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Teacher perspectives on indicators of adolescent social and emotional problems

Jennifer Greif Green¹, Jennifer Kras Keenan¹, Javier Guzmán¹, Suzanne Vinnes¹, Melissa Holt¹, and Jonathan S. Comer²

¹Boston University, School of Education

²Florida International University, Department of Psychology

Abstract

Teachers are a primary source of referral to mental health services for children and adolescents. However, studies find that students identified by teachers differ from those identified by standardized screening scales. This suggests possible discrepancies in conceptualizations of student emotional and behavioral challenges. The current article describes results of a study that explores how teachers conceptualize the emotional and behavioral challenges of adolescents. Middle and high school teachers across the U.S. were identified using a stratified random sampling process and recruited for participation. Twenty-nine teachers (26% of those recruited) were interviewed and asked to describe markers that indicated to them that a student was experiencing emotional and behavioral challenges. Themes in teacher responses were identified and coded. Teachers identified multiple, diverse markers that they perceived were indicators of emotional and behavioral challenges among their students. Markers described by teachers were compared to those typically measured by standardized screening scales. Discrepancies between markers identified by teachers and screening scales are highlighted as potential areas for professional development and enhanced school-based intervention efforts. These findings underscore the importance of integrating teacher perspectives in understanding the referral process for students.

Keywords

Emotional Behavioral Disorders; Teachers; Adolescents; Mental Health; School

Researchers and policymakers increasingly recognize that teachers can serve in critical key informant roles to identify students with emotional and behavioral disorders (Eklund &

Contact Information:

Jennifer Greif Green, School of Education, Boston University, Two Silber Way, Boston, MA 02215, jggreen@bu.edu, 617-353-3253 (phone), 617-353-3206 (fax)

Jennifer Kras Keenan, School of Education, Boston University, Two Silber Way, Boston, MA 02215, jkras@bu.edu

Javier Guzmán, School of Education, Boston University, Two Silber Way, Boston, MA 02215, jaguzman@bu.edu

Suzanne Vinnes, School of Education, Boston University, Two Silber Way, Boston, MA 02215, svinnes@bu.edu

Melissa Holt, School of Education, Boston University, Two Silber Way, Boston, MA 02215, holtm@bu.edu

Jonathan S. Comer, Center for Children and Families, Florida International University, 11200 S.W. 8th Street, Miami, FL 33199, jocomer@fiu.edu

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Dowdy, 2014; Farmer, Burns, Phillips, Angold, & Costello, 2003; Institute of Medicine, 2002; Jensen et al., 2011; President's New Freedom Commission on Mental Health, 2003; Reinke, Stormont, Herman, Puri, & Goel, 2011). In particular, schools have access to youth who do not typically enter other mental health service settings (Slade, 2002) and, as such, teachers can contribute to reducing inequities in mental health service access by connecting students with service providers (Cummings, Ponce, & Mays, 2010). Epidemiological studies find that up to 40% of youth meet 12-month criteria for an emotional or behavioral disorder (Kessler et al., 2012), yet most receive no mental health services (Merikangas et al., 2011). Further, rates of disorders are higher among youth living in low-income than high-income neighborhoods (Xue, Leventhal, Brooks-Gunn, & Earls, 2005). Increasing the efficiency and effectiveness of referrals for mental health services in schools has the potential to decrease the duration of unmet needs and facilitate early intervention (Farmer et al., 2003).

Students with mental health needs are typically identified in schools through one of two pathways (Eklund et al., 2009). First, schools rely on key informants (e.g., teachers, paraprofessionals, coaches) who interact with students on a daily basis, to observe and identify students with emotional or behavioral challenges and initiate referrals for mental health services. Second, schools collect data, using both universal screening tools and administrative records (e.g., office disciplinary referrals) that have the potential to identify students who might benefit from mental health support and services. Studies comparing these two methods indicate that teachers naturally identify a different subset of youth as needing mental health services than those who are identified by mental health screening tools (Cunningham & Suldo, 2014; Eklund et al., 2009; Eklund & Dowdy, 2014). These discrepancies might reflect gaps in teacher training, or the difficulty of observing and responding to particular profiles of mental health problems. Alternatively, discrepancies might suggest that the ways that teachers conceptualize emotional/behavioral problems and identify the types of challenges that require mental health services is meaningfully different from the conceptualization underlying most mental health screenings.

Teacher identification

Despite teachers identifying a different subset of youth than mental health screenings, studies suggest that for many children and adolescents, teachers might be the first adults to detect emotional and behavioral disorders (Paternite & Johnston, 2005). In addition, teachers indicate that they spend substantial time providing emotional support to students (Roeser & Midgley, 1997). Therefore, teachers have the potential to serve effectively in the role of key informant because they can observe change in behavior over time and detect atypical behavior in the context of typically behaving peers. In addition, because of their relationships with students and families, teachers might be some of the most effective people to connect youth to mental health providers; there is evidence to suggest that their encouragement of families to seek mental health services can contribute to reducing ethnic/racial disparities in service access (Alegría, Lin, Green, Sampson, & Kessler, 2012).

