Published in final edited form as:
*J Posit Behav Interv*. 2010 January ; 12(1): 44–54. doi:10.1177/1098300708329710.

# Patterns in Office Referral Data by Grade, Race/Ethnicity and Gender

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## Abstract

Research supports that office referral data is useful in informing programmatic decisions and in planning interventions such as Positive Behavior Interventions and Supports (PBIS). Knowledge of the different patterns of office referrals may facilitate the development of interventions that are targeted to specific groups of students. This study examines patterns in office referrals within an urban district by gender, race/ethnicity and grade. Findings reveal that there are clear differences by grade that appear to be related to developmental level, with greater numbers of referrals for aggression in younger students (grades K-8), greater numbers of referrals for disrespectful behavior in middle school students (grades 7–8), and greater numbers of referrals for attendance problems in high school students. There were also gender differences in the rate and type of referrals, with significantly more referrals for boys' delinquent and aggressive behavior than girls, which may relate to how schools define unacceptable behavior and the method used to collect this data. Finally, there were differences by race/ethnicity, in that there were significantly more referrals for African American/black students than Hispanic students, which suggest that schools need to consider students' racial/ethnic background in the development of behavioral expectations.

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Research supports that office referral data is useful in informing programmatic decisions at the individual, group, and system levels, as well as in the initial planning of interventions, such as Positive Behavior Interventions and Supports (Wright & Dusek, 1998; Safran & Oswald, 2003). Office referral measures have also been used successfully in program evaluations as a dependent or outcome variable (e.g., Hawken, Macleod, & Rawlings, 2007) and have been shown to be reliable measures within schools and within children (Tobin & Sugai, 1996). Initial work in this area has begun to establish the validity of office referral data as a tool to inform program and policy decision-making (e.g., Ervin, Schaughency, Matthews, Goodman, & McGlinchey, 2007). However, few studies have explored patterns in the office referral data related to grade or developmental level, gender, and race/ethnicity. Knowledge of the different patterns of office referrals may facilitate the development of interventions that are more specifically targeted to different groups of students.

## Positive Behavior Support System and Office Referral Data

In response to the increased attention given antisocial and violent behavior of some students, many schools have begun using school-wide behavioral support programs to prevent behavior difficulties (Sugai & Horner, 2002). The Positive Behavior Support (PBS) system developed by Sugai and Horner, for example, is a school-wide reform effort aimed at modifying the school climate, with a shift from reactive and punitive methods to proactive, educational methods. PBS is a data-based system, and before implementing the program, data are collected and reviewed to determine which school practices need to be adopted, maintained, improved, and/or eliminated. One of the best naturally available sources of data is office discipline referrals, which can be used to determine when and where problem behaviors occur on school property in order to develop appropriate interventions, as well as determine whether desired outcomes (e.g., decrease in disruptive behaviors, decrease in suspensions) are being achieved (Sugai & Horner, 2002).

Researchers have increasingly used office referral data as a source of information on students' disruptive behavior in schools by examining the relationship between office referrals and other measures of student behavior in schools (e.g., Rusby, Taylor, & Foster, 2007). Office referral data measures meet the criteria for a valid construct as indicators of school-wide behavioral climate, including general misbehavior at school, student perceptions, teacher perceptions, and classroom orderliness (Irvin et al., 2004). More recently, the validity of using office referral data to make decisions about student behavior in schools was established (Irvin et al., 2006). Irvin and colleagues (2006) found that office referrals are regularly used to make such decisions (e.g., identifying specific behavior problems, changing physical layout of classroom), and that they are an efficient and effective way to do so. Therefore, office referral data has important implications for interventions targeting disruptive student behaviors.

Office referral data measures have been shown to be consistent over time, in that the behaviors that result in office referrals are likely to persist in individual students. For example, one study found that individual students who were suspended in the first term of sixth grade tended to have a consistently high pattern of referrals through eighth grade (Tobin & Sugai, 1996). Although base rates of disruptive behaviors may vary significantly

between individual schools within the district, they tend to be stable within a school across time and within students; at one elementary school, the probability that a student who was referred once would be referred again was 81% the first year, 80% the next year, and 77% the third year (Wright & Dusek, 1998). Research also shows that office referrals in school predict later school failure and antisocial behavior into adulthood (Farrington, 1989; Tobin & Sugai, 1999).

## Patterns in Office Referral Data by Grade/Developmental Level

While total numbers of office referrals have shown stability over time, few researchers have examined the patterns of type of referrals over time or across grades. In a study of the office referral patterns in a middle school population, Tobin and Sugai (1996) compared the rates of violent (e.g., fighting, vandalism, harassment) and nonviolent behaviors (e.g., disruption, skipping class, insubordination) in individual students from sixth to eighth grade. They found that in $8^{th}$ grade, but not in $6^{th}$ grade, being referred for violent behaviors was related to the number of overall referrals that school year. Moreover, they found that non-violent and violent behaviors were not significantly correlated in either grade. Similarly, Wright and Dusek (1998) compared office referrals for physical aggression (e.g., assault of a student/staff member, fighting, and destruction of school property) vs. non-aggressive behaviors (e.g., disrupting class, lack of cooperation, harassing another student/staff member, leaving the classroom/school without permission) in urban elementary school students. They found that rates declined over a three-year period, and rates of referral for aggressive behaviors declined even more quickly than the overall rate of referrals. However, this study did not compare students by grade level. Both of these studies included middle school students; even less is known about how the types of referrals may change from elementary school through high school. From the limited research on patterns of referrals, it is difficult to draw conclusions about how the types of referrals may change over time and by grade level.

