

Teacher Identification of Student Emotional and Behavioral Problems and Provision of Early Supports: A Vignette-Based Study

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Abstract

Although teachers are in a key position to identify and support students with emotional and behavioral challenges, their provision of these supports is often inconsistent. The current study investigated patterns in teacher identification of student emotional and behavioral challenges, as well as their provision of supports. Participants were 172 elementary, middle, and high school teachers from a Northeastern school district who responded to two vignettes—one describing a female student with internalizing and one describing a male student with externalizing symptoms. Vignettes were randomized to be moderate or severe. Teachers rated concern for students and their likelihood of providing a series of responses and supports. Results indicated that teachers were more concerned about severe than moderate vignettes, and were more concerned about females with internalizing than males with externalizing symptoms. Middle school teachers rated vignettes as more concerning than elementary teachers, particularly the male externalizing vignette. Elementary teachers indicated that they would provide more classroom-based emotional/behavioral supports and specialty supports than middle and high school teachers; however, high school teachers more often indicated that they would reduce expectations and provide a referral for students. Implications and future research directions for work with teachers on identifying and supporting students are discussed.

Keywords

school based, teachers, externalizing, internalizing

Only one third to one half of U.S. children and adolescents with emotional and behavioral disorders receive mental health services (J. G. Green et al., 2013; Leaf et al., 1996; Merikangas et al., 2011). Unlike adults who often initiate services themselves, understanding low rates of service use by youth requires a focus on the adults, often parents and teachers, who serve in referring roles (Brown et al., 2006; Chavez, Shrout, Alegría, Lapatin, & Canino, 2010; Phillippo & Kelly, 2014; Wagner et al., 2006). For these adults, multiple interacting individual and contextual factors are theorized to influence decisions about whether and how to respond to youth presenting with emotional and behavioral challenges (Stiffman, Pescosolido, & Cabassa, 2004). For example, severity of disorders might affect referral decisions, but so might factors unrelated to student need (e.g., demographic factors), which can lead to disparities in treatment access (Stiffman et al., 2004). Prior studies of factors that influence teachers in identifying and supporting students have largely focused on elementary school teachers (Chang & Sue, 2003; M. T. Green, Clopton, & Pope, 1996; Percy, Clopton, & Pope, 1993; Weisz et al., 1989), despite

evidence that emotional and behavioral challenges increase substantially in adolescence (Merikangas et al., 2010). The current study investigates factors associated with teacher identification and responses to students presenting with emotional and behavioral challenges across elementary, middle, and high school levels.

The Role of Teachers in Identifying Students With Emotional and Behavioral Challenges

Many schools rely on individual teachers and other school staff to detect students with emotional and behavioral

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challenges (Romer & McIntosh, 2005). However, studies indicate that teachers have limited training in identifying students with emotional and behavioral challenges, and feel inadequately prepared to differentiate typical from concerning behaviors (Askill-Williams & Lawson, 2013; Gable, Tonelson, Sheth, Wilson, & Park, 2012). Without specific training in identifying student emotional and behavioral challenges, teachers are left to rely on their own interpretation of student behavior and level of need (J. G. Green et al., 2017) and, despite their best intentions, this might result in teachers under- or over-identifying students for mental health service referrals (Dowdy, Doane, Eklund, & Dever, 2013).

Several theories of behavioral health service access have been proposed to explain disparities in service referrals (Andersen, 1995; Costello, Pescosolido, Angold, & Burns, 1998). In particular, Stiffman et al. (2004) developed the Gateway Provider Model to explain the role of individuals (including teachers) who first detect problems and make determinations about youth treatment. They propose that service referrals are determined not only by the child's need (e.g., presence and severity of disorder) but also by predisposing factors (e.g., demographic factors), enabling factors (e.g., availability of services), structural characteristics (e.g., the organization and management of the system in which gateway providers operate), and the perceptions and knowledge of these factors by gateway providers. This theory suggests that understanding how teachers interpret student behavior, their level of concern for students, and their perceptions of resource availability simultaneously affect decisions to identify students as needing care.

Studying which factors most strongly influence the decision making of gateway providers is complex. As such, a number of vignette-based studies have been conducted to identify factors that are associated with decision making about mental health referrals by teachers. These studies typically present teachers with scenarios describing students with emotional or behavioral challenges, and then systematically vary characteristics of the students presented in the vignettes. Results suggest that both student problem type and demographic factors influence teacher ratings of the seriousness of problems and their reported likelihood of referral (Chang & Sue, 2003; M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010). In terms of problem type, studies generally find that teachers are more likely to report being concerned about students displaying acting-out or externalizing behavioral problems, and are more likely to refer those students for mental health services, as compared with students with internalizing problems (Chang & Sue, 2003; M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010). These vignette study results are consistent with broader research on mental health services access, suggesting that youth with externalizing behaviors are more likely

to receive services than those with internalizing symptoms (Merikangas et al., 2011).