However, most teachers report little or no training in identifying and responding to student mental health needs (Reinke et al., 2011; Walter, Gouze, & Lim, 2006). There are a number of programs designed to explicitly train teachers to effectively identify signs of emotional

and behavioral disorders in youth (for example, Mental Health First Aid [Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010]; Question, Persuade, Refer [Wyman et al., 2008], Typical or Troubled [***Daly, 2010, December 3], At-Risk for Middle School Educators and At-Risk for High School Educators [<https://www.kognito.com/products/pk12/>]), but these programs have not been universally disseminated, which leaves many teachers to rely on their own prior training or judgment. Identification of youth with emotional and behavioral challenges by teachers can therefore be idiosyncratic and dependent on individual and situational factors, such as teacher knowledge and attitudes about mental health, teacher-student relationships, and the quality and efficiency of the school's referral process (Stiffman, Pescosolido, & Cabassa, 2004).

Furthermore, researchers have consistently documented inequities in mental health services access for youth with emotional and behavioral disorders. Unequal services access is associated with factors including symptom type (e.g., children with behavior disorders more often receive mental health services than those with internalizing disorders), ethnicity/race (non-Latino white students more often receive services than their ethnic/racial minority peers), and gender (studies document gender-related differences in service access as a function of symptoms type; Merikangas et al., 2011). In part, these disparities reflect referral decisions by adults. Indeed, there is considerable evidence that key informants under-identify less-observable disorders, such as anxiety disorders (Bramlett, Murphy, Johnson, Wallingsford, & Hall, 2002). There is also evidence that teachers over-identify emotional problems among some ethnic/racial minority youth (Chang & Sue, 2003). When teachers systematically under- or over-identify students as having emotional and behavioral problems, these trends can feed disparities in treatment access.

Mental health screening

In addition to relying on teacher identification, some schools collect data, for example office discipline referral data, to identify students needing supports (Horner et al., 2009; Pas, Bradshaw, & Mitchell, 2011). Schools also use multiple gating procedures, informant rating scales, and universal self-report mental health screenings to identify youth with mental health needs (e.g., Chin, Dowdy, & Quirk, 2013; Columbia University TeenScreen Program, 2009; Glover & Albers, 2007; Husky, Sheridan, McGuire, & Olfson, 2011; Lane et al., 2009). For schools administering tiered interventions, screening can contribute to identifying students requiring higher levels of service provision and facilitate early intervention (Doll & Cummings, 2008; Lane, Oakes, Menzies, & Harris, 2013).

School screenings are typically completed by either teachers or students themselves. Screenings that incorporate self-report data have the additional advantage of improved detection of internalizing, or less easily observable emotional problems (Lane et al., 2009). In particular, studies document discrepancies in identification of internalizing problems when relying of self-report as compared to teacher report (Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Further, some studies have found that discrepancies in teacher vs. self-reports are greater among adolescents than younger children, perhaps because behaviors among younger children are more likely occur be in the presence of teachers (De Los Reyes & Kazdin, 2005). As such, self-report assessments of internalizing problems

among adolescents are a particularly powerful tool. For example, one of the largest systematic studies of mental health screener administration to-date (Husky et al., 2011) found that one-fifth of students completing mental health screenings were identified as needing mental health services, yet only one-quarter of these youth were already receiving services. This suggests that in the absence of screenings, a substantial percent of students who need services might not be identified.

Many schools participate in anonymous universal data collection, which provides information about the overall landscape of mental health needs in schools (e.g., the Youth Risk Behavior Surveillance Survey). Still, the use of non-anonymous screening procedures that identify specific students who might need mental health services is relatively limited in the US (Husky et al., 2011; Romer & McIntosh, 2005) for several reasons. First, although some screenings are free or low-cost, others have a high up-front cost because they require schools to both process school-wide screening data and also fund follow-up interviews (Kuo, Stoep, McCauley, & Kernic, 2009). Second, screenings take time from other school activities and use personnel resources (Dowdy, Doane, Eklund, & Dever, 2013). Third, studies of school-based screenings have found nontrivial refusal rates from parents (Husky et al., 2011). Parents might choose to limit school involvement in mental health service provision or might have concerns about confidentiality when mental health screenings occur in a school context (Weist, Rubin, Moore, Adelsheim, & Wrobel, 2007). Finally, identifying students using a screening raises a series of ethical questions, such as ownership of the data and requirements for the school to provide specific resources to respond to students who are identified by the screening.