The types of disruptive behaviors that children engage in may change over time as children progress through stages of development. Loeber and Farrington (1998) have studied aggressive boys longitudinally in the Pittsburgh Youth Study, which offers valuable insights into the development of disruptive and delinquent behaviors. They propose three different pathways for problem behaviors, related to three different developmental tasks (Loeber et al., 1993). First, they believe the overt pathway representing aggression is most likely to be evident in younger school-age children, for whom a critical developmental task is planning and developing judgment (Bee & Boyd, 2004). When children are unable to achieve a goal, they may become frustrated and engage in aggressive behavior. Next, Loeber and colleagues believe that the covert pathway representing lying, vandalism, and theft is most likely to be evident in older school-age children, for whom a critical developmental task is acting responsibly, including honesty and respect for property (Allen & Marotz, 2003). Third, they believe that the authority conflict pathway representing conflict with and avoidance of authority figures is most likely to be evident in adolescents, for whom a critical developmental task is developing autonomy. While this work has important implications for the development and consequences of disruptive behaviors, these studies only included males, so it is unknown whether the findings generalize to females in different grades.

## Patterns in Office Referral Data by Gender

Researchers have also found gender differences in the patterns of office referral data in elementary and middle school populations. A study of office referrals in an elementary school reported that 55% of males had a referral of any kind and 40% had a referral for aggression, as compared to 34% of females with a referral of any kind and 21% with a referral for aggression (Wright & Dusek, 1998). At another elementary school, only 19% of males had a referral of any kind, and 9% had a referral for aggression, whereas 12% of females had a referral of any kind and 6% had a referral for aggression (Wright & Dusek, 1998). A similar study of 11,001 students across 19 middle schools in an urban, Midwestern school district also found clear gender differences in the office referral data; boys received significantly more referrals than girls (Skiba, Peterson, & Williams, 1997). In another sample, these authors found a similar percentage of students being referred at least once (38.8%), as well as a clear gender difference, with males accounting for 75.4% of the total referrals for a school year. However, these researchers did not examine differences in types of referrals by gender. There is still a need to determine whether gender differences are related to type of office referral, as boys may be more likely to engage in physical aggression and girls may be more likely to engage in relational aggression, or social aggression (i.e., behaviors that damage relationships, such as excluding a child from a group or spreading rumors) (Crick & Grotpeter, 1995). The overt nature of physical aggression makes it more likely to result in office referrals than the more covert acts of relational aggression. Further, gender differences in office referrals may differ over grades, as rates of referrals for aggressive behaviors decrease and referrals for noncompliant behavior increase from elementary school to high school.

## Patterns in Office Referral Data by Race/Ethnicity

In addition to gender differences in office referrals for disciplinary action, there is evidence that African American youth experience a disproportionate rate of office referrals and discipline when compared to their white counterparts and compared to the rates of problem behavior (Skiba, Peterson, & Williams, 1997; Townsend, 2000). For example, one study of urban, middle school students found that African American students received more office referrals, even though they did not engage in misbehavior at greater rates than their white, non-Hispanic counterparts (Skiba et al., 2002). A recent meta-analysis of 15 studies found a small, positive effect ($d$ = .31) for race/ethnicity on number and type of referrals, in that African American and Hispanic students received a greater number of referrals for disciplinary problems and special education services than Caucasian students (Tanenbaum& Ruck, 2007). The majority of these studies have compared minority students to their white counterparts, however, and there is still a need to examine racial and ethnic differences in patterns of office referrals between minority groups.

## The Current Study

The current study examined office referral data in an urban school district across elementary, middle, and high schools to determine whether the patterns of office referrals changed by grade. First, we expected to find referrals for behaviors similar to those found by

other researchers in the middle school grades (i.e. noncompliant/disrespectful), but we expected to find more problems with aggression in the elementary school and more attendance problems (i.e., skipping class, truancy) in the high school. Second, we expected to see higher rates of aggression, delinquent, and disrespectful behaviors in boys across grades, and we explored for gender differences in rates of referrals for attendance problems. Third, based on the findings from other research (e.g., Tenenbaum & Ruck, 2007), we expected that African American/black students would have more referrals than other race/ethnicities.

## Methods

### Procedure

This data was collected as part of a pilot project to assess the efficacy of Positive Behavior Supports (PBS) within the public school system in a densely populated Northeastern city of 140,000 people (8,000 people per square mile over 17.5 square miles) (U.S. Census Bureau, 2000). The city is characterized by extreme poverty with more than 95% of students in the public schools eligible for free or reduced lunches and an average per capita income of $16,306. The current study consisted of those students with at least one office referral. The final sample was 1668 students, with 56.8% (947) boys and 43.2% (721) girls. Students ‘age ranged from 4 to 20 years old, with a mean age of 14.6 (*SD*= 2.4). About 49% of the referred students were African American, 48% were Hispanic, 2% were Caucasian, and 1% were Asian. The pilot study included four schools: three elementary/middle (K-8) schools (first school population = 867;2% Asian, 22% African American/Black, 3% Caucasian, 73% Hispanic; second school population = 561;1% Asian, 65% African American/Black, 2% Caucasian, 32% Hispanic; third school population = 442;1% Asian, 45% African American/Black, 1% Caucasian, 53% Hispanic) and one high school (population = 1654:1% Asian, 43% African American/Black, 3% Caucasian, 53% Hispanic). The school staff consisted of classroom teachers (67%), paraprofessionals (5%), non-instructional professional staff (10%), administrators (5%), and other (13%). The majority of school staff were female (71%), 28% were African American/Black, 15% were Hispanic, 54% were Caucasian, and 3% other. The number of years working ranged from 0–42, with a mean of 13 years, and a median of 5 years. The number of years working at the current school ranged from 0–34, with a mean of 8 years, and a median of 1 year.

