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School Referral Patterns among Adolescents with Serious Emotional Disturbance Enrolled in Systems of Care

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Abstract

School staff play a critical role in referring adolescents with serious emotional disturbance (SED) to mental health services; however, the mechanisms underlying this referral process are poorly understood. We used data from adolescents ($N=4,365$) enrolled in SAMHSA's Children's Mental Health Initiative Systems of Care (SOC) and participating in a national evaluation to compare the profiles of youth referred for SOC services by school staff with youth referred for those services by professionals at other agencies. We sought to identify whether school staff referred a unique set of adolescents by examining indicators of global impairment and impairment in school functioning (i.e., absences, suspensions, failures). Using multilevel regression models, we estimated the association of global impairment and school functioning with referral source (i.e., school vs. other) and controlled for SOC community characteristics and individual-level socio-demographics. Findings indicated that adolescents referred from schools had significantly lower levels of global impairment than adolescents referred from mental health settings. However, they had considerable school-related impairment, with rates of absences, suspensions, and failures that were equivalent to youth referred from most other agencies. This study is the first to examine school-related impairment among youth receiving SOC services as a function of referral source. By identifying adolescents with more mild global impairment, who nonetheless experienced significant impairment in school functioning, schools can be key contributors to effectively identifying a unique set of adolescents for SOC services. Further, schools might meaningfully inform the provision of comprehensive services to this population by educating community agencies about school functioning among youth with SED.

Keywords

Systems of Care; Adolescents; School Mental Health; Services; Referral

introduction

Only one-third to one-half of US children and adolescents with emotional and behavioral disorders receive mental health services (Kataoka, Zhang, & Wells, 2002; Leaf et al., 1996). Researchers and policymakers frequently state that school staff have the potential to reduce gaps in treatment access because they can identify and provide mental health referrals for youth who might not enter other service sectors (Alegría, Lin, Green, Sampson, & Kessler, 2012; Dowdy, Ritchey, & Kamphaus, 2010; Green et al., 2013; Husky, Sheridan, McGuire, & Olfson, 2011; Wood et al., 2005). However, the circumstances underlying referral decisions made by school staff remain poorly understood and can be quite complex. For example, there is variation across schools in how students who require services are identified, staff perceptions of which students can be served effectively “in-house,” and in the nature of staff relationships with community providers (Weist et al., 2012).

Unidentified and unmet need for mental health services is particularly problematic for youth with serious emotional disturbance (SED; Merikangas et al., 2011). SED is defined by the Substance Abuse and Mental Health Services Administration (SAMHSA) as “a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within the [DSM-IV], that resulted in functional impairment which substantially interferes with or limits the child’s role of functioning in family, school, or community activities” (Federal Register, 1993, p. 29425). Children and adolescents with disorders that meet the SAMHSA criteria for SED are eligible for an array of federally funded community-based mental health services.

One of the most broadly disseminated community-based approaches to serving youth with SED is the system-of-care (SOC) approach (President’s New Freedom Commission on Mental Health, 2003; United States Public Health Service, 2000). The SOC approach, originally articulated by Beth Stroul and Robert Friedman (1986), was specifically designed to meet the complex needs of youth with SED by providing a range of home- and community-based supports and services and by coordinating the multiple agencies (e.g., schools, community mental health agencies, child welfare, juvenile justice) that often provide simultaneous services to these youth (Manteuffel, Stephens, & Santiago, 2002; Stroul & Friedman, 1986). Three core SOC values direct systems to be (1) family and youth oriented, (2) community-based, and (3) linguistically and culturally competent (Stroul & Blau, 2010). The SOC approach also encompasses several guiding principles that emphasize the coordination and integration of a comprehensive array of child-serving services, the provision of services in the least restrictive environment, and the promotion of a high level of family participation. Since 1993, SAMHSA’s Comprehensive Community Mental Health Services for Children and their Families Program (also referred to as the Child’s Mental Health Initiative or CMHI) has funded 5-year grants to improve and expand systems of care for youth with SED.