Although screening procedures are gaining traction in the US (Dowdy, Ritchey, & Kamphaus, 2010; Dowdy et al., 2014; Lane, Oakes, & Menzies, 2010), one study indicates that even among teachers, a different subset of students are identified via teacher informant screening surveys than those that teachers list as being most in need of mental health services (Dowdy et al., 2013). In particular, Dowdy et al. (2013) found that the standardized teacher screening identified 15.3% of elementary and middle school students as “at-risk,” compared to only 9.7% who were identified based on teacher nomination. This finding suggests that standardized screenings have the potential to detect students who might not otherwise be referred for services. Further, there is reason to believe that standardized screening approaches have the potential to reduce disparities in service access, because they might not be as susceptible to reporting bias as reliance on key informant perceptions alone. For example, Dever et al. (2016) found that demographic variables (e.g., race/ethnicity, gender, age) accounted for 1.2% of the variance in being screened as “at-risk” based on a standardized screening scale, but the same demographic variables accounted for 7.2% in the variance in special education placement (which was largely based on key informant referrals). Although demographic variables accounted for some variability in both identification methods, the lower degree of variability based on identification by standardized screening provides some support for this method. Understanding discrepancies in these two identification methods can inform the direction of research and practice to better align the two approaches, with the goal of optimizing the identification of youth who are most in need of services.

Current research

Identifying the true group of youth with emotional and behavioral problems is an imperfect science, and schools might most effectively identify youth by using a hybrid of methods and understanding where they converge. The current article describes a study designed to explore how teachers conceptualize mental health needs among youth. First, we used interviews to identify markers that teachers perceive to be most important in determining whether students are experiencing emotional and behavioral challenges. Second, our research team coded interview responses to determine the extent to which teacher-derived markers align with indicators assessed in standardized screenings. We focus specifically on adolescents because of increased rates of emotional and behavioral challenges among this age group (Merikangas et al., 2010), at the same time that detecting those problems in schools becomes more complex because older students often have larger class sizes and reduced involvement with adults.

Method

Participants

Twenty-nine teachers from across the US participated in semi-structured interviews. To select teachers for interviews, we used a stratified random-sampling approach. School names were downloaded from the US Common Core Dataset of Public Elementary/Secondary Schools (years 2009–2010), a database of all public schools in the US (> 100,000 schools) (U.S. Department of Education, 2010). School location was stratified using the four Census region categories (Northeast, Midwest, South, West) and a variable in the Common Core dataset indicating locale (City large, City mid-size, City small, Suburb large, Suburb mid-size/small, Town fringe, Town distant/remote, Rural fringe, Rural distant/remote). Within each region, we selected one school in each category of locale, with the exception of City large, which we oversampled by selecting five schools. In total, this method led to the recruitment of teachers from 52 schools (13 schools in each of 4 regions). Once schools were selected, we determined whether 1) the school had a website and if so, then 2) if the schools posted a publically available list of teacher email addresses. Schools were excluded if there were no websites or if email addresses were not publically available. When email addresses were publically available, we selected the first teacher of an academic subject area on the list for recruitment. Of the 109 teachers who were “cold” contacted, 29 completed a phone interview (26.6%). Selected teachers were contacted by mail and then by email, with an invitation to participate in a 30-minute phone interview. Participants were sent a \$30 gift certificate as compensation for their participation. Because our recruitment relied on mail and email, we were unable to distinguish refusers (those who received our recruitment material and chose not to respond) from teachers who did not receive the recruitment materials.

The final sample consisted of teachers who worked in all four regions of the country (15 different states), with at least one teacher from each of the nine locale categories. Teachers were primarily female (59%), and the average age was 42.9 years old ($SD=11.9$). Over half taught high school (grades 9–12, $n=16$), the remainder taught middle school (grades 6–8, $n=13$). The majority of teachers taught English ($n=11$) or math ($n=6$) and reported an

average of 14.3 (SD=9.3) years of teaching experience. (See Table 1 for participant and school sample characteristics.)

Procedures

Study procedures were approved by the University Institutional Review Board. All participants received an email with a description of the study and an informed consent document. The study was described as a “study of how teachers work with students who might be having problems that are non-academic in nature (e.g., stress, acting out, sadness).” All participants provided verbal consent prior to beginning the phone interview. Participants were asked two broad questions: First, “I have some questions about working with students who are having problems that are non-academic in nature, like emotional or adjustment problems. When I ask about emotional problems, I am asking about students who are experiencing more than the normal ups-and-downs of adolescence and whom you think might benefit from additional support or help for those problems. What signs tell you that a student might be having an emotional problem or be in emotional distress?” Second, “How do you draw the line between being not concerned about a student and being concerned?” Responses to these two questions were combined for analysis. Follow-up questions and probes were used to obtain a deeper understanding of teacher experiences including encouragement to provide multiple markers (e.g., “Are there other signs that you see?”) and questions to clarify markers that were identified (e.g., “What does [behavior mentioned] look like in your classroom?” or “Can you give me an example of a situation where a student engaged in [behavior mentioned]?”). All interviews were transcribed by one of four research assistants. A second member of the research team listened to the audio recording and checked the transcripts to verify their accuracy.