In terms of student demographic characteristics, teachers are more likely to accurately recognize and refer vignettes of boys with externalizing problems and girls with internalizing problems, as compared with when gender and problem-type pairs are reversed (M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010). Furthermore, teachers rate internalizing behaviors as more common when rating vignettes describing Asian American students than vignettes describing peers of other races (Chang & Sue, 2003). Studies finding that referral decisions are based on demographic factors, such as gender and race, raise questions about whether characteristics unrelated to the need for services contribute to the likelihood of mental health referrals from teachers; a finding that is consistent with research suggesting that mental health service access is influenced by predisposing (or "non-need") factors (Andersen, 1995; Langer et al., 2015; Stiffman et al., 2004).

Prior studies on teacher identification, however, have focused almost exclusively on how teachers identify emotional and behavioral challenges among elementary school students (Chang & Sue, 2003; M. T. Green et al., 1996; Percy et al., 1993; Weisz et al., 1989) or, in one case, adolescents with depression (Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010). There is limited information about how identification of emotional and behavioral challenges might shift as students enter adolescence. This is a notable absence because researchers have documented the rise in rates of emotional and behavioral internalizing disorders throughout childhood and into adolescence (Merikangas et al., 2010). At the same time, students redefine their relationships with teachers in adolescence and describe placing an increasingly high value on feeling connected, cared for, and respected (Roeser, Eccles, & Sameroff, 2000). These shifts suggest that teachers might be particularly important in supporting struggling students at the middle and high school levels.

The Role of Teachers in Responding to and Supporting Students With Emotional and Behavioral Challenges

In contrast to research on identification, there have been few studies on the types of classroom-based supports typically provided by teachers to address the needs of students with emotional and behavioral challenges (for exceptions, see Gable et al., 2012; J. G. Green et al., 2016; Wagner et al., 2006). From the limited data available, it is clear that teachers generally report inadequate professional preparation and a lack of confidence in providing effective classroom-based support to students presenting with emotional and behavioral challenges (Reinke, Stormont, Herman,

Puri, & Goel, 2011; Snider, Busch, & Arrowood, 2003; Walter, Gouze, & Lim, 2006; Westling, 2010). The limited availability of relevant courses on behavior management (Allday, Neilsen-Gatti, & Hudson, 2013; Freeman, Simonsen, Briere, & MacSuga-Gage, 2014) and social and emotional problems (State, Kern, Starosta, & Mukherjee, 2011) in teacher preparation programs might partly explain limited confidence in these areas. Consequently, teachers report being unfamiliar with many of the most widely disseminated evidence-based interventions for children with emotional and behavioral challenges (Gable et al., 2012; Stormont, Reinke, & Herman, 2011).

In some studies, limited preparation to support students with emotional and behavioral challenges persists across grade levels. For example, Gable and associates (2012) found that teachers in elementary, middle, and high schools were equally likely to report that they felt unprepared to utilize the 20 evidence-based strategies measured in their study. Other studies, however, have found discrepancies in the extent of support provision available across school levels. A national study of supports and services for students classified as having emotional and behavioral disorders found that supports, while always limited, were more common at the elementary and middle school levels than at the high school level (Wagner et al., 2006).

Furthermore, discrepancies have been observed in teacher reports of supports for students with externalizing versus internalizing behaviors, with priority among general education teachers being given to targeting behavioral over emotional problems (Evans, Weiss, & Cullinan, 2012). For example, Evans and colleagues (2012) found in a sample of general education teachers that the majority had strategies for responding to externalizing student behaviors but not for addressing internalizing problems.