Results from a national evaluation of CMHI-funded SOC communities indicate that school staff are consistently one of the primary sources of referrals to SOC services in their communities (Manteuffel et al., 2002; Walrath et al., 2001). Furthermore, youth enrolled in SOC services have high rates of school failure, absenteeism, and suspension, indicating the

substantial consequences of SED for youth in school (Anderson, 2011; Anderson, Wright, Smith, & Kooreman, 2007). In general, studies suggest that school staff are most likely to refer youth with emotional and behavioral disorders for mental health services if those students also present with academic problems (Bradshaw, Buckley, & Ialongo, 2008). However, in the case of referrals to SOC, it is unclear whether decisions about children with the most complex mental health needs are specifically driven by their deficits in school functioning or if they are guided more generally by the severity of disorders.

Using data from SOC-enrolled youth participating in CMHI's national evaluation of Systems of Care, this study examines patterns in school staff referral of adolescents, ages 12–18 years old, with SED for mental health services. We focus on adolescents because the prevalence of mental disorders among this age group increases (Merikangas et al., 2010), at the same time that detecting those problems becomes more challenging because older students often have larger class sizes and reduced adult monitoring. Specifically, we examine the extent to which youth referred to SOC by school staff differ in both their general functioning and school functioning (i.e., suspensions, absences, academic failure) from youth referred by providers in other service sectors. We offer two hypotheses. First, based on previous research (Walrath et al., 2001), we hypothesize that youth referred to SOC by school staff experience levels of global impairment equivalent to youth referred from other settings. Second, knowing that many school staff refer youth based on school-related problems (Bradshaw et al., 2008), we hypothesize that youth referred to SOC by school staff experience relatively greater school-related impairment than youth referred by staff in other community agencies. Prior studies have not examined differences in school functioning across referral sources to SOC. By investigating school functioning specifically among adolescents referred by school staff, we seek to provide information that will be useful in informing the practices of school staff and mental health providers who are in positions to make referrals to community-based services for youth with SED.

Method

Participants

Participants in this study were adolescents, ages 12–18 years old, and their parents or caregivers (henceforth referred to as *parents*) enrolled in a CMHI-funded SOC. Data were obtained from the ongoing CMHI national evaluation of SOC implementation and outcomes, which is described in detail elsewhere (for review see Manteuffel et al., 2002). Briefly, awards were granted beginning in 1993 to communities throughout the U.S. The SOC communities vary considerably in their size and structure (e.g., some serve neighborhoods while others serve entire states). The national evaluation covers multiple phases of program funding and implementation. Current analyses focus on data from adolescents and their parents who enrolled in SOC services that were funded between 2002–2006 (i.e., Phases IV and V of SOC funding).

This study was restricted to intake data from adolescents ages 12–18 years old whose parents reported that they attended school in the past six months. These adolescents were enrolled in 48 unique SOC sites. As SOC communities vary in the size of populations they serve, we excluded nine SOC communities from the current study because they enrolled

fewer than 50 adolescents in services and therefore did not have sufficient referral data for comparisons. Adolescents ($n = 126$) missing data on the primary outcome variable, the Columbia Impairment Scale (CIS; Bird, Shaffer, Fisher, & Gould, 1993), were also excluded. In comparison to adolescents with CIS data, those with missing data were more often female (57.9% vs. 39.8%, $\chi^2 = 16.7$, $p < .001$). They were less often non-Latino Black (16.0% vs. 30.7%, $\chi^2 = 12.4$, $p < .001$) and more likely to describe themselves as Other race/ethnicity (24.8% vs. 11.3%, $\chi^2 = 21.6$, $p < .001$). They were also less often referred to SOC by staff in Juvenile Justice agencies (7.9% vs. 18.2%, $\chi^2 = 8.8$, $p = .003$). There were no differences between the groups in likelihood of referral to SOC from school staff. The final sample included data from 4,365 SOC recipients and their parents. Adolescents were on average 14.4 years old ($SD = 1.6$) and a majority were male (60.2%). Adolescents reported that they were non-Latino White (40.3%), non-Latino Black (30.7%), Latino (17.7%), or Other race/ethnicity (11.3%).

