Symptom presentation of pediatric bipolar and related disorders in children A descriptive study to improve educational understanding and supports

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SYMPTOM PRESENTATION OF PEDIATRIC BIPOLAR AND RELATED DISORDERS IN CHILDREN

A descriptive study to improve educational understanding and supports

BY LESLIE FANNING

B.A. Psychology, University of New Hampshire, 2009

THESIS

Submitted to the University of New Hampshire in Partial Fulfillment of Requirements for the Degree of

Master of Education

In

Early Childhood Education Special Needs Option

September 2012
This thesis has been examined and approved.

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[Date: June 28, 2012]
Dedication

This thesis has been dedicated to the life and memory of Eileen Fanning. Eileen passed away on June 25th, 2010 at 48-years-old due to complications of anorexia and a lifetime battle with Bipolar Disorder.
Acknowledgements

I would like to take the time to thank the following people for providing insight and assistance in the completion of thesis: Leslie J. Couse, John Hornstein, Katie Edwards, and Kateryna Sylaska.
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ABSTRACT

SYMPTOM PRESENTATION OF

PEDIATRIC BIPOLAR DISORDER

AND RELATED DISORDERS IN CHILDREN:

A descriptive study to improve educational understanding and supports

by

Leslie Fanning

University of New Hampshire, June, 2012

Diagnosis of Bipolar Disorder and other mental health disorders has grown in recent years. As early childhood professionals meet children with these diagnoses, they face challenges in supporting a new population of children with special needs. This paper discusses current research on prevalence in early childhood classrooms, comorbid disorders, and current supports. Educators and professionals currently working in PreK-3rd grade were surveyed about the prevalence and supports for Pediatric Bipolar Disorder (PBD) and related disorders. Results of this study reflect the research that suggest children with PBD may present slightly different behaviors than those with Attention Deficit-Hyperactivity Disorder. In order to support these behaviors, educators reported finding the greatest success through the use of methods contingent upon positive reinforcement.
Introduction

Each year new research and information emerges suggesting new methods of teaching, supporting, educating, and caring for young children with and without special needs. It is the job of the educator find and sort through this information and apply it to their position as a professional in the field of early childhood special education. As children with special needs are now included into general education classrooms with their peers, teachers are responsible for the education and support of all students and thus must be aware of the varied disorders and symptomologies that might be included. Many university programs now merge the education of early childhood teachers with special educators in order to best prepare teachers for all needs that might be found in the classroom (Pugach & Johnson, 1995). Though curriculum in these programs focuses on the cognitive, physical, and social-emotional development of young children, aspects of mental health are not prominent considerations. Many professionals increasingly recognize the importance of mental health and development in early childhood education (McDougall, 2011) but history has unfortunately slowed the process of research development. Sigmund Freud may have been a pioneer for adults with psychosis when he took the world by storm with psychoanalytic theory but his beliefs inhibited research and treatment for children with psychiatric disorders (Papolos & Papolos, 2002). As his theory was rooted in the person’s unconscious sexual desires, he did not believe that a person could meet criteria for depression until puberty.

In 1960, psychiatrist James Anthony and physician Peter Scott discussed the first signs of what we now call Bipolar Disorder (BD) today in “Manic-depressive psychosis
in children.” Not only did Anthony and Scott suggest that children ages 12-years-old and younger could encounter symptoms of depression but also provided accounts of “mania” in children, necessary criteria to meet conditions for BD-I. Warning clinicians only to diagnose if symptoms were severe, the illness was still considered extremely rare in children and required more research to fully cement the existence of this type of psychosis. Over the last 50 years BD has evolved beyond the diagnosis and treatment of adults toward a better understanding of the illness in children.

**Diagnostics**

According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – Text Revision (DSM-IV TR), two types of Bipolar Disorder exist (APA, 2000). Type I must include one manic episode without the presence of no more than one past major-depressive episodes. The criteria for a manic episode must include a minimum week-long period of elevated or irritable mood where at least three of the following symptoms persist:

1. Elevated self-esteem of grandiosity
2. sleeping less than three hours per night
3. extremely talkative; person feels pressure to continue talking
4. racing thoughts
5. distractibility
6. increased goal-directed activity or psychomotor agitation
7. “excessive involvement in pleasureable activities that have high potential for painful
consequences" (APA, 2000).

The symptoms must be severe enough to hinder functioning in social or work-related activities or the person has been hospitalized for the safety of self and others. Behaviors cannot be accounted for through any type of schizoaffective disorder, physiological effects of substance abuse or medication, or mixed episode.

To meet diagnostic criteria for BD-II, the individual must present one or more major-depressive episodes and at least one hypomanic episode without the presence of a manic or mixed episode (APA, 2000). Criteria for a hypomanic episode must include the same symptoms as described in the aforementioned manic episode with a marked difference in functioning impairment. The episode must be “associated with an unequivocal change in functioning that is uncharacteristic of the person when not symptomatic” and observable by others (APA, 2000). To compare, a hypomanic episode is not the same duration as a manic episode and does not present with severe enough symptoms to impair functioning. In addition to meeting diagnostic criteria for a hypomanic episode, individuals with BD-II must also present at least one major-depressive episode. Criteria for this must include at least five of the following symptoms (APA, 2000):

1. Observable depressed mood for most of the day; in children, this can present as irritability
2. Loss of enjoyment or interest in activities
3. Weight loss or decreased appetite; weight gain in children
4. Daily insomnia or hypersomnia
5. psychomotor agitation or retardation
6. fatigue
7. worthlessness or guilt
8. inability to focus
9. suicidal ideation or recurrent thoughts of death

Symptoms must cause functioning impairment or severe distress but are not accounted for by physiological effects due to medication or substance abuse. If a person has lost a loved one but still presents symptoms after a span of two months has passed, then he or she would also meet criteria for a major-depressive episode.

Individuals that do not meet full criteria for either BD-I or II normally fall into BD-Not Otherwise Specified (BD-NOS). To qualify for BD-NOS, symptoms must include the following:

1. rapid cycling, over days, between manic and depressive symptoms that meet threshold but not duration criteria
2. recurrent hypomanic episodes with intercurrent depressive episodes
3. manic or mixed episode superimposed on delusional disorder, residual schizophrenia,
or a psychological disorder – not otherwise specified
4. hypomanic episodes along with depressive episodes that are too infrequent for cyclothymic disorder
5. bipolar is present but cannot rule out physiological cause
Due to the lack of duration criteria, many children fall under this category of BD (Papolos et. al., 2002). For children, this is only a small picture of what and how symptoms might present.

Before moving to discuss the current research regarding early-onset BD, one must acknowledge the reliability and validity of utilizing the DSM-IV TR for diagnostic descriptions. Within the next year or so, the newest edition of the DSM will be released possibly changing the criteria practitioners use to diagnose a variety of disorders. The changes will directly impact diagnoses of BD in children reflecting the current research suggesting that longitudinally, children with BD do not carry the disorder into adulthood (www.dsm5.org, 2010). The articles cited in this literature review utilize DSM-IV criteria, thus the methodology moving forward will remain consistent with the research. However, it is important to consider the implications of these changes. Possible changes might reflect the prevalence rates and whether children can, in fact, be diagnosed with BD. This suggests that the research using criteria from the DSM-IV TR will no longer be generalized to future populations and will most likely fall under the broad category of mood disorders. Without any new studies considering the new definitions, this paper will reflect the aforementioned criteria as described in the DSM-IV TR remaining consistent with the research that will be discussed.

Related to BD is the label of a mood disorders which reflect all those diagnoses which include a “disturbance in mood as the prominent feature” as criteria (APA, 2000). Excluding BD, disorders included in this category are Major Depressive Disorder (MDD), Dysthymic Disorder, Cyclothymic Disorder, Substance-Induced Mood Disorder,
and Mood Disorder Not Otherwise Specified (NOS). BD in adults or children is categorized in the DSM-IV TR as a mood disorders, thus much of the research discussed in this review will look at the entire category, as well.

In 2004, Wariach and colleagues conducted a review of literature on the prevalence of mood disorders and concluded that overall lifetime prevalence for BD-I in all ages resulted in .82 out of every 100 people, which can significantly fluctuate depending on the country. Results from the World Mental Health Survey initiative revealed similar rates, suggesting that 1% of the general population shows lifetime prevalence of BD-I while BD-II represents 1.22% (World Mental Health Consortium, 2011). When looking at the entire population of individuals with mood disorders, the lifetime prevalence ranges between 3.3% and 21.4% with a median age-of-onset between 20- and 40-years-old (World Mental Health Consortium, 2007). Of the population diagnosed with BD-I, half reported age-of-onset occurring prior to 25-years-old but the actual mean age of onset was not included in this report (AMA, 2011). When looking at the number of young children currently receiving diagnosis of BD, no research offers results that can be generalized to the entire population. Youngstrom and colleagues (2005) found that within an outpatient clinical setting, approximately 6% of patients have received a diagnosis of pediatric BD.