Prior to this pilot study, all school incident data was collected in a narrative form. One goal of the pilot was to create a uniform method to collect data across the schools so that school staff could use the data in planning how PBS would be implemented, and to allow administrators at the district level to determine if PBS was making an impact. The incident report form, created in collaboration with principals from each of the schools and district administrators, allowed for school staff to indicate the type, location, and time of day of each incident and any action that was taken by school staff in response to the incident. Detailed instructions were included in the form to assist staff in completing it, and training sessions were conducted with school administrators, who then trained staff to maximize reliability. Similar to the School Wide Informational System (SWIS™), the standard information management system used for PBS, our training included operational definitions

of problem behaviors to ensure that teachers would be reporting the same types of behaviors for the same referral codes (i.e., Todd, Honer & Tobin, 2005). After being trained on the form, school incident data were entered by school staff directly into their Management Information Systems (MIS). Data was transferred monthly by district MIS staff to a team of evaluators working with the district on this project. The data reported in this paper includes all school incident data collected from these four schools during the 2004–2005 academic year.

### Data Analysis

Office referral forms included 27 different reasons for referral. For these analyses, we combined these reasons to create four categories of referrals: attendance (leaving the building without permission, skipping class, skipping detention, tardies), delinquent (weapon, drugs, alcohol, vandalism, theft, extortion, cheating), aggressive (fighting, physical threat to staff, physical threat to peer, physical harassment, sexual harassment, verbal threat to staff, verbal threat to peer, verbal harassment, endangering behavior, bullying) and disrespectful (use of profanity toward peer, use of profanity toward staff, use of profanity toward other, disruptive behavior, disrespect, lying). These categories were created building on past research, which separated behaviors into violent/non-violent (e.g., Tobin & Sugai, 1996) or aggressive/non-aggressive (e.g., Wright & Dusek, 1998), and incorporating the Loeber's developmental model.

A Poisson regression model was utilized to determine if a relationship exists between the independent variables (i.e., grade, race/ethnicity/gender) and the outcome variable, number of referrals. When the dependent variable is a count, such as number of referrals, the distribution shows large positive skewness, with many observations having small values and few observations with large values.[1] The Poisson models run included a dispersion parameter to adjust the standard errors due to under-or over-dispersion (Dunteman & Moon-Ho 2005). The inclusion of the dispersion parameter in the analyses appropriately accounts for the variability in the data which, if not adjusted, could lead to an inflation of the Type I error rates. Finally, the pattern of significant results presented in this paper and the high levels of significance moderate concerns regarding the performance of multiple tests.

## Results

### Descriptive Statistics

There were a total of 3340 students enrolled in the schools that piloted a new system for collecting office referral data during the 2004/05 school year and 8688 office referrals were made that year, for an average of 2.6 referrals per student. A total of 1668 students, or 49.9% of the school population, had one or more referrals. Table 1 provides details of the referral type by gender and race/ethnicity.

[1]The explanatory variables are linearly related to the outcome variable through a log link function ($\eta$) as the following equation demonstrates: $\eta = \log(\mu) = \beta_0 + \beta_1 X$. The expected value or mean ($\mu$) of the outcome variable (number of referrals) is linearly related to the explanatory variable X by using a link function $\eta$ that models the logarithm of the mean with respect to the explanatory variable. Thus, to interpret the effect of an explanatory variable, it is necessary to exponentiate (inverse of the log) the corresponding coefficient of the explanatory variable (Gill 2000).

## Poisson Regression Analyses

**Office Referrals by Grade Level—**To test our first hypothesis, that the types of referrals would differ by grade level, we grouped grade level into four categories (K-3, 4–6, 7–8, and 9–12) and entered it as a categorical variable in the regression model with grade levels 9–12 as the reference group (see Figure 1). As seen in Table 2, we found a significant difference between grade categories for all four outcomes: attendance, delinquent, aggression, disrespect, and the total number of referrals. For attendance, the high school grades were significantly more likely to have attendance referrals than the lower grade levels. Moreover, the number of attendance referrals increased as grade level increased. The K-3 students had only 0.1% of the referral rate of high school students, in contrast to 4% when comparing grades 7–8 to high school. For delinquent behavior, the children in grades K-3 and 4–6 had significantly less referrals than students in high school, but grades 7–8 did not differ from high school. A follow-up contrast revealed grades K-3 did not differ from grades 4–6 ($F$= 0.95, $p$ = .33). For aggressive behavior, grades K-3, 4–6, and 7–8 had significantly more referrals than grades 9–12. This ranged from 44% more for grades K-3 than high school to over five times ($e^{1.757}$ = 5.80) as many for grades 7–8 as high school. For disrespectful behavior, grades K-3 and 4–6 had significantly less referrals, while grades 7–8 had significantly more referrals compared to grades 9–12. Finally, the total number of referrals significantly differed by grade level. Contrasts revealed the increment by grade level was significant; K-3 differed from 4–6 ($F$= 36.38, $p$ = .000) and 4–6 differed from 7–8 ($F$= 49.51, $p$ = .000).

**Office Referrals by Gender—**Results for analyses testing the third hypothesis, that the number of office referrals would differ by gender, are shown in Table 1, and Figure 2 displays the mean number of referrals by gender for each outcome. For all four types of behavioral outcomes, males had significantly more referrals than females. The difference ranged from 22% more attendance referrals for boys than girls to over three times ($e^{1.115}$= 3.05) more aggressive referrals for boys than girls. When aggregated, males had 50% times the total number of referrals as females.