Procedure

Within 30 days of SOC intake, each adolescent and a parent completed a structured interview. Parent interviews provided information about the adolescent's background and socio-demographic characteristics, referral in the SOC, current functioning at home and in the community, and functioning at school. Secondary analysis of de-identified CMHI evaluation data was approved by the University Institutional Review Board.

Measures

Global Impairment—Global functional impairment was assessed using the Columbia Impairment Scale (CIS; Bird et al., 1993), a 13-item measure of impairment in four domains: interpersonal relations, functioning in job or schoolwork, use of leisure time, and broad psychopathological domains. The CIS was completed in paper-and-pencil form by a parent. Parents rated each of 13 problems on a scale ranging from “no problem” (0) to “a very big problem” (4). The CIS total was calculated as a sum of the 13 items, with higher scores indicating more significant global impairment in functioning. Item internal consistency reliability was good in the current sample (Cronbach $\alpha = 0.85$).

School Functioning—School functioning was assessed using three indicators from the Educational Questionnaire Revised (EQ-R). The EQ-R was developed for the SOC evaluation and completed by parents to provide data on their children's educational experiences in the past six months. First, parents were asked “When school was in session, did [child] ever miss school for any reason in the past 6 months? This includes excused as well as unexcused absences” (emphasis in original). To identify youth with significant school absence, this variable was dichotomized to indicate whether, on average, their child was absent one day or more per week. Second, number of suspensions was assessed by two questions asking parents to indicate the number of days that their child spent in in-school or out-of-school suspension. Numeric responses to these two questions were summed and standardized within SOC communities to have a mean of 0 and variance of 1.0. Third, academic performance was assessed by parents indicating their child's average grade. To identify youth with significant academic failure, this item was dichotomized to indicate whether parents reported their child was failing half or more of the classes at school.

SOC Service Initiation—Referral to the SOC was assessed by a question about the system or individual who referred the adolescent for services. Seven categories were included in this analysis: *School, mental health agency, justice* (e.g., corrections, juvenile court, probation), *physical health provider, child welfare* (e.g., child protective services), *self-referral*, and *other*. *Year of SOC intake* was assessed based on the calendar year in which adolescents completed their initial assessment. In addition, we calculated an *enrollment cohort* variable, which identified when in the history of the SOC each individual was enrolled. This *enrollment cohort* variable was created by comparing the *year of SOC intake* to the year of initial community funding, therefore indicating whether youth were first enrolled during the first, second, third, fourth, fifth, or sixth year of community funding. The vast majority of intake evaluations occurred between years two and six of grant funding. Most SOC communities used their first year of funding as a planning year, with very few or no individuals enrolling that year. There were also a very small number of adolescents enrolled after year six; these adolescents were included with the sixth-year category of the *enrollment cohort* variable for our analyses. These variables were included in analyses to account for changes in service provision that might have occurred over time (*year of SOC intake*) and also as function of SOC community maturity (*enrollment cohort*).

Socio-Demographics—Socio-demographic variables considered here include respondent age (12–18 years old), sex, race/ethnicity, family income at or below poverty level (\$15,000/year) vs. above poverty level (>\$15,000/year), whether respondent received services through an individualized education plan (IEP) within the past six months, and whether the child was covered by private medical insurance (regardless of other insurance or medical coverage; Table 1).

Data Analysis

A series of bivariate and multivariate regression models were estimated to examine the association of global impairment and school functioning with referral source. Because respondents were nested within SOC communities (i.e., multiple respondents participated from each community), analyses were adjusted to account for this within-site clustering using multilevel multivariate regression analyses. That is, SOC community was entered as a level two covariate. At level one (i.e., the individual-level), statistical controls were introduced for year of SOC intake, enrollment cohort, and socio-demographic characteristics. In regression analysis, normal link function was used for continuous outcomes of global impairment and suspension, and logit link function was used for binary outcomes of absence and academic performance. This analysis allowed us to determine the association of referral source with impairment, accounting for variability associated with other individual-factors and differences across SOC sites. Analyses were performed using SAS v9.3 software (SAS Institute, 2011). Two-sided tests with an alpha level of .05 were employed for all analyses.