Second, we compared each of the teacher-derived markers with items included in standardized mental health screenings frequently administered to teachers. We selected the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 2001), *Behavioral and Emotional Screening System* (BESS; Reynolds & Kamphaus, 2002), *Achenbach Teacher Report Form* (TRF; Achenbach, 1991), and *Student Risk Screening Scale* (SRSS; Drummond, 1994) because of their frequent administration in research and practice to identify youth emotional and behavioral disorders. We also compared the teacher-derived markers to a list of “Action Signs” that were identified by Jensen and colleagues (2011) as essential warning signs to help key informants recognize youth with unmet need for mental health services.

Data analysis

Analysis of teacher interviews was conducted using grounded theory (Glaser & Strauss, 1967; Hallberg, 2006). The goal of this analysis was for researchers to identify themes that emerged in the data from teacher interviews. Several members of the research team began with first-stage open line-by-line coding of approximately 20% of transcripts. Codes were discussed and compared over the course of several meetings. We then looked for relationships between categories and identified a set of higher-level and lower-level categories. We developed a codebook with a description and example of each category. Two research assistants independently read the interview transcripts and coded responses into the categories identified. A small number of interviews were coded at a time so that coding

decisions could be discussed, and any discrepancies resolved by a third rater. Responses could be coded in more than one category. New codes emerged as coders read through transcripts and, as a result, all transcripts were coded a second time, using the new code structure. Through this iterative process, saturation was achieved where the coders no longer identified new codes. We also continued to collapse similar codes, because of their conceptual overlap. In the final round of coding, the two independent coders agreed on 92.6% of their codes ($\kappa = .794$). This coding process resulted in the identification of 26 unique markers that teachers reported as indicators of student emotional problems.

To identify the association of markers identified by teachers with indicators assessed by standardized screening scales, the first and second author independently coded whether each of the items on the standardized measure reflected one or more of the 26 teacher-derived markers identified previously. These two independent coders agreed on 90.0% of their codes, $\kappa = .797$. Where there was disagreement, researchers came to consensus through discussion.

Results

Teacher-derived markers

Teachers' descriptions of identifying students with emotional and behavioral challenges revealed a wide variation of markers. Each teacher identified several markers, many provided stories of students with emotional problems in their classes, and some articulated challenges in determining whether to be concerned about students. Each of the 26 unique markers is described in Table 2 along with the frequency of its mention and a sample quote.

Comparison to standardized screening

A comparison of teacher-derived markers to standardized screeners indicated moderate consistency between these two identification strategies. In particular, poor academic performance, social withdrawal, violation of classroom norms, aggression with peers, sadness, stress or anxiety, and somatic symptoms were mentioned by teachers and included in at least four of the five standardized assessments. (Table 3) Teachers, however, also mentioned several markers that were not commonly included in standardized assessments. Most notably, teachers frequently reported relying on their perceptions of change in student behavior, tracking the duration of problems, as well as observing student crying, inappropriate reactions to teachers, and spontaneous acting out, all of which were rarely included in standardized assessments. Across the five standardized assessments evaluated, an average of only 11.4 of the 26 teacher-derived markers were included (i.e., 44% of the teacher-derived markers). However, the extent to which there was overlap between the teacher-derived markers and standardized assessment varied. In particular, the BESS and SRSS, which are both short screening systems, included only 26.9–30.8% of the teacher-derived markers. The SDQ, also a brief omnibus measure of social-emotional strengths and challenges included just over one-third of the teacher-derived markers (34.6%). In contrast, the Action Signs were more closely aligned with the teacher-derived markers, with 50% of markers in common. Finally, the much lengthier TRF, which is designed to comprehensively

assess a range of social and emotional problems, included 76.9% of the teacher-derived markers.

In addition to teacher-derived markers that were not included in the standardized assessments, there were also a number of constructs assessed by the standardized assessments that were never or rarely mentioned by teachers. For example, standardized screenings often assess signs of anxiety (e.g., nervousness, stress, somatic symptoms), inattention/distractibility, and peer rejection. Although these topics were mentioned by some teachers, they were described infrequently in the current sample.

Discussion

As teachers are increasingly called upon to serve as key informants for identifying students with emotional and behavioral problems, understanding their perspectives and training needs is critical to improving the accuracy and efficiency of mental health referrals. With limited mental health funding in schools, effectively leveraging teacher perspectives can be an important resource (Atkins, Hoagwood, Kutash, & Seidman, 2010). Findings from this study contribute to understanding teachers' perspectives on student emotional and behavioral disorders that might provide useful information about how adolescents with mental health needs are identified in schools and how decisions are made about referrals for services.