The limited and inconsistent use of evidence-based supports by classroom teachers cannot be explained by their lack of availability. Evidence-based classroom supports to address behavioral problems, in particular, are well documented (Hutchings, Martin-Forbes, Daley, & Williams, 2013; Reinke, Herman, & Stormont, 2013; Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). Somewhat less is known about classroom-based supports specifically for anxiety and depression, although broad guidelines are available (Minahan & Rappaport, 2012; Reilly, 2015), and social emotional learning programs implemented by teachers have been shown to reduce internalizing problems (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). The question of how to disseminate and increase the adoption of evidence-based and best practices in schools and classrooms has also been discussed, but the actual implementation of empirically tested practices in classrooms continues to be a challenge (see, for example, Atkins et al., 2008; Atkins, Rusch, Mehta, & Lakind, 2016; Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010; Rones & Hoagwood, 2000). As such,

data documenting how teachers respond to and support students with emotional and behavioral challenges are important for identifying typical or common practices in schools, and determining the potential gap between those practices and evidence-based interventions. Indeed, researchers in other areas of both education and child mental health service provision have found that documenting common practice is important for determining optimal methods and evaluating the outcomes of recommended interventions (Garland, Bickman, & Chorpita, 2010).

Current Study

In the current study, we investigated teacher identification of and supports for students presenting with behavioral and emotional challenges. In particular, we explored whether the identification of student problems and teacher responses and supports for these problems varied according to the type (internalizing vs. externalizing) and magnitude (low severity vs. high severity) of the problems students face. As with previous similar studies (Chang & Sue, 2003; M. T. Green et al., 1996; Jorm et al., 2010; Loades & Mastroyannopoulou, 2010; Percy et al., 1993; Weisz et al., 1989), we used a vignette-based approach to collect data.

Depression was selected as the internalizing problem in the vignette because it has been used in other studies (e.g., Jorm et al., 2010) and is often overlooked by teachers (Kleftaras & Didaskalou, 2006). Furthermore, there is some evidence that Major Depressive Disorder is the most common disorder in childhood and adolescence aside from specific phobias that, depending on the phobia, might not manifest in the school setting (Kessler et al., 2012). For the externalizing problem, teachers were given a vignette describing a student with either attention-deficit/hyperactivity disorder (ADHD) or oppositional defiant disorder (ODD). Elementary school teachers received the ADHD vignette, whereas middle and high school teachers received the ODD vignette. ADHD and ODD are the most commonly diagnosed behavior disorders in childhood and adolescence (Kessler et al., 2012). Although the two disorders are distinct, they are highly interrelated, with some studies pointing to a common developmental history (Kessler et al., 2014; Olson et al., 2013).

Studies document that gender is closely related to the presentation of problems among children and adolescents, with internalizing problems tending to be more common among females and externalizing problems (including ADHD and ODD) tending to be more common among males (Kessler et al., 2012; Maughan, Rowe, Messer, Goodman, & Meltzer, 2004; Nolen-Hoeksema, 2001; Olson et al., 2013). In the current study, gender was linked to problem type, such that the vignette describing an internalizing problem included a female student and the two vignettes that described externalizing problems (ADHD for elementary school teachers and

ODD for middle/high school teachers) included male students.

Considering that teacher response and extent of support might vary across school levels, we compared responses from elementary, middle, and high school teachers. As noted above, there is limited research on typical responses and supports by middle and high school teachers who might serve in more complex support-provision roles because students rotate between classrooms and there tends to be reduced adult monitoring at these grade levels.

More specifically, we aimed to answer the following research questions:

Research Question 1: Do teacher ratings of concern for students vary according to the type (female internalizing vs. male externalizing) and severity (moderate vs. severe) of student problems, or the school level of teachers (elementary, middle, high)?

Based on prior research, we hypothesize that teachers will express greater concern about vignettes presenting male externalizing problems and severe problems. Prior research has not compared elementary with middle and high school teachers. However, we hypothesize that concern will increase with school level, as studies show that the severity of problems generally increases with age.

Research Question 2: Do teacher ratings of likelihood of response and supports provision vary according to the type (female internalizing vs. male externalizing) and severity (moderate vs. severe) of student problems, or the school level of teachers (elementary, middle, high)?

Based on prior research, we hypothesize that teachers will be more likely to provide supports for male externalizing problems, given greater training for teachers in responding to behavioral problems than internalizing problems. We hypothesize that increased supports will be provided to vignettes with greater severity. Furthermore, consistent with some prior research, we hypothesize that elementary teachers will report providing more supports than middle and high school teachers.