Results

SOC participants in this sample had an average CIS total score of 23.1 ($SD = 10.7$). Highest impairment scores were reported for the item asking parents: “How much of a problem

would you say [your child] has with his/her schoolwork (doing his/her job)?" ($M=2.3$, $SD=1.4$). Lowest impairment scores were reported for the item: "How much of a problem would you say [your child] has with having fun?" ($M=0.9$, $SD=1.2$). Parents reported that three-quarters (75.7%, $SD=42.9$) of youth were absent from school an average at least one day a week in the past six months. Youth were placed in in-school or out-of-school suspensions an average of 12.5 days ($SD=18.3$, $Mdn=6$) in the past six months. Over a quarter of youth (28.1%, $SD=45.0$) failed half or more of their classes in the past six months (Table 2).

In a series of unadjusted analyses, youth referred by school staff to SOC were reported to have better global functioning (i.e., lower CIS total scores) than youth referred by providers in other service sectors. In particular, significantly higher CIS total scores were reported for youth referred by the mental health ($b=2.2$, $p<.001$) and child welfare sectors ($b=1.5$, $p<.05$). However, youth referred to SOC by school staff had rates of school absences, suspensions, and failures similar to students referred from most other sectors.

We then calculated four adjusted models that examined the association between referral source and CIS total score, absences, suspensions, and school failure, while controlling for socio-demographic covariates, year of SOC intake, and enrollment cohort. There was a significant difference in CIS total score ($F=2.7$, $p<.01$) among referral sources. In particular, youth referred to SOC by the mental health sector had significantly higher CIS total scores ($b=1.7$, $t=3.12$, $p<.001$) than youth referred by school staff (Table 3). Referral source was significantly associated with 10 of the 13 individual CIS items. Although patterns of associations varied, in 60% of significant cases, CIS scores were higher among youth referred by the mental health sector compared to those referred by school staff. CIS total score was also significantly higher for adolescents who were younger ($b=-0.32$, $t=-2.78$, $p<.01$), non-Latino White ($b=-1.5$, $t=-3.06$, to $b=-1.8$, $t=-2.73$ for non-Latino Black, Latino, and Other youth, all $p<.01$), female ($b=0.7$, $t=2.08$, $p<.05$), those living above the poverty line (for those at or below the poverty line $b=-1.5$, $t=-4.05$, $p<.001$), those on an IEP ($b=2.2$, $t=6.35$, $p<.001$), and adolescents with private medical insurance (vs. other types of insurance; $b=1.0$, $t=2.16$, $p<.05$).

In adjusted models predicting school functioning, referral source was significantly associated with frequency of school absences ($F=3.7$, $p<.001$), but not suspensions ($F=1.4$, $p=.213$), or school failure ($F=1.7$, $p=.103$). School absences were significantly higher among students referred to SOC by the justice sector than by school staff ($b=0.5$, $t=2.99$, $p=.003$), as well as for females ($b=0.3$, $t=3.63$, $p<.001$), and youth at or below the poverty line ($b=0.2$, $t=2.50$, $p=.012$). School suspensions significantly declined with age ($b=-0.03$, $t=-2.02$, $p=.043$) and were higher among non-Latino Black than non-Latino White students ($b=0.3$, $t=4.25$, $p<.001$). School failure was significantly lower among females ($b=-0.3$, $t=-3.71$, $p<.001$) and among those receiving educational services through an IEP ($b=-0.2$, $t=-2.18$, $p=.03$).

Discussion

Recent epidemiologic data suggest that approximately 8% of U.S. adolescents meet criteria for SED (Kessler et al., 2012). However, similar to the broader population of youth with

mental disorders, there is evidence that most adolescents with SED never receive mental health services (Merikangas et al., 2011). Our two primary findings have implications for understanding the role of school-community collaboration in reducing this unmet treatment need for youth with SED.

