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An Exploratory Study of the Oral Language and Behavior Skills of Children with Identified Language and Emotional Disabilities in Preschool*

Abstract

As the pre-school initiative in the USA continues to grow in the public school sector, the need to understand and be prepared to address the needs of this population of students is vital. This paper provides an exploratory analysis of language and behavioral skills in children aged three to five years old served in inclusive public preschools. Preschool children documented with language impairments (LI), or emotional and behavioral disorders (ED) were compared to a typically developing group using the Test of Early Language Development-3 and the Preschool and Kindergarten Behavior Scales. Results suggest that preschoolers with identified language delays or behavior disorders were significantly different in both language development and behavior ratings when compared to typical developing peers. Second, no significant differences were found between students with language delays and socio-emotional disabilities. Implications regarding the need for comprehensive screening, continuous assessment, targeted intervention, and professional development for teachers across both developmental areas in the early childhood education settings are presented.

Key words: language disabilities, emotional and behavioral disabilities, inclusion, preschool

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Effective preventative or early intervention strategies that may reduce the incidence of disabilities in school-aged children has been at the forefront of discussion for both general and special education as a result of the most recent reauthorization of the Individuals with Disabilities Education Act (IDEA-2004) (Benner, Rogers-Adkinson, Mooney, & Abbott, 2007) in the USA. In addition, the federal government has expanded the Pre-K initiative (Federal Register, 2006, S300.807-300/808, p.274) to the individual states. Currently 40 of 50 states have adopted the Pre-K initiative and are developing universal preschool programs (Educational Marketer, July 2006, p.3). The growth in public schools providing preschool instruction for all students brings new challenges. Children previously referred to special education programs for early childhood may be served in more inclusive programs including Head Start, Public Preschool, Private preschool, daycare, and family daycare among others.

As public schools open their doors to preschool aged children, services must also be ready to respond to the student needs. One main approach towards serving this new population is to use universal screening tools for evaluating school readiness (Campbell & Halbert, 2002). Unfortunately, because universal screening is not a widely adopted practice in preschool settings across the U.S.A., initial referrals for students experiencing language, academic, and socio-emotional and behavioral difficulties only address the areas of concern identified by the pre-school teacher or parent during the special education referral process. In addition, this process tends to occur later in the school years when children begin to fail academically. In fact, in spite of the recent Response to Intervention (RTI) movement in the USA, the “wait to fail” model continues to be a common practice and referral is delayed until students are experiencing more critical academic difficulties in later grades (Rous, 1999; Vaughn, Mathes, Linan-Thompson & Francis, 2005).

Most often neglected through initial referrals and pre-referral intervention practices (PIT) is emotional or behavioral competence, especially for young children (Hester, Baltodano, Hendrickson, Tonelson, Conroy, & Gable, 2004). Yet, current research has suggested strong links between the maturation processes of language ability and behavioral self-regulation (Prizant, 1999; Rogers-Adkinson & Hooper, 2003). This paper furthers this research by exploring the possible co-occurrence of delays in both domains for young children, who are served in public preschools, and who were initially identified as exhibiting only a language disorder or an emotionally disturbance under the Individuals with Disabilities Education Act (IDEA).

Review of the Literature

The co-occurrence of behavioral difficulties and language ability has been extensively explored (Baker & Cantwell, 1987; Fantuzzo et al, 1999). Most of the research has been on school-aged children (Benner, Nelson, & Epstein, 2002; Nelson, Benner, & Cheney, 2005; Rinaldi, 2003) with some studies suggesting the impact of these co-occurring disorders may increase over the developmental period (Hooper, et al, 2003; Nelson, Benner, & Rogers-Adkinson, 2005).