Several indicators of emotional distress identified by teachers are particularly notable. First, when teachers were asked to generate markers that indicate student emotional distress, they most often described relying on academic indicators. This result is consistent with findings from prior research suggesting that student academic struggles are the greatest predictor of mental health service use (Bradshaw, Buckley, Ialongo, 2008). Second, teachers placed a high value on indicators of change over time. The frequent mention of indicators of change in the current study suggests that teachers might be more attuned to dramatic alterations in student behavior over the course of the year than static markers that something is wrong. In this way, teachers might have an advantage over pediatricians and mental health professionals who tend to interact with a student for a brief period of assessment and rely on others who have longer histories of interaction with students to provide context for behaviors.

Third, teachers described using their intuition to identify students in emotional distress. While their description of intuition might have reflected difficulty in articulating specific observable behaviors, or a general desire to empathize with and care for students, it is also possible that teachers are accessing intangible information about student emotional wellbeing that cannot easily be measured by standardized mental health screenings (Dwyer, Nicholson, & Battistutta, 2006). The extent to which teacher intuition is accurate is unclear, but intuition is likely highly inconsistent. The finding that teachers describe their intuition to be an important source of information suggests that teacher trainers might benefit from being attuned to this strategy, so that they can dispel myths about mental health. This might be particularly important in the delivery of information that may be "counter-intuitive" (e.g., recognizing somatic symptoms, which teachers might tend to attribute to health problems).

Fourth, many teachers spoke about receiving and seeking information directly from students, as well as from other sources. In some cases, other sources of information were additional gatekeepers in the school (e.g., other teachers, nurses), however, some teachers were resourceful in their search for information about student emotional wellbeing (e.g., listening in to student conversations with peers, reading blogs). These comments raise questions about whether mental health providers should specifically query about whether teachers have acquired information from third parties who have expressed concern about the student, or from alternative information sources. Further, it raises questions about whether teachers should be encouraged to seek such information and, if they do, how should they validate and interpret information that they acquire.

In general, many of the markers identified by teachers were related to student functional impairment, rather than specific symptom profiles. For example, teachers described indicators of academic functioning, social withdrawal, and absenteeism/ tardiness. This pattern suggests that it might be more effective to ask teachers how students are performing in their class – academically, behaviorally, socially – than to ask them about symptoms that students might be experiencing. This, however, poses a particular challenge when asking teachers to identify internalizing problems, which tend to be less observable, particularly among adolescents (De Los Reyes & Kazdin, 2005).

To address the second study aim, we compared the teacher-derived markers to standardized mental health screenings. Not surprisingly, there was a higher degree of overlap between teacher-derived markers and longer standardized screenings (e.g., the *Teacher Report Form*) than brief screeners. In general, there was moderate consistency between these two identification strategies, however, there were important areas of divergence. In particular, as noted above, teachers placed a high value on indicators of change over time, a finding that is consistent with research on teacher detection of suicidal behaviors (Nadeem, Kataoka, Chang, Vona, Wong, & Stein, 2011). Although the *Teacher Report Form* included one question about change (“Sudden changes in mood or feelings”), this item does not capture the range of change described by teachers in their interviews, and also this item alone does not flag a child as needing a referral. Moreover, teachers may not use this item to characterize substantial changes in a student across time, but rather may use this item to characterize momentary emotional displays and outbursts. The other standardized screenings that we reviewed asked only about the presence or absence of symptoms, without inquiring about whether those symptoms reflected change over time. Change was, however, identified by Jensen et al. (2011) in their list of Action Signs and the description they include is consistent with the results of the current study: “Drastic changes in your behavior or personality.” Notably, Jensen and colleagues (2011) identified Action Signs by reviewing results from standardized interview protocols and then supplemented those results with focus group discussions. The inclusion of change was one of only two action signs added after input from those focus groups (Jensen et al., 2011).

The current study has several limitations. First, results are based solely on teachers’ descriptions of markers that they perceive to be important indicators of student emotional problems using interview questions that have not been previously validated. We have no information about whether teachers actually used the markers they describe to identify and

support students. Second, we asked specifically about “emotional” problems, but not “behavioral” or “social” problems. It is, however, notable that several of the markers identified by teachers were focused on behavioral and social challenges. Future studies of teacher perceptions should consider asking about specific disorders (e.g., ADHD, generalized anxiety disorder, depression). Although teachers are not diagnosticians, many have at least general knowledge of these specific disorders and asking more specific questions might highlight markers that were not elicited in the general question here about “emotional or adjustment problems.”

