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Social and Behavioral Problems in an Urban At-Risk Preschool Population

Nathan Missen[1], Stephen Bagnato[2], Daniel S. Wells[1], Laura M. Crothers[1*], Ara J. Schmitt[1], & Jered B. Kolbert[1]

[1] Duquesne University, Pittsburgh, PA, USA

[2] University of Pittsburgh, Pittsburgh, PA, USA

*Correspondence: Laura M. Crothers, School of Education, Duquesne University, 600 Forbes Avenue, Pittsburgh, PA, 15282, USA. Tel: 1-412-396-1409. E-mail: crothersL@duq.edu

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Abstract

Early identification of children who display elevated rates of interpersonal and behavioral problems is vital for the initiation of early intervention services. Teaching students social-emotional skills is an important goal of preschool programs, including Head Start programs, across the United States. In order to better understand the rates of interpersonal and behavioral delays demonstrated by preschool students participating in an urban Head Start program, as well as any demographic-based risk factors that may predict these problems, 1,399 (86% Black/African American) students were administered the Preschool and Kindergarten Behaviors Scales – 2nd edition (PKBS-2). Results indicate that gender is significantly associated with both social and behavioral challenges. Specifically, in comparison to girls, boys tend to be less socially adept and more likely to display troublesome behaviors. Suggestions for future research, such as longitudinal studies, are included.

Keywords: preschool, urban, social skills, behavior, gender, Head Start

1. Introduction

Early onset of behavior-based disorders is commonly associated with more lasting, negative outcomes than late-emerging behavioral problems in development. Research evidence cited by the American Psychiatric Association (APA) suggests that children who display patterns of behaviors consistent with a Conduct Disorder diagnosis before the age of ten and, therefore, qualify for the childhood-onset subtype, show an increased likelihood that the individual's negative behavior patterns will continue on into adulthood (APA, 2013). While the APA cites the age of ten as the cutoff for this childhood-onset classification, research suggests that children can display significant problem behaviors as early as ages two to five, and when problems are demonstrated this early in development, these children are at extreme risk of developing significant maladjustment in later childhood and beyond (Campbell, Shaw, & Gilliom, 2000).

In order to combat the negative effects of full-blown early onset disorders, a consistent finding across many types of behavioral- and social interaction-based diagnoses is that early identification and intervention is one of the most effective tactics in producing positive future outcomes (McMahon & Frick, 2007). Parents and professionals who are able to recognize those children who are at-risk or who have demonstrated some of the early warning signs of disordered behaviors and

interactions are able to provide treatment and instructional interventions in hopes of fixing the problems before the behaviors reach a clinically significant level. However, based on the research discussed by the APA (2013) and Campbell and colleagues (2000), if significant behavioral disorders can arise prior to age ten and as early as age two, identifying and screening for children who may be at-risk for these disorders must occur early in childhood (American Academy of Pediatrics, 2001; Owens *et al*., 2015).

Due to the need for early identification and intervention with problem behaviors, early education experiences such as preschool appear to provide an important opportunity to complete these initial screening and intervention services. Recently, the importance of preschool education has been at the forefront of federal, state, and local government debate and policy makers have increasingly provided early education programs with greater amounts of funding while establishing higher standards and goals to improve student outcomes (The White House, 2015). As a result, preschool programs are under increased scrutiny to achieve the two broad goals of increasing students' foundational academic skills as well as promoting social-emotional and behavioral functioning (Duncan *et al*., 2007).

In general, preschool programs have performed well with the first of these two goals. Longitudinal research studies that have tracked students' progress through preschool and on into kindergarten, elementary school, and even as far as adulthood have consistently shown that those students who attend preschool demonstrate higher levels of cognitive ability, higher rates of academic achievement across subjects including reading, math, and oral language, and also experience more positive educational outcomes like lower retention rates and increased high school graduation rates (Anderson *et al*., 2003; Duncan *et al*., 2007; Garces, Thomas, & Currie, 2000; Gormley Jr., Phillips, & Gayer, 2008; Halle *et al*., 2009). Preschool programs' success in achieving the second goal, however, seems less clear. In their review of research related to social-emotional and behavioral outcomes after students have completed preschool, Anderson and colleagues (2003) found only four published studies that were able to report significant positive social-emotional and behavioral outcomes. This appears to suggest that, when compared to cognitive and academic outcomes, preschool programs have been less able to produce consistent, large-scale behavioral improvements in the students they serve.