Research in children with severe language disabilities suggest that they are at higher risk for psychiatric disorders with children scoring within the severe clinical range of expressive or receptive language ability exhibiting less pro-social behaviors than children with moderate language disabilities in clinical settings (Hart, Fujiki, & Briton, 2005). In fact, Rinaldi (2003) reported that 50% to 75.4% of 4th and 5th graders with emotional and behavioral disorders (ED) served in public school self-contained classrooms scored at clinical levels in semantic and syntactic language skills. Yet, other research shows the prevalence rates for children who have co-occurring ED and language and/or communication disabilities range from 20% to 65% (Baker & Cantwell, 1987; Brinton & Fujiki, 1993; Hummel & Prizant, 1993; Trautment et al., 1990; Warr-Leeper, Wright, & Mack, 1994) as evaluated in clinical settings.

In looking at this co-occurrence, researchers have demonstrated that school-age students eligible for special education services under the category of Emotional Disturbance (ED) displayed moderate to large language disabilities that appear to be relatively stable across age and gender (Nelson, Benner & Cheney, 2005). Specifically, Nelson, Benner & Cheney (2005) explored students K through 5th grade (n=56) with identified ED under IDEA and found that 86% of their sample also met criteria for language disorders but were not receiving services for these needs.

Additional research has also addressed students with language disability (LI) as a primary area of disability. This population was also shown to have more externalizing emotional difficulties and reading disabilities. In fact, research uniquely looking at the language abilities of preschool children have also established that strong oral language skills and behavioral and emotional skills of preschool students are strong predictors of future success in reading (Hummel & Prizant, 1993; Paez & Rinaldi, 2006; Rinaldi & Paez, 2008; Spira, Bracken, & Fischel, 2005; Tomblin, Zhang, Buckwalter, & Catts, 2000).

Public preschool populations have had less exploration to date with the prominent work occurring in Head Start settings (Fantuzzo et al, 1999; Kaiser, Cai, Hancock & Foster, 2002; Stanton-Chapman, Chapman, Kaiser, and Hancock, 2004). Head Start refers to a Federal direct service program providing comprehensive child and family development services for families with children from age 3 to age five. Head Start services for children focus on health, mental health, child development and early education services. The research in Head Start settings has focused upon risk factors for children in Head Start related to potential language delays and emotional competence. Children experiencing factors such as poverty, maternal complications during pregnancy or birth, and parental low education and minority status suggest that these children are at greater risk for LI (Stanton-Chapman, Chapman, Kaiser, & Hancock, 2004). However, Head Start preschools are not district led, and thus address potentially different populations from those found in the neighborhood public preschool programs.

Research in preschool programs for children that are typical and atypical developing is limited in scope but some research has been reported. For example, preschool children

with LI have been suggested to experience increased difficulty in both the exhibition of problem behaviors and poor performance of positive social skills based upon observational analysis (McCabe & Marshall, 2006). Others have reported that children with LI were noted to have more aggressive and disruptive behavior and smaller periods of engagement than typical peers (Qi & Kaiser, 2003; Qi & Kaiser, 2004). Yet others have reported that 50% of 3 year-old boys with low language skills showed higher evidence of problem behavior, and that most boys and girls with low language skills and high problem behavior had lower than average social skills. In addition, McCabe (2005) found similar negative patterns of behavioral disabilities both at home and school with a language delayed preschool special education population. However, minimal studies to date have explored preschoolers with already identified special education eligibility in LI and ED in public school settings receiving services under universal pre-schooling initiatives not under Head Start.

Thus, research in the area of ED and language impairments in young children lacks specificity of the uniqueness and occurrence of oral language disabilities and difficulties and socio-emotional and behavioral disorders of preschool children eligible for special education services under IDEA and served in inclusive public preschool settings. We hypothesize that students receiving special education services for ED or LI will have significantly lower oral language skills and co-occurring socio-emotional skills than typically developing peers. Additionally, we also hypothesize that there are no significant differences in both areas, language skills and socio-emotional skills between the students with ED or LI and when compared to typically developing peers. Lastly, we also hypothesize that each group, ED and LI, would have greater levels of severity in the particular disability category with co-occurring delays in the secondary category. These questions are important as new preschool teachers move into public preschool classrooms, they need to be ready to not only provide the special education services identified in the child's individualized educational plan through screening, continuous monitoring, and targeted instruction but also to request support for professional development around co-occurring disabilities. These questions are important as greater understanding of the relationship of language and behavior is critical for providing effective services in the expanding pre-kindergarten/preschool programs in the USA.