Though young children with BD still only represent a very small portion of the population; West, Schenkel, and Pavuluri (2008) have suggested that the temperament of a child can be an indicator of early-onset BD (Miklowics & Chang, 2008). The following behaviors during infancy and toddlerhood are considered as difficult: poor reaction to
changes in routine; squirmy or restless; protesting new things; fussy; poor eating and sleeping regulation; over-reaction to noises, lights, or discomfort; and not settling down even when needs are met (West et. al. 2008; Greene, 2001). A variety of “psychological pathologies” are associated with difficult temperament during infancy including anxiety and mood disorders, disruptive behavior disorders, early delinquent behavior, substance abuse, hyperactivity, inattention, and aggression. The earliest years of development appear to have a great impact on the development of mood disorders in general, as Luby, Belden, and Spitznagel (2006) found that the impact of stressful life events has a greater impact on the severity of MDD symptom presentation in preschool children. Looking further into mood disorders specifically, Hershfield and Becker (2003) found two common behaviors among children with BD showing difficult temperaments: behavior disinhibition and emotional disregulation. With regards to behavior disinhibition, Boylan, Vailallancourt, and Szatmari (2012) found that oppositional behaviors in childhood revealed a higher incidence of MDD in adolescence and adulthood. In The Bipolar Child by Papolos and Papolos (2002), when describing the early sign of “raging”, children are described as having no control physically or emotionally during a fit of rage. These tantrums are described as dangerous and last for more than three hours at least twice a day.

In addition to raging, Papolos et. al. (2002) describes several more symptoms as early indicators of pediatric BD. Often observed during infancy, severe separation anxiety was reported by many parents of children with BD. Mothers in this book described their children as feeling emotions beyond distress when separated; many
needed to be physically attached to their parents at all times of day. Separation anxiety may be an early indicator among infants, comorbidity rates among individuals with unspecified anxiety disorders and pediatric BD are significant, as well (Jolin, Weller, & Weller, 2008). These anxieties can often be overlooked as many fears can be common in childhood, however children with BD can often have a tremendous fear of death (Papolos et. al., 2002). One of the early signs identified in Papolos, this fear may not necessarily stem from an anxiety disorder but from night terrors; also an early indicator of BD.

Night terrors occur during the early morning hours of the night, between 1 a.m. and 3 a.m. A child experiencing a night terror may start screaming, sweat profusely, or breathe heavily. The child may appear to be awake but will often not respond when spoken to during the episode (www.aafp.org, 2005). Papolos et. al. (2002) describes these terrors as nightmares, but instead of waking up before the unwanted event takes place, individuals with night terrors continue the dream. The continuation of the dream might turn into death for many individuals which is the connection made between a fear of death, night terrors, and poor sleeping habits. To fear the inevitable “death” that may take place during his or her dream would assume a child remembers what happens during his or her night terror. Papolos et. al. (2002) describes the child as having the ability to describe these dreams whereas various sources report most children having no memory of the dream (www.aafp.org, 2005; Ruskin, 2011). Whether or not night terrors and the fear of death are connected, one can still surmise that these signs will impact the child’s behavior at home or in the classroom.
Problems with peers, sensitivity to stimuli, and oppositional behavior are also early signs of BD that educators could identify in the classroom (Papolos et. al., 2002). Children with early-onset BD can present various behavioral issues, looking like or co-existing with Oppositional Defiant Disorder (ODD). Children with ODD may present the following behaviors: lose temper; argue with adults; refuses the request of adults or breaks rules; annoys others; blames others for mistakes or behavior; often annoyed, angry, touchy, resentful, spiteful, or vindictive (APA, 2000). For children with BD, these behaviors may be triggered by changes in routine or being refused of request of their own by an adult (Papolos et. al., 2002). Defiant behavior alone can be difficult to manage in the classroom where an educator is trying his or her best to establish rules to establish safety and respect. This is especially true if the child appears to be experiencing a hypomanic episode.

Children with BD will experience episodes of mania more similar to the aforementioned hypomanic episode than manic episode due to more rapid cycling of symptoms. Similar to adults, children will appear to have higher self-esteem, hyperactive, easily distracted, accelerated speech, restless, and engage in pleasure seeking behavior (Apps, Winkler, & Jandrisevits, 2008; Papolos et. al., 2002; Carlson, 1994). During this time behavior may not be redirected and can manifest in the form of verbal or physical aggression (Apps et. al., 2008). In addition, children may shift quickly into symptoms more common to a major-depressive episode become more easily agitated and irritable (Papolos et. al., 2002). Though most adults with BD will experience a manic or hypomanic episode lasting either four days or over a week, children will continue to
make these shifts throughout the day. This type of symptomology is what is considered a
"mixed state" in the DSM-IV TR (APA, 2000). Individuals meeting criteria for a mixed
state will experience the aforementioned type of cycling for at least one week, notice
marked impairment in everyday functioning, and cannot attribute symptoms to the
physiological effects of substance abuse or medication (APA, 2000). The agitation and
irritability common to children enduring a major-depressive episode can be noticeable
but the high comorbidity rates among children with BD and Attention Deficit-
Hyperactivity Disorder (ADHD) suggest a need to further research and examine
symptoms prior to diagnosis (Singh, DelBello, Kowatch, & Strakowski, 2006).

Various studies have not only found high rates of comorbidity among children
with BD and ADHD, but have begun to answer two relevant questions: how and why?
One school of thought suggests that BD does not exist in young children; they believe it
is too difficult to differentiate symptoms between the two disorders (Litrell & Evans,
2010; Sing et. al., 2006; Milberger, Biederman, & Faraone, 1995). Recalling the
aforementioned symptoms used to define a manic or hypomanic episode, the following
symptoms appear in the diagnostic criteria for ADHD: distractibility, impulsivity, poor
sleeping regulation, inability to remain focused on task, restlessness, and excessive
talking (APA, 2000). Using a subtraction method of overlapping symptoms between the
two disorders, Milberger and colleagues found high comorbidity rates were a result two
non-differentiated symptomologies between the two disorders (Singh et. al., 2006;
Milberger et. al. 1995). Looking to answer the same question, Geller, Williams, and
Zimmerman (1998) interviewed individuals with BD and ADHD between the ages of 8
and 12 and found the following symptoms to appear far more frequently in BD-Individuals: elated mood, grandiosity, hypersexuality, decreased need for sleep, and all mania items with the exception of hyperenergetic and distractibility. Rucklidge (2008) performed a similar study by taking retrospective reports from parents of children with ADHD, BD, and no diagnosed psychiatric disorder. Focusing on three different points in development: preschool, latency, and adolescence; very few symptoms presentations were identified as different between the ADHD and BD groups. In the reports looking at preschool, no significant discrepancies were found between groups, however elated mood and depressive mood recorded marked differences in adolescence and latency, respectively (Rucklidge, 2008). Results from this study may suggest that during preschool the two disorders present indistinct symptoms but limitations exist. The use of parent recall suggests lower reliability while the study did not follow-up to discover whether individuals with ADHD were later diagnosed with BD (Rucklidge, 2008). When Trudy Carlson discusses early events involving her son and his more difficult behaviors resulting from early-onset BD, she writes: “...he was an active child, but it was not hyperactivity in which the child is constantly in motion and disruptive. It was more like an intense reaction to specific situations...when he was angry, he would get furious” (Carlson, 1994, pg. 22). When diagnosing BD, Dr. Charles Popper suggests looking beyond the symptoms as they appear on paper but instead the origins of the behaviors which took place (Papolos et. al., 2002; Popper). Popper identifies several differences between the behaviors of children with ADHD and children BD; figure 1.1 describes the displays the differences found between ADHD and BD. Little research has been found
Table 1 Behavior Differences Between ADHD and BD

<table>
<thead>
<tr>
<th></th>
<th>ADHD</th>
<th>PBD</th>
</tr>
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<tbody>
<tr>
<td>Destruction</td>
<td>Resulting from carelessness</td>
<td>Resulting from anger</td>
</tr>
<tr>
<td>Tantrums</td>
<td>Short</td>
<td>Long</td>
</tr>
<tr>
<td>Triggers</td>
<td>Stimulation</td>
<td>Limit setting</td>
</tr>
<tr>
<td>Sleep</td>
<td>Too much energy to fall asleep</td>
<td>Lack of sleep fear of night terrors</td>
</tr>
<tr>
<td>Misbehavior</td>
<td>Resulting from inattention and often</td>
<td>Often intentionally</td>
</tr>
<tr>
<td></td>
<td>accidental</td>
<td>provoked; bully</td>
</tr>
<tr>
<td>Awareness</td>
<td>Find danger accidentally</td>
<td>Danger seeking</td>
</tr>
<tr>
<td>Hypersexuality</td>
<td>Lacking</td>
<td>May start early</td>
</tr>
<tr>
<td>Psychotic</td>
<td>Not; has a firm grasp on reality</td>
<td>Often does not grasp reality</td>
</tr>
<tr>
<td>Medication</td>
<td>Often respond to stimulants; lithium has</td>
<td>Lithium works well as treatment</td>
</tr>
<tr>
<td></td>
<td>no effect</td>
<td></td>
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indicating the origins of these symptomatic behaviors aside from this record, which can also be found from the Indiana Mental Health Needs organizational website (2010; Papolos et. al., 2002). This may be a result of a difficulty in creating a large-scale study looking at the symptoms, behaviors, and situational variables that may or may not have relevance to better distinguishing the two disorders.