Our first finding is that adolescents with SED who were referred to a CMHI-funded SOC by school staff had *lower* levels of global impairment, which means they had less severe SED, than adolescents referred by providers specifically in the mental health sector. This difference in levels of global impairment associated with referring agencies may be due to several factors. When service providers, including school staff, refer youth to SOC services, these professionals are presumably selecting for referral the adolescents who present with the greatest impairment in functioning relative to their peers (Walrath et al., 2001). School staff, because of the normative student population in their building, may have a lower threshold for identifying students in need of SOC referrals than counselors in a treatment-seeking mental health agency. This normative context is a unique feature of schools and can be an important factor in positioning school staff to make referrals for milder cases of SED. Another potential explanatory factor is that school staff may refer students to particular mental health service agencies, rather than directly to SOC because they have had experience with those agencies, are familiar with them, or because they do not have a strong relationship with the local SOC. If mental health agencies then determine that their services are insufficient to help these referred youth, they may subsequently refer them to a SOC. If the severity of SED for those adolescents were mild, the agency to which they were initially referred might have addressed their needs and they therefore would not have been part of our data pool drawn from youth served by SOC.

The finding that youth referred by school staff have lower levels of global impairment contradicts previous research (Walrath et al., 2001) and our hypothesis. The difference between our findings and those of the 2001 study may be due to several methodological variations. In particular, Walrath and colleagues (2001) analyzed data collected from both children and adolescents in communities funded in 1993 and 1994 that administered the Child and Adolescent Functional Assessment Scale to determine the youths' global functioning (Hodges, 1994). In contrast, we analyzed data from a later sample that included only adolescents and based their global functioning measurement on their parents' answers to the CIS. An alternative explanation is that school staff are more tuned into and aware of functioning that directly affects school behaviors and are less aware of global impairment that often reflects home and community functioning.

Our second primary finding is that youth referred to SOC by school staff experienced rates of absences, suspensions, and school failure that were equivalent to youth referred by staff in other service sectors. One exception is that absences were significantly greater among youth referred by the Juvenile Justice sector than among youth referred by school staff. When considering this finding in relation to result above, indicating that youth referred to SOC by school staff have *lower* rates of global impairment than their peers, our finding suggests that academic functioning might be a more important factor in referral decisions than global functioning. It is well-established that school staff recognize more significant mental health problems based on academic problems (Bradshaw et al., 2008), and this result is consistent

with other community- and school-based studies that report that school staff are particularly effective at early identification and referral of youth with more mild forms of SED (Alegría et al., 2012; Husky et al., 2011). However, prior research has focused on the general population of youth with mental health problems; our finding is novel in its suggestion that school functioning might also drive decisions about service referrals for adolescents with the most severe disorders.

The current study has several limitations. First, SOC grantees vary considerably in their size and structure, including the extent to which they are explicitly designed to collaborate with school staff. SOC communities with more extensive school connections, by their nature, might be more likely to serve adolescents who are referred from school systems. Because of this variability in SOC sites, we conducted all analyses in a multi-level framework to adjust for differences that could be explained by the communities in which youth were enrolled. Second, the national evaluation of SOC communities collected data only about the main source of referral to the SOC. As described above, it is possible that school staff referred adolescents to another service sector (e.g., mental health) and professionals in that sector subsequently made a referral to the SOC. However, the large number of adolescents referred directly by school staff to SOC communities indicates that school staff are a prominent referral source to SOC in their own right. Third, the CIS and education questionnaire were both based on parent reports. Prior studies have shown that parent-adolescent agreement on reports of psychiatric symptoms and impairment is generally low (Schwab-Stone et al., 1996; Kramer et al., 2004; De Los Reyes & Kazdin, 2005), although sometimes higher for reports of more severe and observable consequences of behavior (e.g., school suspensions; Kramer et al., 2004). In the current study, questions measuring global impairment in the CIS required parents to report on more subjective information (e.g., trouble getting along with others) than questions about school-related impairment (e.g., grades, attendance), which parents are typically apprised of in reports from schools.

Fourth, parents indicated only the frequency with which their child had been absent from school and did not indicate whether absences were excused or unexcused. In particular, if children were absent for a disciplinary-related reason, there might be some redundancy with the suspension outcome variable. However, responses to these questions were divergent enough that we believe that the two outcomes are important to consider independently (i.e., of students whose parents reported that they missed school for any reason, only half [53.9%] said that their child had been suspended or expelled, the correlation between frequency of absences and number of days suspended was moderate [$r = .308$]). Finally, this study examines youth who receive services for SED within an established, CMHI-funded SOC and, as such, we cannot answer questions about whether youth with SED who received referrals to a SOC differed from youth with SED who did not receive SOC services.