Method

Participants

The study took place in a rural area of the Midwest portion of the USA in a district serving 10,555 students (75% Anglo, 15% Hispanic, 8% African-American, and 2% other). The preschool population served was a total of 6.9% of the PreK-12 enrollment in that district. Thirty-three percent of preschool students were served under IDEA. Participants included thirty-seven children, 26 males and 11 females currently attending a preschool program. The children were aged three-to-five years with and without disabilities in an inclusive setting. Subjects were excluded from the study if an articulation disorder or cognitive delay were noted in the educational records. The public school pre-school program utilized an inclusion model with typical peers attending the

program as role models. Eighty percent of the students met guidelines for free and reduced lunch. Out of 37 children from three groups, fourteen were peer models as control, eight children were currently diagnosed as emotional disability and fifteen children experienced language disability as established within the Individual with Disabilities Education Act (IDEA, 2004). All children identified with a disability had a primary and only diagnosis of either LI** or EBD***; no secondary area of disability was identified in the educational records of the students. The students with LI and ED met eligibility under Wisconsin's special education category as part of IDEA. Controls were selected based upon participation as a peer confederate in the pre-school program and having no referral or concerns regarding potential need for special education services. Consent from 3 students was not obtained and therefore they were not included in this sample. All subjects were Anglo with the exception of two African-American children. Children were between 3 and 5 years of age with a mean age of 4.7 years (SD .8 months). In addition, all subjects were determined to have an IQ within the normal range as it was used as a criterion for eligibility in the disability areas for LI and ED. Because the requirement for a cognitive score (i.e. IQ) to be in the average or above range, it was deemed not necessary to be shared with the researchers by the district's human subjects review board. The classroom staff included a full time special education teacher, a part-time speech language therapist and classroom volunteers with a ratio of 1 teacher for every 8 students in the classroom.

Dependent Measures

We collected data for the dependent measures of behavioral competence and language ability. Behavioral competence was assessed utilizing the Preschool and Kindergarten Behavior Scale (Merrell, 1994). The PKBS consists of an index of positive social skills observed, and clinical scales in the areas of problem behavior based upon developmental norms. It consists of 34 social skill items that are then divided into subscales in the areas of social cooperation, social interaction and social independence. Forty-two problem behavior items are also included that then can be scored in subscales of self-centered/explosive, attention problems/overactive, externalizing, social withdrawal, and

** Wisconsin definition of LI refers to difficulties in speech or sound production impairment under the following requirements: 1) the child's conversational intelligibility is significantly affected and the child displays at least one of the following: the child performs on a norm-referenced test of articulation or phonology at least 1.75 standard deviations below the mean for his or her chronological age or demonstrates consistent errors in speech sound production beyond the time when 90 percent of typically developing children have acquired the sound or one or more of the child's phonological patterns of sounds are at least 40 percent disordered or the child scores in the moderate range of phonological process use in formal testing and the child's conversational intelligibility is significantly affected.

*** Wisconsin definition of EBD refers to an emotional behavioral functioning that departs from generally accepted, age, appropriate ethnic or cultural norms that it adversely affects a child's academic progress, social relationships, personal adjustment, and classroom adjustment and meets one of the following: 1) severe, chronic, and frequent behavior that is not the results of situational anxiety, stress or conflict; 2) occurs in school and in at least one other setting, c) displays an inability to develop or maintain satisfactory interpersonal relationships, inappropriate affective or behavior response to a normal situation, pervasive mood of unhappiness, anxiety, or depression, physical symptoms, pains or fears associated with personal or school problems, inability to learn that cannot be explained by intellectual, sensory or health factors, extreme withdrawal from social interactions, extreme aggressiveness for a long period of time, and other inappropriate behaviors that are so different from children of similar age, ability, educational experience, and opportunity that the child or other children in a regular or special education program are negatively affected.