Developing research is now exploring whether ADHD is an indicator for early-onset BD and trying to better explain the high comorbidity rates between the two. Singh
et. al. (2006) reviewed several research studies focusing on this particular link finding that individuals with comorbid ADHD and BD has an earlier age of onset compared to those without ADHD (Wozniak, Biederman, Kiely, Ablon, Faraone, Mundy, & Mennin, 1995). Chang and colleagues found that offspring of individuals with BD were more apt to have ADHD compared to other disorders (Chang, Steiner, & Ketter, 2000). Though very profound connections were found between individuals with ADHD and early-onset BD, it is important to note that ADHD does not necessitate BD; most persons were ADHD will not develop BD (Singh et. al., 2006). Factors associated with ADHD may have an impact on those at-risk for BD; this is particularly relevant to BD with regards to treatment.

Criteria for diagnosis of ADHD require that symptoms be severe enough to impair functioning socially, academically, and occupationally (APA, 2000). In order to pacify these symptoms, individuals with ADHD are often prescribed stimulants. Unfortunately, this form of treatment has reported adverse effects in those with BD (Singh et. al., 2006; Apps et. al., 2008). Though stimulant medication is the protocol for children with ADHD, this medication can heighten or worsen the experience of a child’s manic episode. The suggested treatment is to first reduce the child’s symptoms of bipolar with a mood stabilizer and observe any persisting symptoms of ADHD (Apps et. al, 2008). Reichers and Nolan (2004) looked across the globe to compare treatment strategies and found 1/6 fewer cases of early onset BD, prepubertal, in the Netherlands; the difference was suggested to be the reflection of relatively low usage of stimulants. DelBello, Soutullo,
and Hendricks (2001) found that treatment of stimulant medication is related to earlier age of onset of BD, even without a prior ADHD diagnosis. Due to the use of a small sample size of 34 adolescents that had been hospitalized for mania, limitations existed. Following this study, DelBello and colleagues took 80 adolescents hospitalized for either a manic or mixed episode and found similar results (DelBello, Soutullo, Ochsner, McElroy, Taylor, Strakowski, & Keck, 2002). In addition to finding that adolescents with exposure to stimulant medication report an earlier age of onset of BD, DelBello et. al. (2002) found that the symptom presentation was more severe in patients having taken stimulants prior to hospitalization. However, more research is necessary to substantiate adverse effects of stimulants on those at-risk for BD. Several studies have revealed varying results with regards to the effects of stimulant medication but that does not mean that professionals should ignore this research.

Whether or not ADHD and BD are two indistinct disorders, ADHD is an early indicator of BD, or stimulants induce adverse effects on individuals at risk for BD; it is important to recognize the symptomologies of both disorders. When parents send their children to school they are placing their trust in the expertise and guidance of early childhood educators. To best serve these children, the educator must not only be present and aware of the behaviors taking place in the classroom but have developed a relationship with the child that may become a lens in which to understand these behaviors. Much of the research focuses on larger group samples and a checklist of symptoms out of context, which inherently discounts the contexts of the symptoms or symptomatic behaviors observed at home or in the classroom. As educators strive to
better understand the children they serve in the classroom, parents also want communication. For the purposes of consistency between setting, it is important for parents to know the needs of their child at school.

**Terms of Behavior**

With the research and diagnostic criteria defined in terms of behavior, it is important to understand the behavioral framework with regards to child development and classroom management. Symptoms are often described as behaviors with specific triggers, as indicated in Popper's table explaining the differences in behavior as it relates to children with BD and ADHD (Papolos et. al., 2002). For example, the section labeled "misbehavior" differentiates children with ADHD and children with BD by suggesting that children with BD are provoked (Papolos et. al., 2002). This provocation will be described as an *antecedent*. An antecedent is a preceding circumstance, event, object, style, or phenomenon that elicits a *response* (Cain, 2010). A response is a behavior that results from an internal or external stimulus (Cain, 2010). The past research does not reflect an instinctive response as defined by biological need, summing that an external stimulus or antecedent is eliciting the behavioral responses that are symptomatic of children with BD. Papoulos explains that in cases when children demonstrate tantrums or oppositional behavior, this is a response to refusal from a parent or authority figure (Papolos et. al., 2002). Though various environmental aspects could have also contributed to the response, or consequent behavior, the antecedent was the refusal.

Strict behaviorists, such as Watson or Skinner, would suggest that children with BD present symptoms that have been conditioned by their environment (Cain, 2010). The
behavior is a response to the environment. If research suggests that symptom presentation of BD can be provoked by transitions or parent refusal, studying the behavior of these children specifically will pinpoint the exact situations that have conditioned particularly unwanted responses that are common to BD at school. Much of the research discussed in the previous sections of this paper focuses on presenting symptoms, comorbidity rates, and early signs predicting later diagnosis. Utilizing behaviorist strategies of identifying consequent behaviors can identify the classroom environment that is predisposed to unwanted, symptomatic responses.

**Educational Supports Outlined in Research**

When looking at all disorders discussed in this review of literature, a few different strategies arise in the literature for supporting children with PBD, mood disorders, or ADHD in the classroom. Recommendations made for teachers working with children ask that they consistently record and identify children’s behaviors in the classroom and assist the child in recognizing his or her own moods or behaviors (McIntosh & Trotter, 2006; Senokoff & Stoddard, 2009; Crundwell & Killu, 2007; DuPaul, Weyandt, & Janusis, 2011; Daley & Birchwood, 2010). For children with PBD, McIntosh et. al. (2006), suggests that teachers become aware of when children are enduring manic episodes. Specifically for young children, if he or she has begun telling seemingly unrealistic and unbelievable stories, then the teacher should work to help the child grasp reality.

DuPaul and colleagues (2011) take the idea of self-regulation a step-forward and present research that shows a positive impact when children practice evaluating their own behavior. In this case, both the children and the child’s teacher are asked to complete a
behavior inventory using a Likert scale to evaluate particular behaviors (DuPaul et. al., 2011). The elementary-aged child is provided positive reinforcement by the teacher "to the degree" that scores match (DuPaul et. al., 2011, pg. 37; Reid, Trout, & Schartz, 2005). The more often the child is able to match his or her behavior with his teacher, frequency of behavior evaluation will decrease. For children with mood disorders, self-regulation requires the attainment of coping strategies in order to decrease the severity of symptoms (Luby et. al., 2006). Focusing on acquiring skills necessary for academic success, Daley et. al. (2010; Raggi & Chronis, 2006) has found success in asking children to not only construct but also monitor their own goals regarding task completion and accuracy. Studies using boys ages 9- to 12-years old showed that when the student is successful in satisfying both elements of the self-regulation strategy, teachers use positive reinforcement and provide children with rewards (Daley et. al., 2010; Kern, Childs, Dunlap, Clarke, & Falke, 1994; Drabman, Spitalnik, & O'Leary, 1973). With many of the interventions or methods outlined in the research, it is highly suggested that they be paired with positive reinforcement or token economy system as a way of providing motivation.

While continuing to look at academically-based supports, assignment modification is a technique that is highly suggested in the literature for educators to employ when working with children diagnosed with PBD, mood disorders, and ADHD (Mcintosh et. al., 2006; Senokosoff et. al., 2009; Crundwell et. al., 2007; Dang, Warrington, Tung, Baker, & Pan, 2007; Daley et. al., 2010). In addition to simply shortening assignments for children all ages, separate studies looking at ADHD and PBD
in the classroom suggest that teachers attempt to divide tasks into more manageable portions (Daley et. al., 2010; McIntosh et. al., 2006). This is done for children with ADHD due to the challenges faced by inattention and hyperactivity. Teachers should make these adjustments for children with PBD understanding that the rapid fluctuation of moods and behaviors can have an adverse impact on the ability to maintain focus on one task. In conjunction with work modifications, McIntosh and Trotter (2006) stipulate that organizational strategies such as completion checklists be introduced in order to develop effective management skills. When working with children diagnosed with PBD specifically, it is also important for educators to remain sensitive to sleeping irregularities and make adjustments to assignments, accordingly (McIntosh & Trotter, 2006).