Despite these limitations, the results of this study indicate the importance of understanding the role of school-community collaboration in supporting youth with SED, even in communities that do not provide SOC services. First, these findings suggest the importance of school staff in identifying youth with SED. School staff are especially attuned to variations in youth functioning that differ from the school culture's normative functioning. This nuanced sophistication in identifying school-related impairments is critical to early

identification and to helping youth succeed in school. In addition, schools differ substantially in the resources they are able to provide in coordinating services (Green et al., 2013; Slade, 2003). Building closer relationships between school staff and mental health service agencies can help serve youth who suffer the double burden of mental illness and poor academic performance. Weak linkages between community-based mental health agencies and the education system have been an ongoing concern of those involved in children's mental health service delivery (Adelman & Taylor, 1999; Atkins, Hoagwood, Kutash, & Seidman, 2010; Weist et al., 2012), but a number of approaches have been developed specifically to enhance their collaboration (Walsh et al., 2014; Weist et al., 2012). In particular, Expanded School Mental Health programs provide a framework for effective partnerships between educators and community mental health staff. These programs include strategies for working across disciplines to coordinate multi-agency providers and emphasize clearly defining roles, setting a shared agenda, and taking steps to ensure that relationships are sustainable (Weist, Ambrose, & Lewis, 2006).

Finally, evidence clearly suggests that youth in SOC with SED have relatively low levels of school functioning. Recognizing this fact may encourage policymakers to consider a more sophisticated integration of previously mandated measures of academic success involved in programs such as No Child Left Behind and Race to the Top with the growing number of mental health screening programs being adopted by school staff (Husky et al., 2011; Levitt, Saka, Romanelli, & Hoagwood, 2007). Policymakers might even consider evaluating schools based on how well they meet the mental health needs of youth as well as how well students perform academically. Such measures would allow school staff to appeal to local communities and to state and federal governments for greater resources for mental health needs within the schools and for an expansion of SOC for youth needing additional support.

The suggestion of seeing these findings as part of an argument for expanded funding and increased inter-agency cooperation, including greater integration of school-based providers in those networks, comes at a time, however, when the type of community-based services provided by SOC are in flux. As debate continues over the Affordable Care Act (ACA), policymakers will need to determine the extent to which the type of inter-agency collaboration modeled by SOC is incentivized, particularly for working with youth with significant mental health needs. In addition, services that have traditionally been funded by Block grants to states might shift to federal funding sources under the ACA, which could affect mental health care utilization for youth with SED. These shifts in funding will have implications for both the mental health and the academic performance of youth affected by SED, as well as for the broader population of youth with mental health problems.

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Table 1

Socio-demographic Characteristics of Sample

<u>Socio-Demographic Characteristic</u>	<u>Sample Size</u>
<u>Age</u>	<u>N (%)</u>
12	660 (15.1)
13	767 (17.6)
14	882 (20.2)
15	916 (21.0)
16	746 (17.1)
17	347 (7.9)
18	47 (1.1)
Total	4365
<u>Race/Ethnicity</u>	
Latino	769 (17.7)
White	1751 (40.3)
Black	1332 (30.7)
Other	489 (11.3)
Total	4341
<u>Sex</u>	
Male	2626 (60.2)
Female	1738 (39.8)
Total	4364
<u>Enrollment Cohort</u>	
1	46 (1.1)
2	831 (19.2)
3	1253 (29.0)
4	1280 (29.6)
5	773 (17.9)
6	144 (3.3)
Total	4327
<u>Referral Source</u>	
Justice	795 (18.2)
School	770 (17.6)
Mental	1426 (32.7)
Physical	37 (0.8)
Welfare	394 (9.0)
Caregiver	458 (10.5)
Self	90 (2.1)
Other	395 (9.1)
Total	4365
<u>Year of SOC Intake</u>	<u>N (%)</u>
2004	208 (4.8)