anxiety/somatic problems. This assessment was developed as a universal screening tool for identifying children at risk or experiencing serious behavioral and emotional problems between the ages of three to six. Internal consistency reliability estimates for the Social Skills and Problems Behavior total scores were found to be .96 and .97, respectively. The classroom special education teacher rated each child utilizing the Likert-type responses between 0 (never) to 3 (often).

Language competence was assessed through the administration of the Test of Early Language Development-3 (Hresko, Reid, & Hammill, 1999). The TELD-3 provides a receptive and expressive score that is combined to provide an overall spoken language quotient based upon developmental norms. This test can be used as another universal screening tool. The Receptive Language Subtest measures the comprehension of language and it includes tasks such as following directions, determining syntactic correct forms of the English language, and identification of vocabulary. The Expressive Language Subtest measures the ability to communicate orally. Tasks in this subtest include answering questions, participating in conversation and identifying complex sentences and appropriate vocabulary. Thus, the Spoken Language Quotient combines both receptive and expressive abilities and is the best indicator of a child's overall oral language ability. Internal consistency reliability coefficients for the TELD were found to be .91. The authors trained in the administration of assessment tools administered the test to each student individually.

Procedures and Design

The preschool selected was a part of a public elementary school serving Pre-K-6. The school had established the preschool program as a result of a district initiative for Pre-K education. The classroom served students between the ages of 3-5. We obtained parental consent and evaluated 37 preschool students in the school on an individual basis for an average administration time of 35 minutes in a quiet area outside of their classroom. Each student was administered the Test of Early Language Development-3 (Hresko, Reid, & Hammill, 1999) per standard administration procedures. The Preschool and Kindergarten Behavior Scale (Merrell, 1994) was rated by the classroom special education teacher and scored by the second author per the manual instructions.

A multivariate analysis of variance (MANOVA) was used to find the differences among the groups. The analysis facilitated results for the following three research hypotheses: (1) preschool students in the EBD group and LI group would have similar deficits in social behavior and language skills and (2) preschool students with already identified emotional behavioral disorders (EBD) or language disability (LI) would vary significantly from the typical developing peers, and that 3) each group, LI and ED, would have greater levels of severity in the particular disability category with co-occurring delays in the secondary category. For the first and 3rd research hypothesis a MANOVA technique was used with two groups and five dependent measures. The two groups were EBD and LI group. For the second hypothesis, the EBD and the LI group were combined to form an experimental group (DIS: Disabled and this group was compared with the control (or the typical peers) group using MANOVA techniques.

Results

Descriptive statistics means and standard deviations for each measure of the TELD and the PKBS in this study are presented for group membership (control, DIS (both ED and LI), ED, and LI) in Table 1.

Table 1
Means and Standard Deviations for the dependent

Dependent Measures	Group 1 Control (n=14)		Group 2 Behavior Disorder (n=8)		Group 3 Speech & Language Disorder (n=15)	
	M	SD	M	SD	M	SD
Social Skills Total	112.7	14.7	86.3	20.0	96.8	19.8
Problem Behavior Total	102.7	5.3	120.5	16.2	105.0	15.6
Receptive Language	104.2	13.1	92.6	14.6	86.4	13.4
Expressive Language	90.5	9.1	84.6	7.4	78.2	8.7
Spoken Language Quotient (Receptive + Expressive)	96.8	12.3	86.3	11.4	78.8	11.4

The Spearman partial rank-Order correlations among the dependent variables are provided in Table 2. The table shows all the variables are highly correlated to each other except the variable of problem behavior total. This measure is highly correlated to the variable social skill total but not to the rest of the measures in the study. However, this variable was kept in the analysis as theoretically it is part of the assessment tool used to screen for behavior and emotional problems.