This lack of overall behavioral improvement in children demonstrated by preschool programs in general is consistent with the reported outcomes of the nation's largest federally funded preschool program: Head Start. Head Start, which was initiated in 1964, provides free preschool education to children whose families' incomes fall below an established standard. The program was and is intended to provide children with the early services and experiences necessary to succeed later in life with the objective that they will not experience poverty themselves (Lamy, 2012). As discussed with preschool programs in general, Head Start has shown many positive outcomes in terms of cognitive and academic preparedness, especially when compared to other children who do not attend preschool (Lee, Brooks-Gunn, Schnur, & Liaw, 1990; U.S. Department of Health and Human Services [USDHHS], 2010). Head Start has also made concentrated efforts toward developing programs that target social-emotional growth through the Research-based, Developmentally Informed (REDI) initiative, which has been shown to produce some social-emotional growth in a small group of children (Bierman *et al*., 2008). Still, however, nationwide research into the impact of Head Start programs at large has indicated that few lasting positive impacts in terms of social-emotional and behavioral functioning have been found (USDHHS, 2010).

Given that social-emotional and behavioral growth is a goal of preschool programs, it is vital that these programs continue to improve screening for and intervention of these issues. However, this appears to be no simple task. Decades of research has described seemingly countless factors associated with the development of social-emotional and behavioral delays and disorders. Factors such as neurochemistry (Alink *et al*., 2008), genetic-based temperament (Campbell *et al*., 2000),

parental interactions with children (Stormont, 1998), socioeconomic status (Halle *et al*., 2009), and community crime and violence (Rauh, Parker, Garfinkel, Perry, & Andrews, 2003) have all been shown to impact children's early psychological and behavioral development. While each of these factors is undoubtedly important, it may be difficult for preschool professionals to determine which, if any, of these risk factors (e.g., poor parental interactions; neurochemical deficits) are being experienced by students; especially when the students are too young to clearly and accurately discuss their experiences (Bruer & Pozzulo, 2014). Furthermore, due to the community-based nature of the education system, it can be assumed that students from a given school or classroom are experiencing many of the same environmental risk factors. Therefore, easily observable factors that are still able to illustrate important differences between students would likely be a helpful starting point for early intervention.

One such factor that is readily apparent and has a clear history of association with social-emotional and behavioral outcomes is student gender. Gender differences in observed behavior have been well documented. Preschool-aged boys have been consistently rated by both teachers and parents as displaying more negative externalizing behaviors and fewer internalizing behaviors, as having less control of their emotional responses, and as enjoying fewer positive peer interactions than their same age female peers (Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002; Graves Jr., Blake, & Kim, 2012; Nixon, 2002; Rose & Rudolph, 2006). While it has been argued that adult raters often struggle to differentiate between disordered and developmentally-appropriate behaviors in young children (Wakschlag, Tolan, & Leventhal, 2010), the consistency of these gender-based differences suggest that simply being male places a child at-risk for displaying inappropriate social-emotional and behavioral functioning during his preschool and early school-age years.

These gender differences in the rates of social-emotional and behavioral problems have lasting impacts on students' later educational careers and beyond. In the United States' public school system, boys are shown to be determined as eligible for special education services under the disability category of Emotional Disturbance at a rate roughly three and a half times that of their female peers (Coutinho & Oswald, 2005). This indicates that as students age, males are significantly more likely to demonstrate significant behavior problems that negatively impact their ability to learn and function in the classroom. This issue becomes even more important when other factors that are associated with Head Start participation, such as income level and race/ethnicity, are considered. Research into special education participation has consistently shown a significant overrepresentation of students of color – such as African-American students being roughly twice as likely to receive an Emotional Disturbance label as their White peers (Ferri & Connor, 2005). Similarly, living in impoverished families and communities has been linked to higher rates of behavioral disorders and lower levels of academic achievement (Artiles, Harry, Reschly, & Chinn, 2002).