**Office Referrals by Race/Ethnicity—**To test the second hypothesis, that types of referral would differ by the race/ethnicity of students, we used three categories of race/ ethcnicity: African American/black, Hispanic/Latino, and Other (Caucasian and Asian/Asian American). These were entered as a categorical variable in the regression model, using Other as the reference group (see Table 1). African American/black students had significantly more referrals for delinquency, aggressive and disrespectful behavior, and more total referrals than the Other group. African American/black students had over six times the number of delinquent referrals, 2.57 times as many aggression referrals, and 1.78 times as many disrespect referrals as other ethnicities. Hispanic/Latino students had significantly more delinquent referrals (5.02 times) than the Other group and significantly less attendance referrals (0.71 times or 30% less) than African Americans/blacks (not shown, $F$ = 27.90, $p$ = .000). Moreover, African Americans/blacks, as compared to Hispanics/Latinos, had significantly more delinquent (1.20 times, F = 3.95, p = .047), aggression (1.57 times, F = 37.67, p = .000), disrespect (1.50 times, $F$= 39.12, $p$ = .000), and

total (1.42 times, $F$= 41.84, $p$ = .000) referrals. Figure 3 displays the mean number of referrals by ethnicity.

Further analysis tested for two-way interactions between grade level, ethnicity, and gender. There was a significant interaction between gender and grade level for the number of delinquent, aggressive, and total referrals. The pattern was similar for the above outcomes, in that males had higher rates of referrals than females at every grade level, but the gender difference became smaller as the grade level increased. The same pattern held for the attendance and disrespect referrals, although this interaction was no t significant. Figure 4 indicates the mean number of total referrals by gender and grade level. Males had about four times more referrals than females during grades K-3, but this difference decreased to 30% more by high school.

There were also significant interactions between gender and race/ethnicity for attendance ($F$= 98.61), delinquency ($F$= 47.96), aggression ($F$= 45.87), disrespect ($F$ =64.53), and total referrals (F= 133.84, all $p$ < .001). The pattern was fairly similar across the four referral outcomes, in that African American/black males received significantly more referrals than females, but the gender difference was not as great for Hispanics/Latinos and Others. Figure 5 shows that mean number of total referrals was actually higher for females than males within the Hispanic/Latino and Other ethnicities, but the reverse occurred for African Americans/blacks.

Lastly, there were significant interactions between race/ethnicity and grade level for the separate referral measures. African Americans/blacks consistently received more aggression and disrespect referrals across all four grade levels, but Hispanics/Latinos and Others received more referrals for attendance and delinquency than African Americans/blacks in grades 7–8. Furthermore, Hispanics/Latinos received more total referrals than Others for the lower three grade categories (K-8), but this finding was reversed in high school (grades 9–12), as seen in Figure 6.

## Discussion

This study examines archival office referral data from an urban school district to determine whether there are patterns in types of referrals across grade levels, and whether these patterns differ for students by ethnicity and gender. We found that the types of referrals did differ across grade categories, and these differences appear to be related to developmental stage, similar to the work of Loeber and colleagues (Loeber et al., 2003). The developmental tasks for students in elementary school include friendship and team building, and it was found that students in the younger grades (K-6) were higher in referrals for aggression (e.g., fighting, physical and verbal threats, bullying). Middle school students are working toward identity development and autonomy, and therefore they were higher in referrals for disrespect (e.g., use of profanity, disrespect toward teachers). Finally, students in high school were higher in referrals for attendance (e.g., skipping class, leaving building without permission), which may relate to their increasing independence. These findings strongly suggest that students' developmental levels influence the types of problem behaviors they are likely to exhibit in different grades. Therefore, there is a need to focus interventions on

the behaviors that are most likely to occur in specific grades and developmental levels, rather than applying a universal intervention across a school system.

Our results are consistent with the literature indicating that African American/black students, and African American/black boys in particular, are more likely to be referred for disciplinary action (Skiba et al., 2002; Townsend, 2000). The literature suggests that this disparity occurs even in schools that are predominantly African American/black with faculty and staff that are also African American/black (Townsend, 2000). To address this disparity, it may be important to determine if a particular expectation is solely a means of behavioral control or one that promotes learning. For example, teachers' common expectation that students sit in their seats with both feet on the ground might prove difficult for more active African American/black students or boys. If a student is engaged in his work, but is sitting on one knee partially standing, he may be disciplined, despite the fact that such behavior may be promoting rather than hindering his learning. Expectations with a clear academic rationale promote learning, are more meaningful for students, and do not result in disciplining students for different learning styles. Understanding and utilizing ethnic/racial differences in office referral patterns is consistent with the intervention and could be useful in establishing expectations for behavior that are meaningful for all students (Sugai & Horner, 2006). Taken together, this suggests that school systems should examine these patterns in their schools to provide information on how best to implement a system that meets the needs of both school personnel and students.

The results from the current study are consistent with previous research finding that boys are significantly more likely to receive office referrals than girls (e.g., Skiba et al., 1997). However, it is important to note that the office referral form used in this study and those used by other researchers (Skiba et al., 1997; Tobin & Sugai, 1996) are more likely to capture externalizing behavior such as aggression, disrespect, and overt defiance, and less likely to capture some of the more covert behaviors that girls may be more likely to engage in, such as subtle teasing and relational aggression (Cote, Vaillancourt, Barker, Nagin, & Tremblay, 2007). Given the data collection method, it is not surprising that we found that boys were significantly more likely to be referred to the office than girls, and that this difference was most significant for aggressive behavior referrals. It is also interesting to note that the gender difference decreased in the higher grade levels, suggesting that older girls and older boys are more likely to engage in the same kinds of behaviors that result in office referrals (e.g., skipping class). Future work is needed to define the types of behaviors that warrant an office referral, and to include forms of relational aggression.