The results from the overall MANOVA test to determine the differences between the two groups of students with identified disabilities (ED and LI) in terms of five dependent measures gave the following result: $F(5, 17) = 2.15, p = 0.11$. The omnibus F-test in this case is not significant at the set level ($\alpha = 0.5$). This is in accordance with the original hypothesis that preschool students in the ED group and LI group are not statistically different from each other on the dependent measures and a new variable was created named DIS (disabled LI + ED). This analysis also supported our third hypothesis since the means for each group, LI and ED, had greater levels of severity in the particular disability category with co-occurring delays in the secondary category. We identified a delay based on commonly used guidelines of 1 standard deviation below the mean.

Table 2
Partial Correlations by Group Membership (Disability Status) for Language Skills by Social Skills and Problem Behavior

	Social Skills Total	Problem Total	Receptive	Expressive
Problem Total	-0.46*			
Receptive	0.44*	-0.20		
Expressive	0.40*	-0.06	0.65*	
Spoken Language Q	0.46*	-0.16	0.94*	0.86*

* Correlation is significant at the 0.01 level

The results from the overall MANOVA to test the differences between the control and the DIS group on the five dependent measures gave the following results: $F(5, 31) = 3.1, p = 0.02$. The omnibus F-test in this case is significant at the set level ($\alpha = 0.5$). This shows that the preschool students with already identified disabilities, [DIS (i.e. ED and LI)] are significantly different from their typically developing peers (control group).

Discussion

There is substantial evidence that emotional behavioral disorders and language deficits are likely to co-occur in school age children (Baker & Cantwell, 1987; Benner, Nelson & Epstein, 2002; Nelson, Benner, & Cheney, 2005; Rinaldi, 2003). However, limited research has replicated this co-occurrence in pre-K students in district led public preschool settings. The purpose of this study was to (a) establish that preschool students receiving services for ED or LI in public school programs share significant difficulties in both areas of language skills and social-emotional skills, and (b) establish that preschool children identified with ED or LI were significantly different in language skills and social behavior than typically developing peers in this setting. Our results suggest that indeed, preschool students with ED and LI do share similar difficulties in language skills and social behavior despite the fact that they had only met eligibility for either ED or LI only. Results support previous findings in a variety of contexts such as those in clinical settings and Head Start. We also found that both groups are statistically different than their typical peers in both language and behavioral-emotional skills as expected.

In addition, findings support those of Kaiser et al (2000) who reported that 3-year old boys with low language skills also exhibited problem behavior in a clinical setting; and McCabe's (2005) study who found negative patterns of behavior skills, in home and preschool, of children identified with LI. It further suggests that although students maybe identified with one area of disability, their needs may extent to other areas that can eventually impact academic progress. Acknowledging this occurrence is important for practicing teachers who will have students with and without LI and ED and need to

be preventive in delivering services in both areas, not just the one addressing their primary area of disability or difficulty. It is also vital for teachers to recognize that serving preschool children must occur within the context of the classroom as language skills mediate behavior.

Although we would expect differences between students already identified with a disability compared to typical developing peers, the importance lies on the need to focus on preventive comprehensive screening, evaluation, and intervention in both domains inclusive of socio-behavioral skills and language development. The fact that significant differences were not found between the ED and the LI groups suggest that teachers and special education personnel need more information to plan, monitor and meet the individual needs of these children and that services need to be more sensitive to children's difficulties in both domains. Our study furthers the research by establishing the co-occurrence of ED and LI of students ages 3-5 in public school pre-school programs and highlighting the need for schools to address, through screening, monitoring, and instruction, both domains for children identified with either disability.

In summary, the results of our exploratory study suggest that both students with EBD or LI scored significantly below (i.e. clinical levels) on language measures and behavior scales. This is important as this suggests that when assessing young children, measures of both must be administered to get a more holistic and comprehensive picture of the child. In addition intervention must mediate this interaction as well since we could not establish the differences between the LI and ED group.