Third, all teachers were recruited from US public schools in public school districts, as those are the schools included in the US Common Core of Data. However, according to the US Department of Education, approximately 10% of US students attend private schools (<https://nces.ed.gov/fastfacts/display.asp?id=65>). Private schools might have greater resources in terms of mental health service accessibility and smaller student-teacher ratios, which are school characteristics that could influence teacher identification and referral decisions. Fourth, approximately one-quarter of recruited teachers participated in interviews. Additional schools were identified that did not publish public lists of teacher email addresses and therefore could not be included in our recruitment efforts. The 26% response rate reflects only those teachers who were sent emails and therefore likely underestimates total selection bias in the sample. In addition, as we engaged in “cold” contacts, we do not know how many teachers never received our email (perhaps because they left their school or the message went into a spam mailbox). Although we used a broad description of the study in our recruitment materials and, for example, did not use the word “mental health,” it is likely that the teachers most interested in this topic were those who responded to our inquiries. There were certainly some teachers who indicated in interviews that they did not believe that addressing student emotional wellbeing was part to their job description, but the majority of teachers in the sample indicated that they were invested in supporting the emotional needs of their students. Additional research is needed with larger samples and from multiple sources (teachers, students, mental health service providers) to determine the extent to which teachers use the strategies they describe, whether they effectively identify students with mental health needs, and whether results generalize to the larger population of teachers.

Conclusions and Recommendations

The focus of this study was on teachers of adolescents, a sample that has traditionally been absent from studies of teacher identification of youth with emotional and behavioral problems. Teacher identification of adolescents might be particularly challenging because students typically rotate between classes in middle and high school, often resulting in reduced monitoring and less intense interactions with specific adults. Some teachers who were interviewed described challenges with detecting students in emotional distress because of the large number of students in their classes. On the other hand, exposure to multiple teachers might increase the likelihood that any single teacher will identify a student in distress. Given the variability in strategies described by teachers, increased exposure to different adults might be a benefit to students.

Future directions for research include investigating whether standardized mental health screenings completed by teachers could be better aligned with the strategies described by teachers in these interviews. For example, standardized screenings might make better use of teachers' strengths if they ask specifically about changes observed over time and more subtle shifts in student behavior. The practice of developing and validating standardized screenings with youth and then modifying the wording to develop a teacher report form might be particularly problematic for capturing the types of strategies used by teachers. Furthermore, given the focus of teachers on student impairment, future research might instead use signs of functional impairment as a foundation for measurement tools. There are several established measures of child impairment that might be useful in these efforts (e.g., Fabiano et al., 2006; Whiteside, 2009).

We also recommend that researchers consider how standardized screenings, teacher identification, academic data (e.g., performance, absences, suspensions), and student self-report can be effectively integrated and leveraged to most effectively identify youth in need of mental health service. Ultimately, relying on any one of these methods alone is likely to lead to under-identification of students with emotional and behavioral problems. Further, all of these methods have the potential to under- or over-identify particular segments of the student population (e.g., by race/ethnicity or gender). Identifying how these measures can be used in synchrony and how they collectively can reduce disparities in unmet need for mental health services should be a top priority.

There are several implications of this study for mental health providers working to support adolescents with emotional and behavioral disorders within schools or in collaboration with schools. First, results indicate the importance of understanding how teachers conceptualize and respond to emotional and behavioral challenges in their classes. Large-scale data from national samples can identify patterns and correlates of teacher identification of emotional and behavioral challenges among students. However, it might also be helpful to collect local data to identify the most common challenges identified by teachers and to inform school practice. In particular, mental health providers involved in training and supporting teachers in their identification of students might begin by determining the strategies already used by teachers and use information about those strategies to provide complementary information about indicators for which teachers are less attuned. Meetings where teachers and mental health providers can jointly discuss concerns about students are another way to provide opportunities for teachers to share how they perceive students with emotional and behavioral challenges, as well as how their perceptions may (or may not) converge with those of mental health providers. Such meetings could also provide mental health providers a chance to more deeply understand how individual teachers make referral decisions. Mental health providers can use that information to adjust in-house referral tools, provide feedback to teachers when appropriate, and enhance their understanding of needed supports in the school. In particular, such discussions have the potential to illuminate and ultimately reduce potential biases (e.g., related to gender or race/ethnicity) in teacher identification of youth with emotional and behavioral challenges.

Second, findings suggest that although teachers are most consistent in their attention to academic outcomes, they vary in other strategies used to identify students with emotional

and behavioral disorders. Mental health providers can work with teachers to increase the range of signs that they recognize as markers of emotional problems therefore enhancing the effectiveness of their identification of students. In particular, attention to how teachers conceptualize externalizing problems might be important to ensure that students with behavior problems are referred for appropriate support services. Relatedly, when teachers are asked to identify students in need of services using a screening measure, it might be beneficial to provide them with definitions of emotional and behavioral challenges, prior to their ratings. As an example, research on parent ratings of ADHD indicate that providing mothers with videos and instructional material improves agreement between mother and coder ratings of ADHD in some samples (Johnston, Weiss, Murray, & Miller, 2011). Similar materials for teachers might increase teacher knowledge of emotional and behavioral problems and improve the accuracy of their identification. Considering the relationship between observable functional impairment and symptoms that are less observable might further aid teachers in understanding the influence of emotional and behavioral challenges on classroom behavior.