In our sample, attendance was by far the most frequently occurring behavior resulting in office referrals for both genders and all racial/ethnic groups. It is important to note, however, that many of the students in this sample take the city buses to school, and therefore do not always have control over their time of arrival (i.e. not all of the tardies are within the students' control). It may be that the school environment is not reinforcing for these students, resulting in behaviors that allow them to avoid school. These findings suggest that attendance problems should be targeted by school-wide interventions at the high school level (grades 9–12). Schools need to consider ways to make the school environment more reinforcing to students, to decrease the problems with attendance.

There are some limitations to using office referral data. It is important to note the values that are implicit in office referrals with regard to the behaviors that are considered to be problematic (Irvin et al., 2004). Generally, problematic behaviors are those that are not consistent with the values of order, safety, and control in the school and, as previously mentioned, tend to be behaviors that boys are more likely to engage in than girls. It is also important to consider that office referrals are always filtered through the referring teacher, with no independent measure of student behavior (Wright & Dusek, 1998). Teachers have varying thresholds for tolerating behaviors, so reports across teachers of the same behaviors may not be comparable. Further, the reliability of office referral data is questionable, given that the referrals must pass from the teacher to the office and into a database (Wright & Dusek, 1998). The need for ongoing training with regard to the accurate completion of office referral forms and the policies needed to maintain reliable office referral data is vital and cannot be underestimated. Finally, research has demonstrated the need to question reliability of office referral data *within* schools. Wright & Dusek (1998) found significantly different rates of physical aggression and other disruptive behavior between schools in the same district, and therefore caution that national estimates of base rates of disruptive student behavior may not accurately reflect the rates of behavior at a particular school. Although consistent training within a district can help to control this variability, it is vital that each school examine their data and use that information in planning programs that will best meets the needs of their students.

## Implications and Directions for Future Research

The current study demonstrates that there are differences in the rates and types of office referrals based on grade, and that these differences appear to relate to developmental tasks. These findings suggest that teacher preparation must include a greater focus on developmental stages in children and adolescents, so that instruction and behavioral expectations are closely aligned with these stages. Further, the results of the current study support differences in patterns of referral based upon race/ethnicity, which suggests that schools should acknowledge students' racial/ethnic backgrounds in order to develop more salient positive behavior expectations. We also caution that the observed gender difference in the rate and type of referrals may have more to do with how schools define unacceptable behavior and the method used to collect this data. It is important to note that other measures of positive student behavior (e.g., academic performance, social skills) should be used in conjunction with office referrals to determine the need for and the effectiveness of behavioral interventions. The inclusion of such measures will mark the shift from reactive and punitive methods to proactive, educational methods. In conclusion, the current study offers further support that educational programs should consider grade/developmental stage, gender, and ethnic differences when developing programs that support and build upon strengths for all children.

When planning interventions based on office referral data, it is important to keep in mind that both the student and the teacher may be reinforced by office referrals for disruptive behaviors (Wright & Dusek, 1998). That is, sending the student to the office gives the teacher a break from the disruptive child, and the student gets a break from what may be perceived as an aversive classroom. This suggests the need to enhance the skills of teachers

to help prevent the onset of disruptive behavior and help de-escalate the behavior when it does occur. Examination of office referral data at the teacher level can be helpful in the identification of teachers who may benefit from coaching in the area of classroom behavior management. Additionally, examination of office referral data at the individual student level can be helpful in identifying students who may benefit from additional supports to help them to gain the skills to successfully remain in the classroom. Future research is needed to replicate the patterns of office referrals related to developmental differences in other populations.

## Acknowledgments

Funding for this research was provided by the Child, Youth and Family Branch of Center for Mental Health Services, Substance Abuse and Mental Health Services Administration through a cooperative agreement awarded to the Connecticut Department of Children and Families. Funding for Dr. Vaughan's time on this manuscript was supported by a Postdoctoral training grant in substance abuse prevention from NIDA (T32DA019426).

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## Biographies

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**Karen Andersson, Ph.D.,** is the Connecticut Department of Children and Families Director for the Behavioral Health Partnership.

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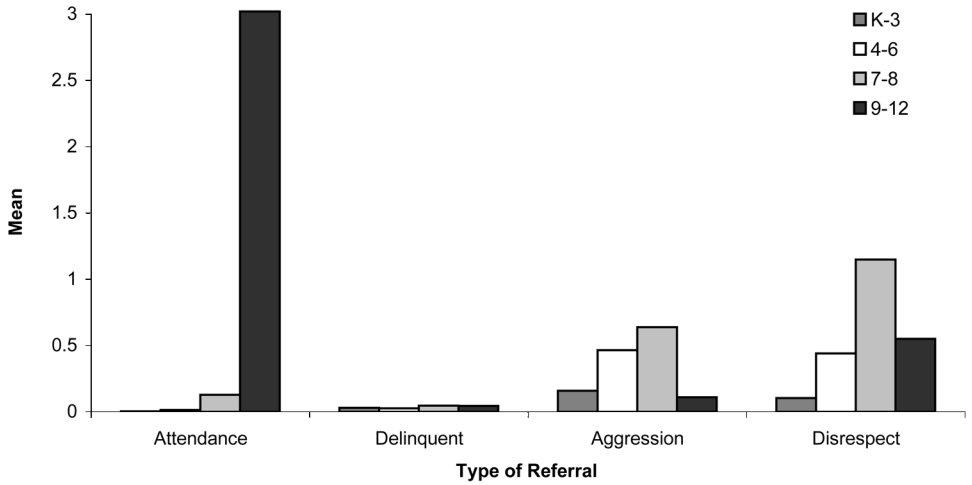