The final method of support suggested for use through the research for all disorders suggests that educators keep a classroom with clear, concise expectations and a structured daily routine (McIntosh et. al., 2006; Senokosoff et. al., 2009; DuPaul et. al., 2011; Daley et. al., 2010). If the teacher needs to deviate from the routine for some reason, students of any age with PBD should be informed before the start of school day or at some point before the deviation takes place (McIntosh et. al., 2006; Senokosoff et. al., 2009). At times when the change in schedule or other external events overwhelm the child with PBD or mood disorders, the school should not only provide a safe place but a person, aside from the teacher, with whom the student is comfortable to talk through emotions. In addition to providing routine and structure to students with both ADHD and PBD, teachers should also take time to create a visual display of rules, explaining what...
they mean and why they are in place (McIntosh et. al., 2006; DuPaul et. al., 2011; Daley et. al., 2010).

Utilizing educators within the classroom, the aforementioned strategies have been used to provide support for children with PBD and related disorders. General education teachers, however, cannot work alone to develop the most effective strategies and interventions because they’re insight and expertise represent only one aspect of the child’s schooling. Parents and teachers must work together to create consistency across settings (McIntosh et. al., 2006; DuPaul et. al., 2011; Daley et. al., 2010). DuPaul and colleagues (2011) have studied the use of student report cards that record daily feedback from the school day that can brought home for parents to use as a guide for administering positive reinforcement. Some studies look at the use of parents as tutors. When given training, parents can provide direct instruction with work at home (Daley et. al., 2010). Along with parents and teachers, collaboration on a team of school personnel can take on a holistic approach of supporting a child with PBD or ADHD (Dang et. al., 2007; Senokosoff et. al., 2009). Members of the team should freely engage in role release, allowing others to become leaders when a particular skill-set is needed.

Teachers and parents must work together in identifying and supporting children with PBD and related disorders. Though the aforementioned section outlines current strategies used to assist children with PBD succeed in the classroom, very few studies exist substantiating these recommendations in the early childhood (EC) classroom. By gaining a better understanding of the disorder and how it appears in the (EC) classroom, teachers, parents, and other relevant personnel can begin developing a plan based on
student needs. Considering the implications of misdiagnosis, an increase in understanding could allow educators to become more effective when delivering information to practitioners that may be considered when diagnosing children with emotional and/or behavioral disorders. To better understand the symptomology and begin to understand the differentiation of ADHD and PBD, the following question will be investigated: 1) what are the strengths and challenges are demonstrated by children with PBD, mood disorders, and ADHD in early education settings? As many of strategies discussed in literature were looking specifically at older elementary and school-aged children, one must also investigate the strategies currently being employed by Early Childhood (EC) professional by asking the next research question: 2) what are the methods and strategies EC professionals are currently using to effectively support children with the PBD and related disorders? Though both research questions were derived from the literature review, neither have been field tested and will be analyzed through a descriptive study.

**Methods**

**Descriptive Research Methodology: Survey**

This study used quantitative approach to answer the research questions. This descriptive research surveyed teachers through the use of a questionnaire. Descriptive research is used for the purposes of generating “knowledge that describes something” (Goodwin & Goodwin, 1996, pg. 33). Categories included in descriptive research include survey and developmental. This study utilized survey research. With surveys, the researcher typically constructs either structured interviews or questionnaires to distribute
within a given sample (Goodwin et. al., 1996). For this investigation, a survey was created which asked questions regarding the following: sample demographics, experience with children with a diagnosis of PBD, mood disorder, and ADHD within the school setting, specific behaviors, behavior frequencies and challenges, and activities/times of behavior display.

**Sampling**

Sampling refers to the population of subjects that will be chosen for survey distribution (Goodwin et. al., 1996). The intention of this research was to gather information on current practices used within the classroom in order to support young children with PBD, mood disorders, and ADHD. For the aforementioned reason, current teachers working in school classrooms with children were identified as the target population for distribution. As time was a constraint throughout this study, a convenience sample was used. Convenience sampling refers to the utilization of available subjects (Goodwin et. al., 1996) and in this case, the subjects were New Hampshire (NH) school teachers and special educators.

To minimize researcher bias and to ensure for the largest possible sample size, the survey was sent only to large school districts categorized as Class L or Division I in the New Hampshire Interscholastic Athletic Association. Schools in this class were placed in the division when the district high school size exceeded 1200 students. A snowball sampling method was used. This is a type of sampling where a “subject nominates additional persons to be used in the study” (Goodwin et. al., 1996, pg.28). An email invitation was sent to school principals from all elementary school included in these
designated districts. Principals then disseminated the email with a survey link to their school personnel, specifically EC teachers and special educators. In total, 72 educators began the survey, with 66 completing beyond the first page, and only two men were represented.

**Data Collection**

Data was collected through responses on Survey Monkey over a two week span. This program provided for the ease of distribution while also calculating the percentages found in the results (www.Surveymonkey.com).

**Data Tools**

The survey was created based upon the review of the literature. The survey was comprised of 78 items divided into four specific sections: demographic information, PBD, mood disorder, and ADHD. In the demographic section, educators were asked to identify their gender, age group, education level, course(s) of study, relevant coursework information, and experience in current position, grade level teaching, and school.

Survey questions probed teachers about each disorder, the ages at which children worked with were diagnosed, hours of service provided, effective and ineffective strategies of intervention, and student strengths. Finally for each diagnosis, questions were asked to indicate which behaviors were most frequent, most challenging, and at what times of day these behaviors took place.

**Procedure**

The research began with the distribution of an email request to Principals from Class L defined districts asking for further distribution to teachers and special educators
working or having worked in grades PreK – 3. The survey was distributed on a Sunday night before school scheduled for the following day. A link to the survey on SurveyMonkey.com was included in the email. After one week, the responses were tabulated with the Survey Monkey program and a reminder invitation was sent to the same pool of individuals. Two days before the end of the second week, a high priority reminder was sent to the same group of principals. On Monday, at the end of two weeks time, the survey was closed.

**Purpose**

**Data Analysis**

The data was analyzed looking for specific patterns in data: identifying the frequency of activities/subjects produced repeated behaviors and the time of day specific behaviors presented. I also looked at the current child support practices in place, the efficacy of these practices, and which practices were most commonly used. Including data on both mood disorders and ADHD allowed for comparison on prevalence rates in this NH sample of all disorders and how and when symptom presentation differs for these individuals. After examining frequency and percentage of responses, correlations were run to determine if there was a relationship among variables to answer the research questions.

**Results**

**Demographics**

In total, 72 educators began the survey and only two men were represented from the pool of 67 individuals that continued past the first page. General educators were the
largest group represented (45.7%), while special educators were the second largest group represented (28.6%). All candidates held at least an Bachelor’s degree, though 87.4% had completed at least some graduate coursework with 66.7% possessing a Master’s degree or higher. Undergraduate concentrations ranged from finance to drama. 90% of individuals had earned a Master’s in Education having a variety of foci. During their years employed in education, at least 80% of educators had completed a course in behavior management, child and human development, and assessment and intervention, while over 70% denoted learning about human behavior, positive behavior supports, and classroom management. Professional development training covered a range of educational experiences, as over 60% had received some form of training in both Positive Behavior Intervention Supports (PBIS) and supporting social and emotional needs of children.

Regarding current positions, classroom teachers and special educators represented the largest educators groups at 43.9% and 28.8% respectively, in addition 6.1% of those surveyed reported holding dual responsibilities. The age range of professionals who participated was most widely represented by the 20 – 30-year-old age group and 51 – 60-year-old age group, which matched the range of experience found in the demographic results. Just less than one-third of individuals reported having taught and/or case-managed for 21 years or more (N=21, 29%), as one-fifth were in their first five years (N=14, 20%).
Experience with Disorders

In looking the experience of educators with each disorder, of 67 educators 25 responded as having worked with a child diagnosed with PBD. The mean age of a child with PBD was 9.5-years-old. All 19 of the educators who continued with the section verified that they were informed of the diagnosis through medical report, Individualized Education Plan (IEP)/Individualized Family Services Plan (IFSP) documentation, 504 plan, or parent report. Of the educators who reported working with children diagnosed with PBD, 60% reported having provided services to three or more children, while 40% had worked with 0-2 individuals.

Nearly half (30, 48.3%) of the 62 educators worked with a child diagnosed with a mood disorder and all 19 who responded to this portion of the survey indicated they were made aware through the same sources as those previously mentioned for PBD. Educators who reported working with children diagnosed with a mood disorder represented a range: 47.4% had worked with zero to two children, 21.1% of educators had worked with three to five, 21.1% had worked with five to ten children, and 10.5% had worked with 10 or more children with mood disorder. The average age reported by those educators having worked with a child with a mood disorder was 8.1-years-old.