Finally, there are a small number of training programs that have been developed to improve teachers' detection of students for referral for mental health services. Although the research on these programs is limited, evidence suggests that they improve student access to mental health services (Wyman et al., 2008). Broadening the dissemination of these programs and further researching their effectiveness is an important next step for improving the accuracy of teacher identification and referral of students.

There are many reasons that schools may be hesitant to systematically collect data on student mental health including lack of buy-in from stakeholders, cost, and concern about over-burdening mental health service providers. Indeed, findings suggesting that 20% of youth who complete screening measures need mental health services (e.g., Husky et al., 2011; Merikangas et al., 2011) might raise concerns for schools in which resources are already overtaxed. However, the cost of untreated mental health problems is even higher (Insel, 2008), and youth who receive no early treatment might require more intensive and costly services than those provided by schools (Costello, Copeland, Cowell, & Keeler, 2008). Presumably schools will ultimately save money if they engage in effective prevention, early identification, and treatment efforts (Chatterji, Cafray, Crowe, Freeman, & Jensen, 2004). Furthermore, researchers have documented substantial associations between mental health and educational outcomes (Breslau, Lane, Sampson, & Kessler, 2008; Porche, Costello, & Rosen-Reynoso, 2016), which make clear that schools will not be able to meet their educational goals if they do not address the mental health needs of students. Teachers are already involved in these efforts; ensuring that they have the preparation and resources to serve effectively in support roles and to collaborate with mental health providers is necessary to improve services for students.

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Table 1.

Description of Teacher Participants

Characteristic	Teachers (N = 29)
	Number (%) / Mean(SD)
<i>Gender</i>	
Male	12 (41.3%)
Female	17 (58.6%)
<i>Grades taught</i>	
6	2 (6.9%)
7	6 (20.7%)
8	7 (24.1%)
9	12 (41.4%)
10	11 (37.9%)
11	11 (37.9%)
12	13 (44.8%)
<i>Subjects Taught</i>	
English	11 (37.9%)
Social Studies	4 (13.8%)
Math	6 (20.7%)
Science	3 (14.3%)
Art	1 (3.5%)
Foreign Language	3 (14.3%)
Comp Science	2 (6.9%)
Other	4 (13.8%)
<i>Years teaching</i>	<i>M = 14.3 (SD = 9.3)</i>
<i>Number of students</i>	<i>M = 108.2 (SD = 43.8)</i>

Table 2:
Teacher-Derived Markers of Student Emotional Distress and Frequency of Mentions in interviews

Marker	Definition	Example	Frequency n (%)
Poor academic performance	Grades dropping, failure to complete or turn in assignments, lack of engagement during class	"[They] don't really care to turn anything in; they don't look at the repercussions of not doing their work."	23 (79.3%)
Social withdrawal	Quiet, keeping head down, avoiding eye contact, staying away from friends or peers	"I've had a few students who will actually choose to sit away from everybody else, and it's usually because they're having some issue going on."	22 (75.9%)
Marked change	A marked or significant change in students from the beginning of the school year, or a sudden change in student behavior	"I guess the big concern for me is just a big change in behavior. A student who is really quiet and suddenly sullen, when normally they're animated or engaged."	20 (69.0%)
Duration of problems	A pattern of problems being repeated or extended over a period of time	"When it's repeated and not just one day. Maybe they are just in a bad mood that day. But when it's repeated day after day for multiple weeks, there's likely something wrong."	14 (48.3%)
Norm violation	Behaviors that broke rules or violated the norms of the classroom.	"Things that fall outside the norm for that class in terms of whether it's their study skills, their emotional behavior, the quality of their work, all those things are sort of red flags for me to look at...it's surprising if they seem to have sort of disregarded the norms of the classroom with their behaviors."	14 (48.3%)
Crying	Crying or tearfulness	"Kids outside crying in the hall is usually a pretty good indicator."	12 (41.4%)
Inappropriate reaction to teacher	Students reacting inappropriately to teacher directions, or reported that students has a disproportionate response to a redirection	"The way they react when they're redirected...I think of students who are quick to become emotional and when I ask them to get back on track, their reaction will sometimes be really loud, or sometimes they'll shut down altogether...just from a simple redirection."	12 (41.4%)
Spontaneous acting out	Intense emotional outbursts or acting out, seemingly without provocation	"Just getting upset, frustrated, and start to scream out from time to time...it's just out of the blue. Sometimes they'll get frustrated, ripping up paper or storming out of the room and screaming, that kind of thing."	10 (34.5%)
Teacher intuition	Relying on the teacher's own intuition to identify when students were in emotional distress	"You get, it's almost like a teacher 'spidey' sense that I get when a kid is just having a bad day or when a kid is consistently having a bad time."	10 (34.5%)
Other sources	Teachers learning of student emotional problems from other people.	"Often times I will receive notices from the administration, from the counseling office, or from the students' parents themselves."	10 (34.5%)
Aggression with peers	Bullying, fighting with peers	"All of a sudden they were becoming very aggressive or very short-tempered, and they seemed to be lashing out, not just at the teachers around them, but even their	9 (31.0%)