Method

Participants

As part of a district-wide effort to improve mental health supports for students, teachers in one Northeastern school district were invited to participate in a survey about identifying and supporting students with emotional and behavioral challenges. Teachers in Grades 3 to 12 were included in this study to mirror the inclusion of students in Grades 3 to 12 in a district self-report survey. One hundred

seventy-two teachers employed in the four schools in the district (two elementary, one middle, one high) participated in the study (a response rate of 93%). Teachers were predominantly female (76.3%) and distributed across the elementary (Grades 3–5; 44.8%), middle (Grades 6–8; 23.2%), and high school (grades 9–12; 32.0%) levels. To protect the confidentiality of individual teachers, further demographic data were not collected. However, based on state data, 99.6% of school staff identified as non-Latino White, and 95.4% were evaluated as proficient in their annual evaluation. Furthermore, state data indicated that 94.0% of students in the district identified as non-Latino White, 3.6% received free or reduced-price lunch, and 14.5% were classified as students with disabilities.

Procedure

Data for the current study were collected as part of a partnership between district leaders and the university research team to identify possible improvements in student mental health service planning and delivery. At the time the partnership was initiated and data for the current study were collected, the district did not have a district-wide plan for emotional and behavioral supports in place. All teachers in the district were invited by a school administrator to take part in an anonymous survey about identification of and responses to student emotional and behavioral challenges. Several administrators used faculty meeting times for survey completion. Surveys were completed online in fall 2014, and were administered using Qualtrics survey software. All surveys were completed prior to staff engagement in professional development related to emotional and behavioral challenges. The Boston University Institutional Review Board approved secondary analysis of these anonymous data.

Measures

Teacher Mental Health Vignette Scale. Vignettes used in the current study were adapted from vignettes developed by the Center for Multicultural Mental Health Research to study parent perceptions of child need for mental health services (Chavez et al., 2010). The development and construction of the original vignettes are described by Lapatin et al. (2012). As described above, we selected vignettes that focused on either an internalizing disorder (depression) or an externalizing disorder (ADHD and ODD).

In the summer of 2014, 19 middle and high school teachers from several Northeastern school districts (but not the district included in the current study) participated in focus groups and reviewed the vignettes. Focus group participants discussed the wording of vignettes and suggested modifications to improve the vignettes for use by teachers. For example, focus group participants suggested

focusing on information that would be observable in a classroom setting, removing information about family and home life, and adding information about academic performance.

Final vignettes were 100 to 130 words in length with symptom descriptions based on *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria (examples of vignettes are included in the appendix). We used scenarios that depicted “moderate” disorders, and then modified those scenarios to include information to identify the disorders as “severe.” For example, in the case of the student with depression, in the “moderate” version of the vignette the student seems moody, puts her head down on her desk, has lost interests in activities she used to enjoy, and has trouble concentrating in class. In the “severe” version, the student has additionally missed school, and the teacher overheard her saying “I’m totally worthless.”

We employed a 2×2 design (four vignettes) to vary the nature (internalizing, externalizing) and severity (moderate, high) of student problems. Each teacher was asked to respond to two vignettes (one female internalizing, one male externalizing), and was randomized to respond to either a moderate or severe version of each vignette. The order in which vignettes were presented was randomized. All teachers responded to the depression vignette (in which the student was female). In response to a request from the district, elementary school teachers responded to the ADHD vignette (male), while middle and high school teachers responded to the ODD vignette (male). As in one condition of the prior study (Chavez et al., 2010), we used common English names: Anna and David. Race and ethnicity were not included in the vignettes. Teachers were asked to imagine that the student in the vignette was “a student in your class” to make age and grade level of students relevant to individual respondents.

Ratings of concern. To determine the extent to which teachers would identify problems described in vignettes as concerning, teachers were asked to rate each vignette on the extent to which they would be worried about the child (Anna or David) and the seriousness of the problem. Worry was assessed by asking teachers, “Using a score of 1 to 10, where 1 is not at all worried and 10 is very worried, how worried would you be about [Anna]?” Seriousness was assessed by asking teachers, “Using a score of 1 to 10, where 1 is not at all serious and 10 is very serious, how serious would you rate [Anna’s] behavior?” We additionally asked teachers to rate the typicality of the behavior described in the vignette among their students: “Using a score of 1 to 10, where 1 is very rare and 10 is very common, how common is [Anna’s] behavior compared to other students you teach?” Similar ratings were used by Chavez and colleagues (2010).