Due to the continued importance of social-emotional and behavioral screening and intervention, as well as preschool programs', in general, and Head Start programs', specifically, documented struggles in these areas, the current research investigation provides further information regarding the social-emotional and behavioral skills of a Head Start preschool sample. This sample was studied in order to determine the overall rates of social-emotional and behavioral problems as measured by a system-wide behavioral screening measure. Analyses will also be used to investigate if any demographic characteristic differences are present that would support its use as a predictive risk factor for social-emotional and behavioral intervention.

2. Method

The sample for this study consisted of 1,399 preschool children, with an average age at evaluation of 49 months (range = 28-73 months), who attended a Head Start program in an urban city in the

Mid-Atlantic United States. Males comprised 50.3% of the sample (n = 703) and 45.5% (n = 637) were female. Fifty-nine children (4.2%) were missing data for gender. Head Start enrollment information for the year data were collected indicate that the urban student enrollment may be characterized as 13% White, 2% Hispanic/Latino, 86% Black/African American, 8.7% Bi-Racial/Multi-Racial, <.1% American Indiana/Alaska native, 3% Asian, and < .1% Hawaiian/Pacific Islander. Because the parents of multi-racial children appear to have endorsed more than one racial/ethnic category, the percentages exceed 100%.

2.1. Measures

The Preschool and Kindergarten Behaviors Scales – 2nd edition (PKBS-2) is a 76 item, norm-referenced behavior rating scale designed to measure social competence and problem behaviors of children between the ages of three and six. Each item is rated on a 4 point scale (0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often). Ratings on the PKBS-2 result in scores on the following two broad scales: Social Skills and Problem Behavior. The 34-item Social Skills scale describes positive, adaptive behaviors that facilitate beneficial personal and social outcomes, and includes items related to social cooperation, social interactions, and social independence. The 42-item Problem Behavior scale captures behavior difficulties experienced by children, including internalizing and externalizing problems. Regarding primary scale interpretation, a standard score of 100 reflects typical development in each domain. Children who score 87 or below on the Social Skills scale are considered to exhibit delays in their development of social interaction competencies. Merrell (2003) considers these students to have a Moderate Risk level for noticeable social skill delays. Children who scored in the bottom 5% (less than or equal to a standard score of 69) are designated as being at the level of High Risk. Children who scored 113 or above on the Problem Behavior scale are labeled as having a Moderate Risk level for displaying misbehavior at home and in the classroom as well as some deficits in self-control. A score of 126 denotes a more significant degree of behavior problems, with a corresponding label of High Risk.

2.2. Procedure

Common practice in the location of this study is to screen all students for developmental difficulties across the school year in order to determine the need for early intervention. As part of this screening process, the primary classroom teacher of every Head Start student completed the PKBS-2. After student screening had been completed for the single school year, data existed regarding a total of 1,399 children. The behavior rating scale data were entered into an Excel spreadsheet and then transferred to a more advanced statistical analysis program for further analysis (SPSS).

3. Results

Of the 1,399 students who were assessed using the PKBS-2, the mean score of the Social Skills scale was 99, ranging from a minimum of 42 to a maximum of 122. The mean score of the Problem Score scale was 90, with 75 as the minimum and 135 as the maximum. Because data regarding students' ethnicity/race are not collected on this measure, this variable was not controlled for in the data analysis.

3.1. Children Showing Delays In Social Emotional Development

3.1.1. *Descriptive Findings Regarding Social Skills*

Of all the children assessed, 16% (n = 220) exhibited delays in the Social Skills domain. The mean age of this subgroup of children was 46 months, which is three months younger than the mean age of the entire sample. This finding may suggest that younger children are at a higher risk of experiencing social skill delays. Intuitively, one would expect the social skills of a younger child to

be less well established as the development of social skills is known to follow a developmental sequence (e.g., from parallel play to cooperative play and interpersonal engagement).