Out of 50 educators who answered the items pertaining to ADHD, 49 reported experience working with a child with ADHD. The mean age of a child with ADHD was 7.45-years-old. Educators reported they were made aware of the diagnosis in a variety of ways; 36 (76.6%), through Medical Diagnosis and IEP/IFSP documentation, 29 (61.7%)
learned through parent report, 21 (44.7%) through 504 plan, and seven (15.6%) indicated
the diagnosis was based on their own experience and not through documentation.

**What are the Challenges Demonstrated by Children with PBD, Mood Disorders, and ADHD in Early Education Settings?**

**Symptom Presentation**

Displayed in Figures 1.1 and 1.2 are the most frequently displayed behaviors and
most challenging behaviors presented by children with PBD, mood disorders, and ADHD
as reported by educators. Before reporting the results, it should be noted that the number
of responses differs from the number of educators, as educators were asked to identify
three most frequent behaviors. In all cases, educators reported impulsivity was either the
first most or second most frequent behavior. When looking at children with PBD
specifically, 20 teachers (75%) identified impulsivity as the most frequent behavior with
12 (60%) reported the rapid cycling of moods. Educators looking at high frequency
symptoms in mood disorders and ADHD reported distractibility as being most frequent
with 13 (76.5%) and 42 (93.3%) of 45 responses, respectively.

The most challenging behaviors presented in children with PBD, as reported
through the survey, were impulsivity (60%) and rapid cycling between moods (55%) out
of 20 total educators. Figure 1.2 illustrates the range of challenges identified by educators
working with children diagnosed with mood disorders. Impulsivity represented the
greatest pool of responses (N=17; 58.8%). Irritability and distractibility received the
second highest indicated scores (52.9%). More clearly defined are the
Figure 1.1 Most Frequent Behaviors

Figure 1.2 Most Challenging Behaviors
Figure 2.1 Frequent Behaviors and Subject/Activity Blocks

Figure 2.2 Challenging Behaviors and Subject/Activity Blocks
three most challenging behaviors related to ADHD, as distractibility (93.3%), impulsivity (88.9), and hyperactivity (64.4%) represented the largest three sections of the pool at out of 45 educators.

**Time, Activities/Subjects, and Behavior**

**Frequent Behaviors**

Looking specifically at subject blocks or activities, 10 educators (52.3%) chose unstructured play as the most frequent time behaviors were displayed while nine educators (47.4%) indicated both writing and math (see Figure 2.1). Moving then to which subjects or activities when these behaviors occurred, 13 of those 17 (76.4%) educators reporting identified writing, while nine selected reading (52.9%). Reading and writing were identified as subject blocks when ADHD behaviors were most frequently displayed (N=32; 86.5%). Math was also frequently identified as a subject when behaviors took place by 24 educators (64.9%).

**Challenging Behaviors**

A wide range of subject blocks were identified as times when teachers reported seeing challenging behaviors (see Figure 2.1). Recess or unstructured play was indicated by 10 (52.6%) educators, while both writing and math were chosen by nine (50%) educators having worked with children with PBD.

Educators having worked with children diagnosed with mood disorders identified writing as the most challenging subject block (N=13; 76.5%) receiving the largest pool of responses, where math and reading earned the second largest response both indicated by eight educators. Reading and writing were both identified as subject blocks where
challenging behaviors tended to display most often for children with ADHD, indicated by 31 (70.5%) and 30 (68.2%) educators respectively, while math was also chosen more than half the time from 23 educators (51.1%).

**What are the methods and strategies Early Childhood (EC) professionals are currently using to effectively support children with the PBD and related disorders?**

**Strengths-based Supports**

Educators were asked about the efficacy of strategies used to support each disorder on three different sections: team-based, strengths-based, and individually-based. When asked what strengths students with PBD, mood disorders, and ADHD possess, *creativity* was indicated as a strength more than 50% of the time for each. Professionals who reported having experience with children with PBD selected *creativity* (75%), *gets along better with adults than peers* (60%), and *helpful if someone is upset, hurt, or ill* (50%) the majority of the time (N=20). Figure 3.1 displays the comparison of strengths chosen by educators within each diagnosis.

The results for children with ADHD yielded the greatest reported agreement in strengths. Both *being creative* and *having at least one good friend* were ranked at 61.4% of the time out of 44 educators. Educators also selected *generally liked by other children, helpful if someone is hurt, upset, or ill, and often offers to help others* just over 45% of the time (see Figure 3.2).

Utilizing these aforementioned greatest strengths of children with any of these three disorders, educators were asked to explain how they had built upon these strengths to develop effective supports. Figure 3.2 shows the categories with which those responses
Figure 3.1 Student Strengths

Figure 3.2 Strategies Built on Strengths
were placed after data collection. Positive reinforcement or specific strategies that could be identified as positive reinforcement was indicated for each disorder as, PBD (28%), mood disorders (31%), ADHD (19%). Peer modeling (N=36; 22%) was identified the greatest number of times for educators writing about children with ADHD. Peer modeling, social learning, and creative outlets were indicated between 5% and 25% for each disorder as a method of building on student strengths for support.

**Behavior-based Methods**

The survey gave a list of six methods drawn from the literature review for supporting children with PBD and related disorders; educators then selected strategies that had been effective in their experience. Positive reinforcement was indicated the greatest number of times by 19 (90%) professionals for children with PBD and 17 (90%) professionals considering children with mood disorders. Redirection was chosen the most by the 45 educators who had worked with children with ADHD (95.6%). A Behavior Plan and parent communication were indicated as being effective over 60% of the time for all disorders.

Looking at ineffective strategies, the same choices were available as described in the aforementioned paragraph. For all disorders, negative reinforcement was indicated as the least effective of all options, as is illustrated in figure 3.4. Explanation was reported as the second least effective strategy across groups.
Figure 3.3 Effective Strategies

Figure 3.4 Ineffective Strategies
Team-based Supports

A wide range of effective strategies were reported by educators, making the development of a graphic too complicated. In the final group of strategies those 18 educators who worked with children diagnosed with PBD identified parent communication as the most effective strategy used (44%), followed by consistent team collaboration (38%) and guidance support (33%) as the most frequently indicated choices. Team collaboration was also indicated with the greatest percentage for both ADHD (N=38; 18%) and mood disorders (N=15; 33%). For children with mood disorders, the group also chose parent communication and an effective behavior plan most frequently (N=15; 20%). Results for professionals working with children with ADHD were more scattered, as they were grouped into 30 different categories, yet 15% of educators did select an effective behavior plan as the second most effective strategy.

Reasons educators had been ineffective in working with children with ADHD fell into 17 categories. The most highly indicated reason professionals were effective in delivering services to children were related to the level and condition of parent support along with the amount of communication; these accounted for 28% of responses and were indicated more than three times as often of any other category. Lack of parent support (18%) was also indicated the most by professionals (N=16) as being the largest obstacle in delivering services. Issues with communication were denoted most frequently by educators (N=18) supporting children with PBD (27%).

Educators were also asked to indicate through open response how the team had been effective and ineffective in meeting the needs of children with PBD, mood
disorders, and ADHD. The open responses were compiled and placed into the following categories regarding efficacy: academic accommodations/modifications, additional adult support, behavior plan, CHOICE program, ongoing-assessment, sensory breaks/activities, teacher flexibility, guidance support, outside service coordination, parent communication, calm/private space, routine/structure, self-contained environment, multi-sensory support, wrap-around services, staff training, transition preparation, cueing, effective IEP/504 plan, impacted learning areas, PBIS, medication management, peer modeling, positive reinforcement, positive distracters, Response-to-Intervention (RTI) model, group work, task analysis, and teacher experience. Those 18 educators responding to this question with regards to children with PBD indicated effective team collaboration (50%), open and consistent parent communication (44%), and guidance support (33%) as the top three strategies. Out of 15 persons responding to methods supporting children with mood disorders, effective team collaboration (66%) was reported most frequently. Successful development and implementation of a behavior plan was employed effectively by 20% of educators working with children with mood disorders.

Effective team collaboration was also chosen most frequently by the 39 educators relevant to children with ADHD (33%). Educators also noted the use of a behavior plan (15%) and implementation of accommodations and/or modifications (12%) as being effective when working with children with ADHD. Barriers to teams effectively delivering services to children with ADHD included lack of parent support (28%), time constraints (10%), and inconsistency of medication management (23%). Lack of parental support (12%) and inconsistent medication management (12%) were also found frequent
responses from educators working with children with mood disorders. A lack of effective
team communication was the most common response from educators of children with
mood disorders (18%) and for children with PBD (27%). Additionally, educators of
children with PBD noted that consistency across settings was a barrier (22%) and the
unpredictability of behaviors (16%) proved difficult in the effective delivery of services
to children with PBD.

Discussion

What are the challenges demonstrated by children with PBD, mood disorders, and
ADHD in early education settings?

Symptomology

The purpose of this study was to develop a better understanding of how young
children experience PBD and related disorders, what methods educators have used to
support children with PBD and related disorders, and whether ADHD and PBD
symptoms could be distinguished in young children. In doing this, educators currently
serving students in NH schools were surveyed.