Marker	Definition	Example	Frequency n (%)
Absenteeism/tardiness	missing class, coming in late, leaving class	“Towards the middle and the end of the school year she started being absent a lot...when I first started noticing this I say, 'hey, what's going on? Why are you absent so much?' ...she actually disappeared from school...she wasn't missing, she just stopped coming to school for about two weeks.”	7 (24.1%)
Confiding	Being directly approached by a student to talk about a problem	“I've even had some students that have come to me and said, you know, 'Can I talk to you? I've got an issue that I really need to deal with it, and I just need someone to listen.'”	5 (17.2%)
Self-harm	Self-injury, cutting	“The things that are serious indicators...that would signal instantaneous and immediate alarm and a need to get...other agencies involved...are obvious signs of cutting.”	5 (17.2%)
Appearance	Disheveled clothes, poor hygiene	“I had a student he would come to class and he just had very bad hygiene. He wouldn't cut his nails and he just – just no type of hygiene”	4 (13.8%)
Asking to leave class	Asking to see the counselor, nurse, or to use the restroom	“The person that always wants to go to the guidance counselor – you know – three, four times a week during class, they're late – I need to go to the guidance counselor, I'm late because I came from the guidance counselor, I need to go to the nurse, I need to go talk to the principal.”	3 (10.3%)
Coursework	Signs in the content of writing, journals, art	“People drawing knives and violent scenes. Yeah that in particular and gang tags and written things like that. Also notes, so like verbal or written words.”	3 (10.3%)
Eating disturbance	Over-eating, under-eating	“Eating habits, sometimes I don't get to the cafeteria very often, but sometimes in observation, I notice where a kid doesn't eat... and so or a friend might report that so and so isn't eating.”	3 (10.3%)
Sadness	Seeming unhappy, sad, down, upset	“They are just down and low.”	3 (10.3%)
Hyperactivity	Restless, unable to sit still	“Figuratively speaking, bouncing off the walls.”	2 (6.9%)
Intensity	Crisis, very intense behavior	“Well I think I look at the duration of the symptoms and the intensity of the symptoms.”	2 (6.9%)
Drug or alcohol use	Using substances	“The student might appear to be- might look as though he or she has smoked a joint during lunch break or something. Gone off campus and vibed or something.”	2 (6.9%)
Stress or anxiety	Stress, worry, nervousness	“The kinds of behavior that might interrupt their learning are more stressors from high expectations of themselves”	2 (6.9%)
Signs of neglect	No season clothes, bruising, lack of resources (food, glasses)	“The child who didn't have glasses, obvious signs of neglect, obvious signs of being beaten or otherwise abused at home, clearly a child who's hungry all the time or a child who doesn't have the proper clothing to wear	1 (3.4%)

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Marker	Definition	Example	Frequency n (%)
Somatic symptoms	Shaking, throwing up, headaches	for the season or something like that.” “When they start complaining of ailments, it usually isn’t that they’re actually sick, it’s that there’s something else going on.”	1 (3.4%)
Attention seeking	Behaviors with the specific goal of obtaining attention from either peers or teacher	“It’s more like acting out to get attention”	1 (3.4%)

Table 3. Comparison of Teacher-Derived Markers Indicating Student Emotional Distress and Standardized Mental Health Screenings

	SDQ ¹	BESS ²	TRF ³	Action Signs ⁴	SRSS ⁵
Poor academic performance		X	X	X	X
Social withdrawal	X	X	X	X	X
Marked change			X	X	
Duration of problems			X	X	
Norm violation	X	X	X		X
Crying	X		X		
Inappropriate reaction to teacher			X		X
Spontaneous acting out	X		X		
Teacher intuition					
Other sources					
Aggression with peers	X		X	X	X
Absenteeism/tardiness			X		
Confiding					
Self-harm			X	X	X
Appearance			X		
Asking to leave class					
Coursework					
Eating disturbance			X	X	
Sadness	X	X	X	X	X
Hyperactivity	X		X	X	
Intensity			X	X	
Drug or alcohol use			X	X	
Stress or anxiety	X	X	X	X	X
Signs of neglect					
Somatic symptoms	X	X	X	X	
Attention seeking		X	X		
% Overlap	34.6	26.9	76.9	50.0	30.8

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- ¹ SDQ = Strengths and Difficulties Questionnaire (Goodman, 2001)
- ² BESS = Behavioral and Emotional Screening System (Reynolds & Kamphaus, 2002)
- ³ TRF = Teacher Report Form (Achenbach, 1991)
- ⁴ Action Signs described in (Jensen et al., 2011)
- ⁵ SRSS = Student Risk Screening Scale (Drummond, 1994)