Of the children who displayed social skills deficits, 56.4% (n = 124) were male and 39.5% were female (n = 87). Gender information was not available for 4.1% (n = 9) of the rating scales. These gender findings are consistent with research that young boys are more likely to display poor social skills than young girls (Zill & West, 2001). Children's scores on both the Social Skills and Problem Behavior subtests were compared and results showed that 28% (n = 62) of students who scored in the Moderate Risk and High Risk levels in the Social Skills scale also scored in the Moderate or High risk range on the Problem Behavior scale.

3.1.2. *Descriptive Findings Regarding Problem Behavior*

Children who were rated as displaying increased rates of Problem Behaviors in comparison to typical peers comprised 9.5% (n = 133) of the total sample. The mean age of children in this subgroup was 48 months, similar to the overall mean age of 49 months, indicating that problem behaviors may be more evenly dispersed across age ranges than social skills deficits. Similar to the gender distribution of students displaying social skill delays, 57.9% (n = 77) of this group were male and 36.8% (n = 49) were female. Gender information was not available for 5.3% (n = 7) of the children in the sample.

For this group of students who showed high rates of problem behaviors, 50% (n = 67) also exhibited delays in social skill development. While the direction of the relationship cannot be determined by these data, this does appear to be evidence of the connection between social skill development and the occurrence of problem behaviors. If this relationship does exist, there is reason to believe that intervening regarding one of the students' problem areas may also positively impact the other.

3.2. Analysis of Gender Differences

The results gathered from both the Problem Behavior and Social Skills scales of the PKSB-2 show that more boys than girls display higher rates of problem behaviors and delays in social skills. In order to further examine these differences, a one-way, between subjects analysis of variance (ANOVA) was completed to determine if the gender differences found on the two scales of the PKBS-2 were statistically significant. For each analysis, gender was the independent variable with the dependent variable being scores earned on the Problem Behavior and Social Skills scales, respectively.

Results of the ANOVA revealed that there was a significant effect of gender upon the scores gathered from Problem Behaviors scale. This difference was significant at the p <.01 level, F (1, 1327) = 21.746, with boys displaying more problem behaviors. A significant effect of gender on the Social Skills scale score was also present at the p <.01 level, F (1, 1338) = 21.858, with boys displaying poorer social skills. However, Levene's Test of Homogeneity of Variance was significant, F (1, 1338) = 4.809; p = .028, thereby indicating the null hypothesis of equal variance was violated. In order to test if there was a significant difference in between-group means, both Welch's and Brown-Forsythe's ANOVA modifications were utilized. Both adjustments were significant at the p <.01 level. Taken together, these results suggest that teacher ratings on the PKBS-2 regarding the Social Skills and Problem Behaviors of urban preschoolers do vary by gender.

4. Discussion

Important to understand are the factors that place children at-risk for developmental problems, such as social skills deficits and behavior problems. It is well established that difficulties with peer

relationships and the emergence of behavior problems, whether internalizing or externalizing in nature, early in development, are related to a variety of long-term negative outcomes. By exploring and recognizing the underlying characteristics of such at-risk children, effective services can be tailored and delivered to those in need. One purpose of this study was to determine if gender is related to the presence of delayed social skills and problem behavior in early childhood. The investigators of this study examined a data sample of 1,399 predominantly minority children (86% Black/African American) attending Head Start in an urban community. Descriptive and inferential statistical analyses were conducted to explore the primary research question. Study findings, implications, and limitations are discussed in greater detail below.

Demographic analyses suggested that more preschool boys exhibited delays in social skill development, as well as show deficits in the ability to self-regulate behavior, than girls. To illustrate, 56.4% of boys in this sample evidenced social skill delays, although only 39.5% of girls demonstrated similar deficits. Likewise, 57.9% of the males in the sample showed signs of developmentally delayed self-control skills, but only 36.8% of females showed corresponding deficits. Inferential analyses regarding group differences (ANOVA) revealed statistically significant differences in the mean scores between males and females on both the Social Skills scale and the Problem Behaviors scale of the PKSB-2. Teacher rating scale data suggested that boys in the sample had significantly poorer social skills and significantly greater behavior problems than girls. These findings imply that gender is a noteworthy signifier of risk potential in this sample.