Educators surveyed were asked to report on the behaviors most frequent and
challenging in the classroom; for each disorder professionals’ indicated impulsivity with
at least 58% frequency. As impulsivity is listed as one of the criteria for diagnosis in
ADHD, one might expect such a choice to be highly indicated. However, for diagnosis
of PBD there is no requirement for displays of impulsivity nor does the research name
this specific behavior (APA, 2000). This may be due to the arguments made by those in
the field that believe the disorders present indistinct symptomology (Litrell et. al., 2010;
Sing et. al., 2006; Milberger et. al., 1995). One might also consider that impulsivity coincides with the desire to pursue pleasure-seeking behavior and racing thoughts, both symptoms identified in the diagnostic criteria for BD (APA, 2000). If the child were asked why he or she was engaging in an impulsive behavior, the response could be examined to determine whether the behavior is symptomatic of a particular disorder.

Though impulsivity appears to be a clear symptom similarity among all disorders, when looking at differences that arose between ADHD and PBD there are two behaviors that took place more in one than the other. Educators reporting on experiences with ADHD indicated distractibility to be both the most frequent and challenging behavior in children over 90% of the time, however distractibility was indicated less than 50% of the time by educators reporting on children with PBD. Instead, rapid cycling of moods was chosen more highly by those working with children with PBD and rarely selected in reference to children with ADHD or mood disorders. The findings of this study match much of what Papolos (2002) discusses in his book as distinguishing characteristics of children with PBD from those with ADHD. There is further support of these findings in the study on overlapping symptoms by Geller and colleagues (2008; Papolos et. al., 2002). These results are also consistent with the findings of Hershfield et. al. (2003) that the most challenging behaviors found in young children with PBD are behavior disinhibition and an inability to regulate emotions. Papolos et. al. (2002) suggested that through the presentation of grandiosity in young children, professionals could make the distinction between PBD and ADHD; however grandiosity was indicated least often among frequent behaviors. This could be attributed to the lack of behavior definition;
what does grandiosity look like in young children? McIntosh et. al. (2006) describe children displaying this symptom as telling elaborate stories and an inability to grasp reality. For some professionals, this might be difficult to distinguish from typically developing behavior of young children who regularly engage in pretend play (Cain, 2010).

Whether looking at PBD, mood disorders, or ADHD, the consistency across the questions of the most frequent and most challenging behaviors is something to note. The top three most frequent behaviors for ADHD (hyperactivity, impulsivity, and distractibility) and mood disorders (distractibility, restlessness, and hyperactivity) were also indicated as the most challenging. Due to an error in the construction of the survey, this could not be consistently compared for the responses regarding mood disorders. All behaviors provided were part of diagnostic criteria for either PBD or ADHD and for this reason should also appear most frequently (APA, 2000). The alignment of these numbers might also be due to the action of teacher reporting and the possibility that it is human nature to remember negative events more easily than those which are positive or neither. It is also possible that these behaviors are simply recalled more frequently. Due to the time constraints of the school day, such behaviors may be more challenging to manage, as teachers are growing more and more concerned with meeting academic standards. It should be noted that the all behaviors were reported from teacher perspective. For this reason, the answers should be considered as perceptions of adults rather than the actual personal experience of the child.

Behavior Display
Similar to frequency of challenging behaviors for each disorder, the subject blocks chosen when behaviors were displayed were similar. For both mood disorders and ADHD, educators selected reading, writing, and math as the times when behaviors occurred. Considering the symptoms, one can surmise that these challenging behaviors do not lend to success in academic subjects; subjects where students are required to focus and work diligently for long periods of time as required for young children learning to read write and manipulate numbers.

An interesting finding is noted when looking at Figures 2.1 and 2.2. Math and writing were indicated frequently when looking across disorders. However, recess and unstructured play were chosen by the greatest number of educators when asked about frequent and challenging behaviors for children with PBD. This was not indicated for children with ADHD or mood disorders. Considering the strategies recommended by McIntosh et. al. (2006) strongly urging that teachers provide a classroom structure and also inform students when the normal routine will change, this finding is not surprising. Free play time offers little structure aside from a time limit and a specific environment (e.g., playground) as well as frequently lacks adult support for social interaction. What these results might suggest is that children have difficulty regulating their behaviors during times when adults are not available and structure is missing. Additionally, recess is often a time for social interaction with peers, an area this study found many children with PBD continue to struggle. This finding is consistent with the knowledge that these children get along better with adults than children (Papolos et.al., 2002). When looking at this particular finding in conjunction with strengths chosen by educators, one might infer
that social development and peer interaction is a major challenge for children with PBD. Though important to note that teachers were choosing strengths, less than 20% chose generally liked by other children with respect to children with PBD. This is an especially important finding when comparing these responses to those given regarding children with ADHD, as the results more significantly suggested social skills and interactions as a strength for the children.

**What are the methods and strategies Early Childhood (EC) professionals are currently using to effectively support children with the PBD and related disorders?**

To effectively support children based on strengths, many educators utilized the adult relationship to provide additional support to meet academic goals. While adult support was included as one of the more significant choices made by teachers, creativity was reported as the highest strength for each diagnosis. Many teachers indicated that they would offer creative outlets, engage children using more creative methods, or provide positive reinforcement in the form of creative expression to build upon child strengths. These strategies appeared consistently for all disorders, as many expressed using a strategy based on the strength identified as creativity.

One difference to note between PBD and ADHD is reflected in both strengths related to peer relationships and strength-based support surrounding social learning. Unlike children with PBD and mood disorders, educators of children with ADHD chose has at least one good friend equally as much as creativity. Looking further at how educators used strengths to support children with ADHD, the use of peer models in some way was written most often in the open response section though rarely found in the PBD
section and not at all for mood disorders. This merely highlights what had been found in the literature about children with PBD; these children benefit from additional support in social, emotional development which may possibly derive from a struggle to develop relationships with peers due to the unpredictability of their behavior (McIntosh et. al., 2006; Papulos et. al., 2002).

As positive reinforcement was noted highly throughout the responses looking at strength-based supports, this same choice was picked 90% of the time by educators across disorders. Though the literature outlined a variety of strategies, many were contingent upon delivery of positive reinforcement (McIntosh et. al., 2006; DuPaul et. al., 2011; Daley et. al., 2010). The implementation and construction of a behavior plan was also one of the most widely used strategies identified throughout the survey. When looking across disorders where the questionnaire asked for educators to choose those strategies that worked most effectively and openly respond with strategies the team had employed successfully, behavior plan was chosen frequently. These results are interesting as little of the research explicitly states the use of behavior plans though one might assume that many of the strategies can be incorporated into one.

Analyzing the responses given for questions regarding the team’s ability to deliver services effectively to a child with bipolar disorder, many very clearly stated the need for effective communication and team collaboration. Specifically, many noted the need for regular meetings, consistency of service delivery across settings, and support from parents. These responses match much of the research that not only asks that parents work as part of the team delivering services to a child with either PBD, mood disorders,
or ADHD but also suggests that they actively engage their children in reaching academic goals (McIntosh et. al., 2006; Daley et. al., 2010; DuPaul et. al., 2011). Across disorders, educators reported that lack of parent support was the greatest barrier to supporting the child highlighting how critical parent communication and collaboration is in the education process.

Though not identified in the research, many educators expressed through open response questions the importance of individualizing instruction. Rather than pinpointing strengths and challenges representative of a group, many teachers did not make specific choices because they believed that each child possesses differences, not explained by a diagnosis. The literature does pinpoint specific strategies and are based on the diagnostic criteria of the disorder. For example, for children PBD, McIntosh et. al. (2010) asks that teachers help students self-regulate and self-monitor based on knowledge that diagnosis requires these children to have rapid cycling of moods. When it comes to the job of teaching academic skills, however teachers must learn about the individual and his or her learning styles and how to support them in the classroom. Whether or not a child has a diagnosis of ADHD or PBD, the teacher is not going to learn about the individual through research articles and diagnostic criteria. One might wonder whether individualization would have been indicated more frequently if provided as an option, supplementary to those methods indicated most often.

Limitations

The findings of this study are limited to the sample studied. The sample size was limited due to the time constraints; the sample of responses gathered was small when
compared to the population of teachers throughout the state of New Hampshire. While the diversity of educators were not included in this study, it is important to acknowledge that the sample was taken from NH school districts, a state where 93.9% of individuals are white (quickfacts.census.gov, 2010). NH also holds the seventh-highest median household income and an unemployment rate of 7.1%, below the national average, which suggests this data cannot be generalized to the experiences of educators working in low-income, urban schools (stats.bls.gov, 2010). In addition to the limited sample size and population, the format of the survey did not lend well to statistical tests that offer an outlook as to how future educators in this type of study might respond or make comparisons.