Limitations and Future Research

The results of this exploratory study suggest the importance of recognizing pre-school students with ED or LI may have co-occurring difficulties in both domains and that instruction planning in the Individualized Family Service Plan must integrate progress monitoring and coordination of services in both areas regardless of identification classification of EBD or LI. However, the findings described are preliminary and exploratory of a district funded public school program with a limited number of students enrolled. Thus, generalization should be used with caution.

Future research should increase the sample size across multiple universal public preschool programs that include a stratified sample of the current population of the USA public school system. In addition, the research should include a variety of sources of data such as structured observations and parental reporting to confirm severity of reported behaviors. Moreover, future research should evaluate the multidisciplinary evaluations conducted by school districts or early intervention organizations to evaluate the comprehensiveness of the assessment and its implication for eligibility and identification. This would provide extensive information of the depth of assessment practices conducted and its appropriateness in differentiating between socio-behavioral or language difficulties. In addition, it can provide guidance on instructional programming of pre-school students who are at-risk for developing ED or LI served in public preschools.

Further, research should also address the language development and socio-behavioral skills of culturally and economically diverse population of preschoolers to see if the results replicate to that rapidly growing population of second language speakers.

Practical Implications

We suggest educators conduct careful monitoring of oral language development and socio-behavioral skills of each individual child in order to appropriately identify effective interventions and their impact on pre-readiness skills. Although, this should be a critical part of the Individualized Family Service Plan, we suggest that informal assessment procedures (i.e. task analysis, dynamic assessment, informal oral language assessment, response to intervention, etc.) be used weekly to track progress in these areas as suggested by recent literature on response to intervention models. We further suggest that socio-behavioral interventions be a critical component for services for children exhibiting language delays and socio-emotional difficulties. This can be done through professional development training in structures such as those of Positive Behavioral Supports, areas where empirical research has reported significant training needs and significant outcomes (Stormont, Lewis, Covington, & Smith, 2005). PBS refers to procedures required under IDEA to help student interact appropriately in a program guided by positive consequences rather than punishment in multiple settings (i.e. home and school) within a particular school wide structure (Hallahan & Kauffman, 2003). School-wide Positive Behavioral Supports has shown promise on preventing and remediating students' socio-behavioral skills in typical preschool classrooms and should also be explored (Duda, Dunlap, Fox, Lentini, and Clarke, 2004) in this type of setting. (Stormont, Lewis, Covington, & Smith, 2005). It is important to build upon currently existing structures and research supporting positive behavior support (PBS) as IDEA indicates that positive behavioral supports within preschools is effective to address language based behavioral manifestations (Mandlawitz, 2007).

As more states move towards the implementation of universal preschools services, (preschools educators need preventive programs that incorporate professional development in the implementation of positive behavioral supports and progress monitoring of behavior and language development such as Response to Intervention and recommended by IDEA of 2004. In particular, these models would address increased collaborative interventions and address language skills, and pragmatic skills, as related to prosocial behavior that are critical in the prevention of more entrenched behavioral problems and academic failure during the elementary and secondary school years.

Summary

This research continues to provide critical information regarding the developmental interaction of early language delays and behavioral competence of preschool age children served in public school settings. Multidisciplinary and comprehensive screening, referral, assessment, and identification processes should be carefully monitored and evaluated in order to observe common trends of children who experience delays in either language or social-behavioral development or both. Staff and support

personnel need to be trained to implement behavioral interventions across domains such as those of positive behavioral supports ensuring the overlap of social skills, behavior, and language skills are addressed during early intervention programming and preschool settings. Finally, further research is needed to determine if early intervention that integrates positive behavioral supports and responsiveness to intervention in preschools setting, for this population, can reduce or prevent the longitudinal impact of co-occurring high incidence disabilities in school-aged children.

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