**Figure 1.**
Mean Number of Referrals by Grade

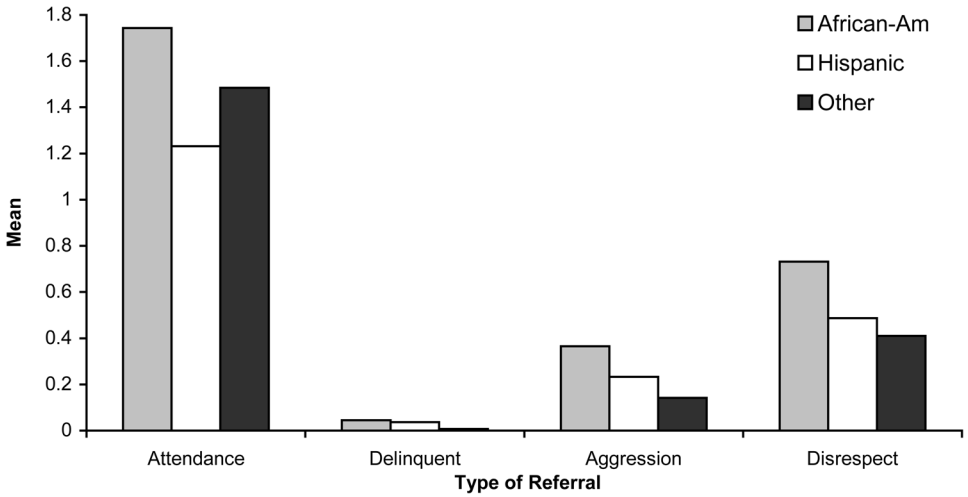


**Figure 2.**
Mean Number of Referrals by Ethnicity

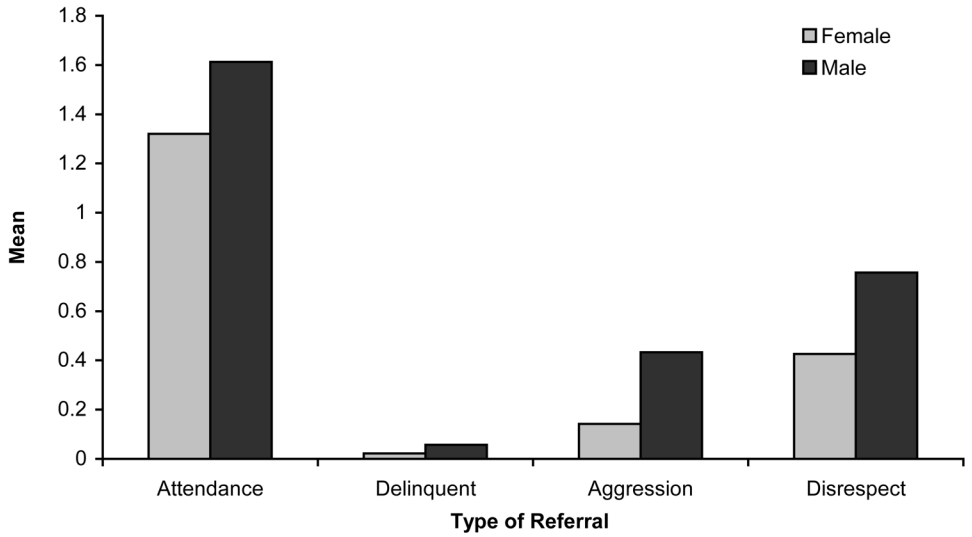


**Figure 3.**
Mean Number of Referrals by Gender

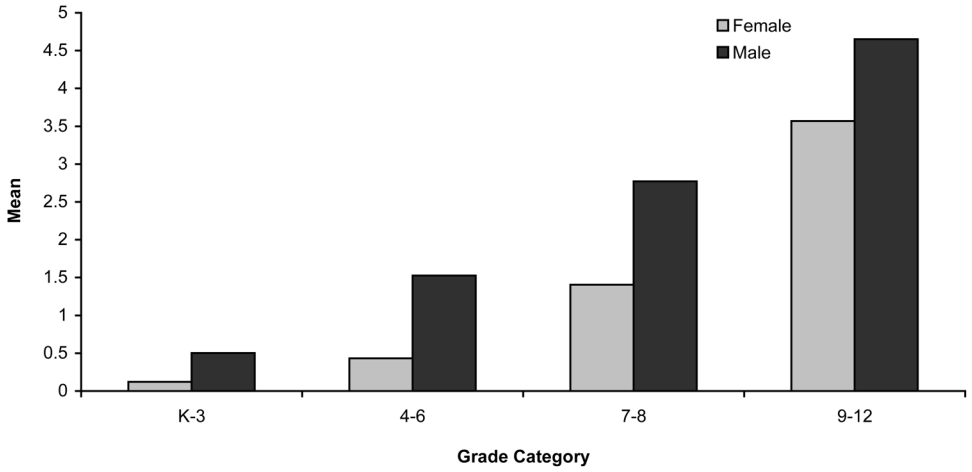


**Figure 4.**
Mean Number of Total Referrals by Gender and Grade Level

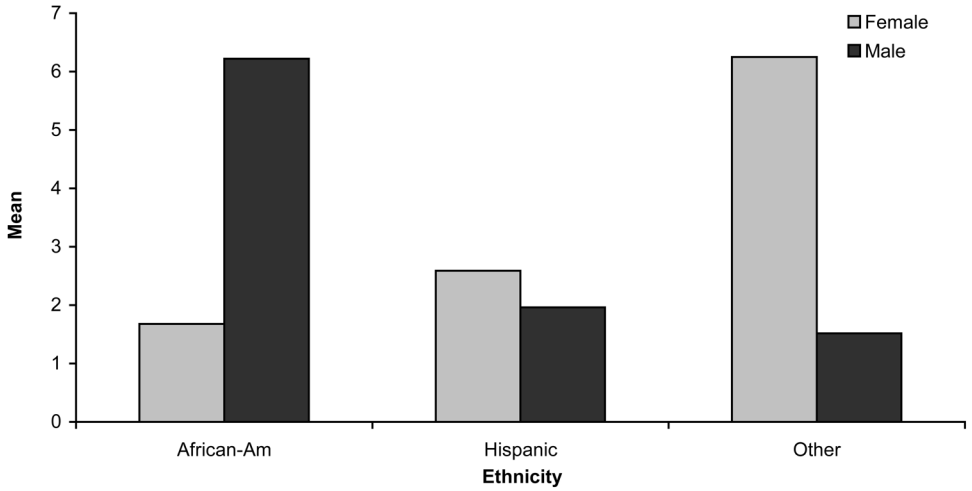


**Figure 5.**
Mean Number of Total Referrals by Gender and Ethnicity

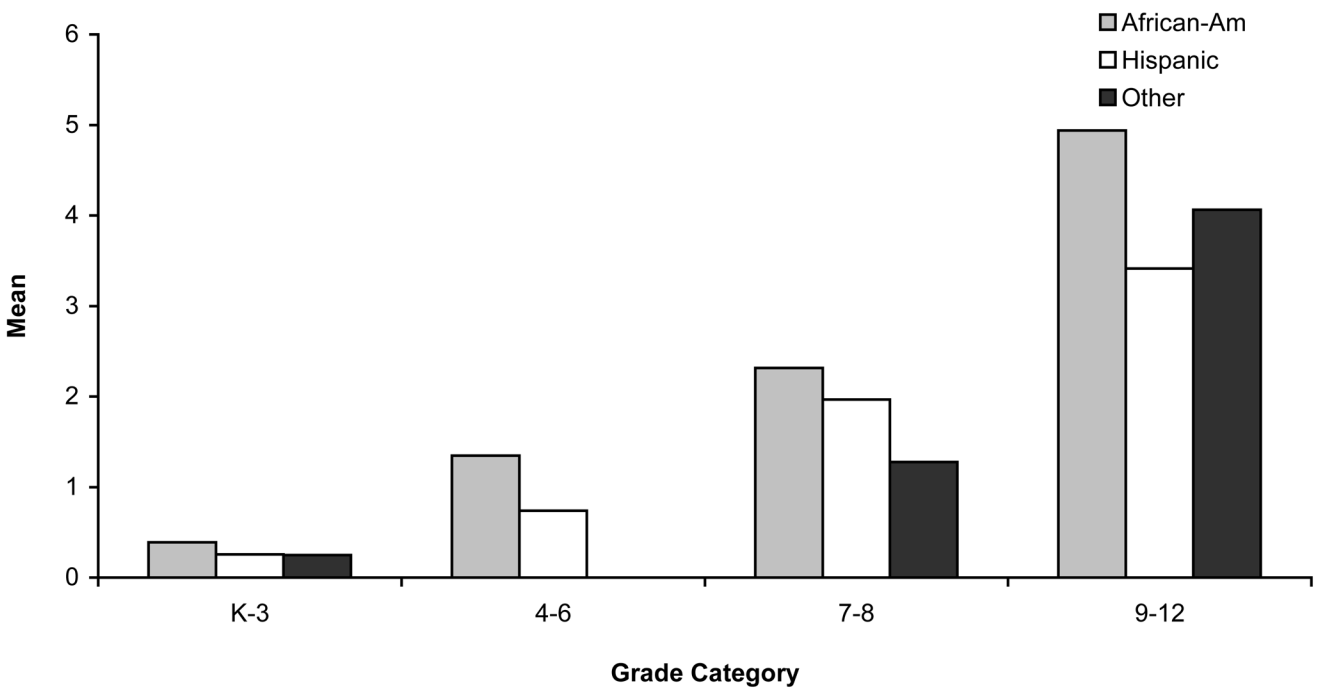


**Figure 6.**
Mean Number of Total Referrals by Ethnicity and Grade Level

**Table 1**

Referral Type by Grade, Race/Ethnicity and Gender

| Type/Grade | African American | | Latino | | Other | |
|---|---|---|---|---|---|---|
| | Male (n = 466) | Female (n = 346) | Male (n = 448) | Female (n = 355) | Male (n = 33) | Female (n = 20) |
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| *Attendance (leaving building without permission, skip class, skip detention, tardies)* | | | | | | |
| K-3 | .10 (.45) | - | - | - | - | - |
| 4–6 | .04 (.21) | .13 (.34) | .03 (.16) | .11 (.32) | - | - |
| 7–8 | .35 (1.26) | .17 (.45) | .10 (.41) | .20 (.59) | - | 1.14 (1.07) |
| 9–12 | 5.18 (6.61) | 4.14 (5.39) | 3.92 (5.18) | 4.54 (6.24) | 5.52 (9.83) | 4.92 (6.74) |
| Total | 3.27 (5.74) | 3.00 (4.90) | 2.32 (4.39) | 3.08 (5.50) | 3.85 (8.54) | 3.60 (5.70 |
| *Delinquency (weapon, drugs, alcohol, vandalism, theft extortion, cheating)* | | | | | | |