Flaws were also found in survey construction during the process of data collection and analysis. Under the item asking educators to check off the three most frequent behaviors found in children with mood disorders, the behavior of irritability was unintentionally omitted. This omission leaves one to wonder how the numbers might have changed under the “frequency” category, as it was one of the behaviors that was highly indicated in the “challenging” category. A second omission was made under the strengths item regarding children with ADHD; the choice was “kind to younger children”. Therefore, no similar question regarding children ADHD followed.

Looking further into the construction of the survey, one must note that the phrasing used when asking one particular question represents a possible range of responses. Questions providing choices looking at the efficacy of specific strategies inquired of educators “what worked well”. This wording does not specify for whom the
strategies worked well and on what basis did the strategies work well. For some teachers, a strategy that “worked well” might pertain to that which was able to keep the child from disrupting the class, thus working well for the teacher. The intention of the question was to gather information on strategies that were effective in supporting the child and enabling him or her to succeed in the classroom. However, it is not the responsibility of the participants to infer the meaning of the question, thus one must not disregard the possibility that the chosen strategies were those that worked well for the teacher and not necessarily beneficial to the student in question.

Accepting that educator interpretations might differ with regards to the aforementioned limitation, one must also accept that all answers were given using teacher report and, specifically, teacher perceptions. The experience of the educator might differ considerably from that of the student or the parent, thus it is important to acknowledge how answers might differ and what factors might impact their choices.

The final limitation of this study becomes apparent when looking at the age groups of children the educators’ experiences refer. The item referring to the age of children asked for the educators to provide all ages of children with whom they had worked with for the diagnosis in question. Though the responses ranged from three to 20, most educators had worked with children between the ages of six and eight with the mean age of children 9.5 years which is beyond the stage of early childhood (Birth-eight-years-old). It is therefore difficult to make any predictions or generalizations to children ages three- to five-years-old served in preschool classrooms.

**Implications**
Differentiating ADHD and PBD

This study does advance our knowledge in certain aspects and raises questions to be examined further. With the controversy surrounding comorbidity rates of PBD and ADHD in children, looking further into presentation of behaviors in the classroom might provide further substance to the argument made by Papulos et. al. (2002) that differences do exist in the presentation of symptoms. The educators in this study have expanded our knowledge of symptom presentation and the times when presentation was most frequent in school settings. Future research should consider further examination of “unstructured time” and note any difference in results. Pinpointing whether the challenges faced during “unstructured time” are due to the lack of an established routine or struggle in developing social skills may enable educators to better support all children in the future.

Supporting Young Children with PBD and Related Disorders in the Classroom

By asking educators to identify times of day and subject blocks when behaviors took place, this researcher hopes that this information becomes a cause for teacher reflection. Through increased awareness, it is time for educators to consider how the current, most effective strategies can be applied during the school day. Though some educators clearly stated that for their students they would occasionally make accommodations or modifications, many did not report using this strategy to support children with PBD, mood disorders, or ADHD. These results might lead to the pursuit of a qualitative study that observes children with PBD during the school the day or further quantitative research to identify triggers during these times or periods.
Supporting Young Children in the Early Childhood Classroom

This is also an area that requires further research as it pertains to children in early childhood settings, as most strategies identified in the literature were conducted with older, elementary students. Given some educators responded as having worked with children diagnosed with PBD as young as age three, it should be possible to find children that better represent the early childhood category: those who are under the age of 8 years in school settings for additional research. In order to pinpoint the true impact and prevalence of PBD in early childhood, the next step for this research may require reaching out to early learning centers across the country. This research would encourage future studies of professionals with a similar questionnaire even if they had no experience with the target population of students in question.

Conclusion

This researcher seeks to empower professionals to continue pursuing investigations that seek to attain further information and understanding of emotional and behavioral disorders. PBD offers great challenges to those given the diagnosis at any age. For children receiving this diagnosis, it becomes the responsibility of those influencing his or her life to provide appropriate support. Teacher preparation programs are guided by evidence-based practices however little is known about the educational supports and manifestation of PBD in early education settings. Adding to the research will further our knowledge of research-based strategies to support children. As this thesis attempts to pinpoint the symptomology and presentation of PBD and related disorders in early education, it is imperative that further explorations continue in the hopes to eventually
provide the results with which to construct best practices for supporting children's mental health.
References


Appendix A
Teacher Survey

Demographic Information

1. Are you:
   Male       Female

2. What is your education level?
   Associate      Bachelors degree
   __________________________

   Course of Study

   Graduate Coursework      Graduate Degree
   __________________________

   Course of Study

3. What is the area of your teaching license? __________________________

4. What is your role:
   General educator       Special Educator

   Special Educator and Classroom Teacher

5. What represents your age group?
   _____ 20-30 yr.       _____ 31-40 yr.
   _____ 41-50 yr.       _____ 51-60 yr.
   _____ 61-70 yr.
6. In your college coursework, did you coursework in any of the following?:
Check all that apply.

Behavior management  behavior analysis  human behavior
positive behavioral supports  child development or human
development
assessment and intervention  classroom management

7. Have you had professional development, continuing education, or attended
any conferences in any of the following?: Check all that apply.

positive behavior supports (PBIS)  applied behavior analysis (ABA)
social skills support  child mental health
supporting social and emotional needs of children
Other:

8. How many years have you been teaching?

9. How many years have you been teaching at this center/school?
   -How many years at this grade level?

**Pediatric Bipolar Disorder**

10. Have you ever or do you currently have a child in your class or case load
diagnosed with Pediatric Bipolar Disorder (PBD)?
    Yes
    No
If you have no experience with children with pediatric bipolar disorder, skip to question #22

If yes, what type of professional diagnosed the child?

a. Medical doctor b. psychiatrist c. other:

- How many children with Pediatric Bipolar Disorder have you worked with?

  a. 1 b. 2 c. 3 d. 4+

- How old were these children?

- You were made aware of this diagnosis through:

  Medical Diagnosis IEP/IFSP Documentation 504 Plan
  Parent report Other
  I have no documentation, but believe it to be true based on my experience

  - How many hours per week do you currently or in the past provide direct and/or indirect service to a child with PBD?

    a. 1-3 b. 4-5 c. 6+

11. What other members make up the team providing services to the child with PBD? List roles: (e.g., teacher, nurse, etc.)

    ____________________________________________

    ____________________________________________

    ____________________________________________

    ____________________________________________

12. What is your role on this teaching team? (check all that apply)

    ___ Service Coordinator ___ Case manager ___ Co-teacher

    ____ Lead Classroom Teacher ___ Family Liaison
13. How long have you been teaching with this staff/team?
   a. <1 year   b. 1-3 years   c. 3-5 years   d. 5-10 years   e. 10+ year

14. Describe the ways the team has been effective in delivering services to children with PBD.

15. Describe the challenges the team has had in effectively meeting the needs of children with PBD.

16. What strengths have the children with PBD exhibited? Check all that apply:
   - considerate of other people’s feelings
   - shares readily with other, for example toys
   - generally well-behaved, usually does what adult requests
   - helpful if someone is hurt, upset, or feeling ill
   - has at least one good friend
   - generally liked by other children
   - kind to younger children
   - often offers to help others (teachers, other children, parents)
   - thinks things out before acting
   - gets along better with adults than with other children
   - good attention span: sees chores or homework through the end

17. How have you utilized or built upon those strengths to support children with PBD?

18. Which of the following behaviors have you found to be most frequently displayed by the children with PBD? Choose three:

   Accelerated speech  Hyperactivity  Distractibility
   Restlessness
Impulsivity  Irritability  Fatigue  Grandiosity/Higher than normal self-esteem

Rapid cycling between moods

- At what time of day do these behaviors typically take place?
  Morning  Early Afternoon  Late Afternoon

- During which activities/subject block do these behaviors typically take place?
  Check all that apply:
  Reading  Writing  Math  Science  Social Studies
  Recess  Gym  Music  Art  Other:

19. Which of the following behaviors have you found to be most difficult or problematic when working with the children with PBD? Choose three:
   Accelerated speech  Hyperactivity  Distractibility
   Restlessness
   Impulsivity  Irritability  Fatigue  Grandiosity/Higher than normal self-esteem

   Rapid cycling between moods

- At what time of day do these behaviors typically take place?
  Morning  Early Afternoon  Late Afternoon

- During which activities/subject blocks do these behaviors typically take place?
  Check all that apply:
  Reading  Writing  Math  Science  Social Studies
  Recess  Gym  Music  Art  Other:
20. What strategies have you used to support the children with PBD that worked well? Check all that apply:

Redirect | Positive Reinforcement | Negative Reinforcement
Behavior Plan | Explanation | Parent Communication
Other:

21. What strategies have you used to support the children with PBD that did not work well? Check all that apply:

Redirect | Positive Reinforcement | Negative Reinforcement
Behavior Plan | Explanation | Parent Communication
Other:

Mood Disorders

22. Have you ever or do you currently have a child in your class / caseload diagnosed with a mood disorder? Yes No

If you have no experience with children with mood disorders, skip to question # 34

If yes, what type of professional diagnosed the child?

b. Medical doctor b. psychiatrist c. other:

- How many children have you worked with that have a mood disorder?
  a. 1 b. 2 c. 3 d. 4+

- How old are these children?