Socio-Demographic Characteristic	Sample Size
2005	613 (14.2)
2006	709 (16.4)
2007	938 (21.7)
2008	818 (18.9)
2009	650 (15.0)
2010	390 (9.0)
Total	4327
<u>Income</u>	
At or Below Poverty Line	1728 (41.6)
Above Poverty Line	2423 (58.4)
Total	4151
<u>IEP Status</u>	
Not on an IEP	1956 (50.8)
On an IEP	1898 (49.2)
Total	3854
<u>Insurance Status</u>	
Private Insurance	855 (19.6)
Other Insurance or No Insurance	3510 (80.4)
Total	4365

Table 2

General Impairment and School Functioning by Referral Source

	Columbia Impairment Scale Total Score	% Absent 1+ Days/Week in Past 6 Months	Standardized Number of Suspensions in Past 6 Months	% Failing Half or More Classes in Past 6 Months
	<u>Mean (SD)</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>	<u>Mean (SD)</u>
School (n=770)	21.91 (10.58)	72.08 (45.90)	-0.11 (0.79)	28.74 (45.29)
Justice (n=795)	22.21 (11.06)	84.83 (35.90)	0.12 (1.09)	29.42 (45.60)
Mental (n=1426)	24.12 (10.46)	74.71 (43.49)	0.01 (1.01)	28.74 (45.29)
Physical (n=37)	25.14 (11.73)	83.33 (37.90)	0.14 (1.10)	42.42 (50.19)
Welfare (n=394)	23.40 (10.46)	68.44 (46.55)	0.16 (1.44)	24.47 (43.06)
Caregiver (n=458)	22.76 (10.49)	72.27 (44.83)	-0.16 (0.76)	24.43 (43.02)
Self (n=90)	22.02 (11.00)	72.97 (44.71)	-0.35 (0.38)	22.78 (42.21)
Other (n=395)	23.38 (11.01)	79.34 (40.55)	-0.01 (0.90)	29.79 (45.80)
F-statistic (p-value)	4.50 (<.0001)	6.81 (<.0001)	3.10 (0.003)	1.52 (0.15)

Table 3

Multilevel Multivariate Associations of Referral Source and Socio-Demographic Characteristics and Impairment Scores

	CIS Total (N = 3629) Beta	Absences (N = 3149) Beta	Suspensions (N = 1718) Beta	Academic Failure (N = 3448) Beta
<u>Age</u>	-0.32 *	0.05	-0.03 *	0.02
<u>Race</u>				
Black	-1.45 *	0.02	0.26 *	0.05
Latino	-1.84 *	0.21	0.07	0.20
Other	-1.76 *	0.20	0.03	0.16
White	REF	REF	REF	REF
<u>Sex</u>				
Female	0.74 *	0.34 *	0.00	-0.31 *
Male	REF	REF	REF	REF
<u>Enrollment Cohort</u>	-0.32	-0.04	-0.04	-0.00
<u>Referral Source</u>				
Caregiver	0.46	-0.08	-0.00	-0.18
Justice	-0.03	0.50 *	0.19 *	-0.13
Mental Health	1.74 *	0.06	0.02	0.07
Other	0.85	0.23	0.09	-0.05
Physical Health	3.05	1.18	0.23	0.81 *
Self	-0.18	-0.00	-0.22	-0.28
Child Welfare	-0.19	-0.31	0.11	-0.26
School	REF	REF	REF	REF
<u>Year of SOC Intake</u>	-0.34	-0.03	0.02	-0.07
<u>Income</u>				
At or Below Poverty Line	-1.47 *	0.24 *	0.03	-0.11
Above Poverty Line	REF	REF	REF	REF
<u>IEP Status</u>				
On IEP	2.23 *	0.02	0.08	-0.18 *
Not on IEP	REF	REF	REF	REF
<u>Insurance Status</u>				
Private Insurance	0.99 *	-0.16	-0.00	-0.07
Other Insurance	REF	REF	REF	REF

Note: Multi-level analyses clustered by SOC site

* $p < .05$