| K-3 | .20 (.62) | .29 (.49) | .17 (.38) | .5 (.85) | - | - |
| 4–6 | .16 (.56) | .09 (.29) | .10 (.30) | .11 (.32) | - | - |
| 7–8 | .10 (.33) | .01 (.12) | .11 (.34) | .06 (.28) | - | - |
| 9–12 | .10 (.35) | .04 (.21) | .08 (30) | .04 (.24) | .04 (.21) | - |
| Total | .11 (.38) | .04 (.21) | .10 (.32) | .06 (.29) | .03 (.17) | - |
| *Aggression (fighting, physical threat to staff, physical threat to peer, verbal harassment, endangering behavior, bullying)* | | | | | | |
| K-3 | 2.35 (2.23) | .29 (.49) | .92 (.78) | .40 (.52) | 1.5 (2.12) | - |
| 4–6 | 3.24 (5.29) | .87 (1.42) | 2.18 (3.47) | .53 (.61) | - | - |
| 7–8 | 1.40 (1.55) | .88 (1.22) | 1.20 (1.40) | .75 (1.05) | .63 (.74) | .43 (.53) |
| 9–12 | .20 (.51) | .17 (.41) | .16 (.54) | .11 (.36) | .22 (.52) | .23 (.83) |
| Total | .88 (2.14) | .36 (.80) | .67 (1.50) | .30 (.68) | .39 (.74) | .30 (.73) |
| *Disrespect (use of profanity toward peer, use of profanity toward staff, use of profanity toward other, disruptive behavior, disrespect, lying)* | | | | | | |
| K-3 | .90 (1.29) | .86 (1.07) | .71 (.91) | .90 (1.29) | .5 (.71) | - |
| 4–6 | 2.29 (2.83) | 1.87 (2.80) | 1.73 (2.31) | 1.79 (2.10) | - | - |
| 7–8 | 2.31 (3.44) | 1.74 (1.66) | 2.07 (2.83) | 1.60 (1.80) | .38 (52) | 2.14 (2.54) |
| 9–12 | 1.04 (1.62) | .91 (1.70) | .84 (1.45) | .43 (1.17) | .83 (1.34) | 1.31 (3.04) |
| Total | 1.47 (2.39) | 1.14 (1.80) | 1.25 (2.06) | .81 (1.44) | .70 (1.16) | 1.60 (2.83) |