- You were made aware of this diagnosis through:
I have no documentation, but believe it to be true based on my experience.

- How many hours per week do you currently or in the past provide direct/indirect service to a child with a mood disorder?

a. 1-3  b. 4-5  c. 6+

23. What other members make up the team providing services to children with mood disorders? List roles: (e.g., teacher, nurse, etc.)

24. What is your role on this teaching team? (check all that apply)

   ___ Service Coordinator ___ Case manager ___ Co-teacher  
   ___ Lead Classroom Teacher ___ Family Liaison  
   ___ Other _______________________

25. How long have you been teaching with this staff/team?

   a. <1 year  b. 1-3 years  c. 3-5 years  d. 5-10 years  e. 10+ year

26. Describe the ways the team has been effective in delivering services to children with a mood disorder.

27. Describe challenges the team has had in effectively meeting the needs of the children with a mood disorder.
28. What strengths have children with a mood disorders exhibited? Check all that apply:

- considerate of other people's feelings
- shares readily with other, for example toys
- generally well-behaved, usually does what adult requests
- helpful if someone is hurt, upset, or feeling ill
- has at least one good friend
- generally liked by other children
- kind to younger children
- often offers to help others (teachers, other children, parents)
- thinks things out before acting
- gets along better with adults than with other children
- good attention span: sees chores or homework through the end

29. How have you used or built upon those strengths to support children with a mood disorder?

30. Which of the following behaviors have you found to be most frequently displayed by the children with a mood disorder? Choose three:

Accelerated speech     Hyperactivity     Distractibility
Restlessness
Impulsivity     Irritability     Fatigue     Grandiosity/Higher than normal self-esteem
Rapid cycling between moods

- At what time of day does this behavior typically take place?

  Morning     Early Afternoon     Late Afternoon

- During which activities/subject block do these behaviors typically take place? Check all that apply:
31. Which of the following behaviors have you found to be *most difficult or problematic* when working with the children with a mood disorder? Choose three:

- Accelerated speech
- Hyperactivity
- Distractibility
- Restlessness
- Impulsivity
- Irritability
- Fatigue
- Grandiosity/Higher than normal self-esteem
- Rapid cycling between moods

- At what time of day do those behaviors typically take place?
  - Morning
  - Early Afternoon
  - Late Afternoon

- During which activities/subject blocks do these behaviors typically take place? Check all that apply:
  - Reading
  - Writing
  - Math
  - Science
  - Social Studies
  - Recess
  - Gym
  - Music
  - Art
  - Other:

32. What strategies have you used to support the children with a mood disorder that worked well? Check all that apply:

- Redirection
- Positive Reinforcement
- Negative Reinforcement
- Behavior Plan
- Explanation
- Parent Communication
- Other:
33. What strategies have you used to support the children with a mood disorder that did not work well? Check all that apply:

- Redirection
- Positive Reinforcement
- Negative Reinforcement
- Behavior Plan
- Explanation
- Parent Communication
- Other:

**Attention Deficit Hyperactivity Disorder**

34. Have you ever or do you currently have a child in your class or caseload diagnosed with Attention Deficit-Hyperactivity Disorder (ADHD)?

- Yes
- No

*If you have no experience with children with ADHD, skip to additional comments section*

If yes, what type of professional diagnosed the child?

- c. Medical doctor
- b. psychiatrist
- c. other:

- How many children with ADHD have you worked with? a. 1 b. 2 c. 3 d. 4+

- How old are/were the children?

- You were made aware of this diagnosis through:
  - Medical Diagnosis
  - IEP/IFSP Documentation
  - 504 Plan
  - Parent report
  - Other
  - I have no documentation, but believe it to be true based upon my experience

- How many hours per week do you currently or in the past provide direct/indirect service a child with ADHD?
34. What other members make up the team providing services to the children with ADHD? List roles: (e.g., teacher, nurse, etc.)

35. What is your role on this teaching team? (check all that apply)

   ___ Service Coordinator   ___ Case manager   ___ Co-teacher
   ___ Lead Teacher          ___ Family Liaison  ___

Other __________________________

36. How long have you been teaching with this staff/team?

   a. <1 year  b. 1-3 years  c. 3-5 years  d. 5-10 years  e. 10+ years

37. Describe the ways the team has been effective in delivering services to children with ADHD.

38. Describe the challenges the team has had in effectively meeting the needs of children with ADHD.

39. What strengths have you found in the children you are currently serving or have served with ADHD? Check all that apply:

   - considerate of other people’s feelings
   - shares readily with other, for example toys
   - generally well-behaved, usually does what adult requests
   - helpful if someone is hurt, upset, or feeling ill
   - has at least one good friend
   - generally liked by other children
   - kind to younger children
- often offers to help others (teachers, other children, parents)
- thinks things out before acting
- gets along better with adults than with other children
- good attention span: sees chores or homework through the end

40. How have you used or built upon those strengths to support children with ADHD?

41. Which of the following behaviors have you found to be most frequently displayed by children with ADHD? Choose three:

- Accelerated speech
- Hyperactivity
- Distractibility
- Restlessness
- Impulsivity
- Irritability
- Fatigue
- Grandiosity/Higher than normal self-esteem
- Rapid cycling between moods

- At what time of day does this behavior typically take place?
  - Morning
  - Early Afternoon
  - Late Afternoon

- During which activities/subject block do these behaviors typically take place? Check all that apply:
  - Reading
  - Writing
  - Math
  - Science
  - Social Studies
  - Recess
  - Gym
  - Music
  - Art
  - Other:

42. Which of the following behaviors have you found to be most difficult or problematic when working with children with ADHD? Choose three:

- Accelerated speech
- Hyperactivity
- Distractibility
- Restlessness
Impulsivity  Irritability  Fatigue  Grandiosity/Higher than normal self-esteem

Rapid cycling between moods

- At what time of day do those behaviors typically take place?

  Morning  Early Afternoon  Late Afternoon

- During which activities/subject blocks do these behaviors typically take place? Check all that apply:

  Reading  Writing  Math  Science  Social Studies

  Recess  Gym  Music  Art  Other:

43. What strategies have you used to support children with ADHD that worked well? Check all that apply:

  Redirection  Positive Reinforcement  Negative Reinforcement

  Behavior Plan  Explanation  Parent Communication

  Other:

44. What strategies have you used to support children with ADHD that did not work well? Check all that apply:

  Redirection  Positive Reinforcement  Negative Reinforcement

  Behavior Plan  Explanation  Parent Communication

  Other:
Additional Comments you would like to share.

Thank you for completing this survey.

---

Appendix B

Greetings Teachers and Administrators,

I am writing to ask your assistance in distributing a survey link included to your faculty in PreK to 3rd grade. As a University of New Hampshire graduate student in early childhood education, I am researching how diagnoses specific to young children’s mental health (Bi-polar disorder, ADHD, mood disorder) may impact their learning and the strategies teachers use to support children. This survey is being sent to administrators in large New Hampshire school districts for distribution. By helping with this study, you will contribute to an increased understanding of children’s mental health and current practices to support children when in the classroom setting.
Administrators: Please forward this email to teachers holding positions as classroom teachers, special educators, and case managers in preschool to 3rd grade.

Teachers: Please complete this survey and pass the link on to a colleague.

Survey Link: https://www.research.net/s/PBD25

Your assistance is greatly appreciated. Feel free to email with any questions or concerns.

Thank you for your time.

Leslie Fanning

Phone: 603-475-1196

Email: lcc5@unh.edu
28-Mar-2012

Fanning, Leslie
Education, Morrell Hall
33 Harrimen Hill Rd.
Raymond, NH 03077

IRB #: 5308
Study: Symptom Presentation of Pediatric Bipolar Disorder: A Case Study to Improve Educational Understanding and Supports
Study Approval Date: 16-Dec-2011
Modification Approval Date: 28-Mar-2012
Modification: Change in Method and Participants

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved your modification to this study, as indicated above. Further changes in your study must be submitted to the IRB for review and approval prior to implementation.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, Responsibilities of Directors of Research Studies Involving Human Subjects. This document is available at http://unh.edu/research/irb-application-resources or from me.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study.

For the IRB,

Julie F. Simpson
Director

cc: File
   Couse, Leslie
28-Mar-2012

Fanning, Leslie  
Education, Morrell Hall 
33 Harrimen Hill Rd. 
Raymond, NH 03077

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For the IRB, 

[Signature]
Julie F. Simpson 
Director

cc: File 
Couse, Leslie