An additional purpose of this study was to examine the rate at which the preschool children demonstrated socio-emotional developmental delays on both scales of the PKBS-2. Of the children with delays on the Social Skills scale, 28% (n = 62) also showed elevated scores on the Problem Behaviors scale. Paralleling these results, 50% (n = 67) of the youth with at-risk scores on the Problem Behaviors scale also displayed deficits on the Social Skills scale. These scores indicate that there may be a strong relationship between social skill delays and problem behaviors at school. Although the direction of this relationship (whether poor social skills may help bring about poor behavior or if children with poor behavior are viewed as having poor social skills) cannot be determined these data analyses, the fact that a fairly high number of students were rated as experiencing both sets of problems is of scientific and clinical interest.

Taken together, the present findings bare a number of implications. First, students of both genders are equally likely to display some problems in acquiring appropriate social-regulation interaction strategies as they are to display inappropriate behaviors, as reported by the PKBS-2 scales. However, significant developmental delays in such behavioral domains are more likely to occur in males than female preschool children. Therefore, early intervention services, behavioral consultation and other proactive supports should be provided to all children, regardless of gender. However, young males may have to be considered for more intensive aid and/or alternative accommodations due to the severity of the delays. Thus, in this context, the PKBS-2 serves as a screening tool to ascertain eligibility for services (in particular, which populations are more at-risk than others).

Second, these results imply that socio-emotional difficulties often emerge early, well before entry into elementary school where attendance is compulsory and children are screened for behavior difficulties on a broad scale. While this is not a particularly surprising finding, this information emphasizes the need to begin providing help and support to children and their families when signs of dysfunctional behavior start to manifest. Again, the PKBS-2 can serve as an identification measure in this case to confirm pre-existing problems or describe recently developed deficits.

As with any research study, there are limitations that detract from the validity of conclusions drawn. Perhaps the most pressing limitation is methodological in nature. The PKBS-2, while being psychometrically reliable and valid (Merrell, 2003) is an instrument that relies solely on the perception of the individual who is completing the measure. As such, there is a distinct possibility

for bias, discrimination, and other forms of error to heavily influence answers (Elliott, Busse, & Gresham, 1993; Fennerty, Lambert, & Majsterek, 2000). Certainly, such an effect is not limited to just the current questionnaire and the conclusions drawn, but the error may be particularly distorting within this result set, since the PKBS-2 is the singular data collection tool.

A second limitation, which is related to the first, is that there was only a single informant providing his or her opinion (i.e., teachers). Again, this unilateral provision of data can seriously affect the validity of this report's deductions. Best practice procedures suggest a multi-source approach so as to yield an accurate and comprehensive profile of information (Merrell, Ervin, & Peacock, 2011). Thus, having the students' parents complete behavior rating scales, in addition to teachers, may produce more trustworthy results. There is literature that supports the incremental validity of parent responses (Fennerty *et al*., 2000; Power *et al*., 1998; Ruffalo & Elliott, 1997).

A third limitation of this study is temporal in nature. Data utilized for this report was gleaned in a broad period of time between fall 2010 and late spring 2011 and each participant was only assessed once. Hence, the figures produced by the demographics analysis may be more representative of situational and/or transient factors occurring at the time, rather than of stable, enduring characteristics. Furthermore, by only assessing each participant once, any meaningful change (whether positive or negative) is difficult to gauge.

In order to address these concerns and limitations, future studies should focus upon providing information that has been gathered from multiple sources that vary in delivery modality (i.e., questionnaires, interviews, observations, etc.). Related to the first course of action, a second option would be to gather data from a variety of informants, where possible. Multiple assessments across time would also assist in verifying whether or not the PKBS-2 may be used to progress monitor changes in behavior. Building upon this, longitudinal study of this study's constructs using the PKBS-2 may provide valuable information regarding the way in which gender is related to socio-emotional development over time.

In conclusion, this epidemiological study provided information regarding incidence rates of social and behavioral problems, as well as demographic information of an urban, at-risk preschool population in Southwestern Pennsylvania. Such information can be utilized to provide effective service delivery as well as refining and tailoring pre-existing services provided by HeadStart. In addition, such data can also contribute to more comprehensive understanding of the socio-emotional development in minority populations and how this can affect their proximal and distal educational outcomes.

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