1998). More importantly, the study raises concern about the long and short term effects these medications may have on young children. Short-term side effects for adults and older children have been well documented (Boyles, 2005; Frankenberger and Cannon, 1999; McKim, 2003; Moline and Frankenberger, 2001; Sweeney and Forness, 1997); however, it is unclear if these side-effects are the same as those experienced by young children. Additionally, long-term side-effects are not well understood for children and the impact of psychiatric medication on learning and the developing brain has yet to be well defined, but recent research indicates reason for concern (Andersen, 2005; Mazer et al., 1997; MTA, 2004; Warden et al., 2005).

Finally, there is mixed evidence surrounding the effectiveness of psychiatric medication, especially among young children (Rappley et al., 2002). For example, while stimulants appear to improve time on task and academic productivity, it is not clear whether they improve overall learning and long term achievement (Frankenberger & Cannon, 1999; Sinha, G., 2005). Further, the effects of behavioral interventions have been investigated and found to be equivalent to stimulant medication in some studies (Klingberg, Fernell, Olesen, Johnson, Gustafsson, et al., 2005; MTA, 2004), yet stimulants seem to be the first line of treatment for children diagnosed with ADHD. Similarly, effectiveness of other psychiatric medication such as anti-psychotics and antidepressants has not been well established with respect to their efficacy among young children. However, behavioral interventions for disorders that would be treated by the psychiatric medication delineated above have been proven effective for disorders such as ADHD, anxiety and those characterized with aggressive behavior (Fisher, Gunnar, Chamberlain, & Reid, 2000; Klingberg et al., 2005; Lochman & Wells, 2003; Masia, Klein, & Storch, 2001) without risk of side effects.

Many studies have documented the short-term efficacy of psychiatric medication for adults (Brown University, 2005; Dodson, 2005; Eli Lilly, 2004); however the same level of proof is generally not available for children. Further, studies typically lack long-term data concerning effects for any population. Given the uncertainty of long-term effects and risks, it is reasonable to question the rapid increase of psychiatric drug use with young children. However, the increase seems to be generally accepted without corroborative evidence. Therefore, use of psychiatric drugs with children, especially young children, warrants monitoring. Additionally, moderation may be a more wise approach as the evidence supporting the use of psychiatric medication with school-aged children remains tenuous (Kollins, Barkley, & DuPaul, 2001). Finally, reserving treatment with psychiatric medication for only the most severe cases in early childhood may be more appropriate until conclusive research of psychiatric medication's short and long-term effects in this age group is demonstrated.

Limitations

The response rate for the current study was approximately 41%; therefore it is possible that those who responded were not representative of the original sample. However, the response rate may have been reduced because the survey asked questions about information that teachers may not have known, or required further research. Further, it is possible the results may not be completely accurate as many children may take their medication at home prior to coming to school (Manos, Short, & Findling, 1999), therefore teachers may be unaware of whether a child is taking psychiatric medication(s). However, the findings of the current study are consistent with those of Roberts, Attkisson, and Rosenblatt's (1998). Future research could include similar studies for the East and West coasts to determine if the results of the current study are consistent with potential findings in these areas.

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