*J Posit Behav Interv*. Author manuscript; available in PMC 2015 January 07.

**Table 2**

Parameter Estimates by Predictor for Each Outcome

| Predictor | Coefficient (β) | SE | $e^{\beta}$ | F | p-value |
|---|---|---|---|---|---|
| Grade Level | | | | | |
| Attendance | | | | 663.73* | .000 |
| K-3 | −6.609 | 1.268 | .001 | 27.16 | .000 |
| 4–6 | −5.365 | 0.635 | .005 | 71.50 | .000 |
| 7–8 | −3.150 | 0.191 | .043 | 272.61 | .000 |
| 9–12 | reference | | | | |
| Delinquent | | | | 6.61 | .001 |
| K-3 | −0.367 | 0.148 | 0.69 | 6.16 | .013 |
| 4–6 | −0.509 | 0.148 | 0.60 | 11.86 | .001 |
| 7–8 | 0.044 | 0.111 | 1.04 | 0.15 | .694 |
| 9–12 | reference | | | | |
| Aggression | | | | 160.06 | .000 |
| K-3 | 0.366 | 0.144 | 1.44 | 6.49 | .011 |
| 4–6 | 1.439 | 0.103 | 4.22 | 195.70 | .000 |
| 7–8 | 1.757 | 0.094 | 5.80 | 348.66 | .000 |
| 9–12 | reference | | | | |
| Disrespect | | | | 160.06 | .000 |
| K-3 | −1.671 | 0.197 | 0.19 | 72.24 | .000 |
| 4–6 | −0.227 | 0.098 | 0.80 | 5.38 | .020 |
| 7–8 | 0.733 | 0.067 | 2.08 | 120.66 | .000 |
| 9–12 | reference | | | | |
| Total | | | | 234.16 | .000 |
| K-3 | −2.573 | 0.185 | 0.08 | 194.21 | .000 |
| 4–6 | −1.435 | 0.100 | 0.24 | 205.01 | .000 |
| 7–8 | −0.676 | 0.066 | 0.51 | 105.89 | .000 |
| 9–12 | reference | | | | |
| Ethnicity | | | | | |
| Attendance | | | | 13.95* | .000 |

| Predictor | Coefficient (β) | SE | $e^{\beta}$ | F | p-value |
|---|---|---|---|---|---|
| Black | 0.160 | 0.166 | 1.17 | 0.93 | .335 |
| Hispanic | −0.188 | 0.167 | 0.83 | 1.26 | .361 |
| Other | reference | | | | |
| Delinquent | | | | 12.01 | .000 |
| Black | 1.794 | 0.523 | 6.01 | 11.77 | .001 |
| Hispanic | 1.614 | 0.523 | 5.02 | 9.52 | .002 |
| Other | reference | | | | |
| Aggression | | | | 23.85 | .000 |
| Black | 0.946 | 0.261 | 2.58 | 13.09 | .000 |
| Hispanic | 0.496 | 0.263 | 1.64 | 3.56 | .059 |
| Other | reference | | | | |
| Disrespect | | | | 21.70 | .000 |
| Black | 0.578 | 0.197 | 1.78 | 8.65 | .003 |
| Hispanic | 0.171 | 0.198 | 1.19 | 0.75 | .387 |
| Other | reference | | | | |
| Total | | | | 21.57 | .000 |
| Black | 0.337 | 0.148 | 1.40 | 5.18 | .023 |
| Hispanic | −0.013 | 0.149 | 0.99 | 0.01 | .930 |
| Other | reference | | | | |
| Male | | | | | |
| Attendance | 0.200 | 0.065 | 1.22 | 9.52 | .002 |
| Delinquent | 0.981 | 0.100 | 2.67 | 107.75 | .000 |
| Aggression | 1.115 | 0.082 | 3.05 | 215.93 | .000 |
| Disrespect | 0.576 | 0.066 | 1.78 | 78.75 | .000 |
| Total | 0.404 | 0.054 | 1.50 | 56.98 | .000 |

* The first F test is the overall test for the categorical variable