Ratings of teacher response. Following the presentation of each vignette, teachers were asked to indicate their likelihood of providing each in a series of responses to the student. This list of responses was initially developed in the course of interviews with 29 middle and high school teachers from across the United States (more details are available at J. G. Green et al., 2017). None of the teachers interviewed were employed by the school district participating in the current university-school partnership. In these interviews, teachers were asked to describe the “first steps” that they would take to respond to students who are having emotional or adjustment problems. Answers to this question were coded for themes by members of the research team who read through each response and created high-order categories. The list of themes was later presented as part of the same focus groups with 19 teachers in the Northeast described above. Teachers in focus groups provided feedback on the content and wording of responses. Focus group participants were also asked whether there were additional responses they provided to students that were not included on the list. We engaged in an iterative process in which these responses were added and discussed in subsequent focus groups. Finally, we reviewed the literature on student supports to identify supports that had not been previously mentioned by teachers (e.g., Bergin, 2014; Cappella et al., 2012; Cheney, Schlösser, Nash, & Glover, 2014; Epstein, Atkins, Cullinan, Kutash, & Weaver, 2008; Minahan & Schultz, 2014; Miranda, Jarque, & Tárraga, 2006; Schonfeld et al., 2014; Simonsen et al., 2008). In total, our final survey included 23 items, and teachers were asked to rate (on a 4-point Likert-type scale) the likelihood that they would provide each response to each of the two students described in the vignettes.

Validity of vignettes. Clinical and research experts in child or adolescent mental health and school-based service provision were identified through a review of the literature and through personal contacts. Fourteen experts responded to a request to rate the vignettes and were included in the current study. All experts had recent experience providing direct services to children and adolescents. They had an average of 14.6 years of experience ($SD = 8.6$) in practice or research settings focused on children and adolescents, and reported that they currently spent an average of 29.7 hours a week ($SD = 13.5$) in this work. On a scale of 1 to 10 (where 1 was *not at all realistic* and 10 was *very realistic*), experts gave the vignettes an average rating of 8.7 ($SD = 1.3$). Experts used the *Children’s Global Assessment Scale* (C-GAS; Shaffer et al., 1983) to rate the impairment experienced by students in vignettes (on a scale of 0–100, with lower scores indicating greater impairment). Each expert completed two to four vignette ratings, providing a total of 34 vignette ratings. There were no significant differences between C-GAS ratings of internalizing ($M = 51.5$,

$SD = 10.4$) and externalizing ($M = 53.8, SD = 9.0$) vignettes, $t(32) = -0.72, p = .48$. Experts rated moderate vignettes as significantly less impaired ($M = 56.8, SD = 8.6$) than severe vignettes ($M = 47.9, SD = 8.4$), $t(30) = 3.04, p < .01$.

Analytic Strategy

Teacher ratings of their level of concern, problem seriousness, and the typicality of problems were entered into a series of MANOVA to compare those ratings as a function of vignette severity, problem type, and school level, and the interaction of those variables. Next, we estimated models to examine the association of vignette type with teachers' ratings using the PROC MIXED function of SAS 9.4 (SAS Institute Inc., 2013). The PROC MIXED function allowed us to estimate mixed-effects models accounting for the nested structure of data within individual teacher raters. The first model examined teacher ratings of their level of concern, problem seriousness, and the typicality of problems by vignette severity, problem type, and school level. A second model tested the interaction effects among independent variables.

Second, to identify patterns of likely supports provided by teachers, we entered the list of 23 teacher responses into an exploratory factor analysis (EFA) using maximum-likelihood extraction with Promax rotation in the statistical package IBM SPSS version 24 (SPSS, 2016). Categories derived from the EFA were entered into a MANOVA to compare responses and supports as a function of vignette severity, problem type, and school level, and the interaction of those variables. Finally, as described above, a linear mixed-effects model was estimated to examine teacher ratings of responses by vignette severity, disorder type, and school level. A second model tested interaction effects among independent variables.

Results

Teacher Ratings of Concern for Students

Mean ratings of concern for students are reported in Table 1 and indicated significant differences by vignette problem type, vignette severity, and teacher school level. Results of a linear mixed-effects model indicated that vignettes designed to be severe and those describing female internalizing problems were rated as more worrisome, serious, and less common than vignettes designed to be moderate and those describing male externalizing problems. There was also a main effect for school level, such that middle school teachers indicated that problems described in the vignettes were more worrisome and serious but less common than elementary school teachers. High school teachers also indicated that problems were less common than did elementary school teachers. Results are presented in Table 2.

There were several significant interactions, which are presented in Figure 1: First, middle school teachers rated male externalizing (but not female internalizing) problems as more worrisome and serious than elementary school teachers (see Figures 1a and 1c). Second, middle and high school teachers rated male externalizing (but not female internalizing) vignettes as less common than elementary school teachers (see Figure 1e). Third, high school teachers rated high severity problems as more common than moderate severity problems, while elementary and middle school teachers rated moderate severity problems as more common (not shown). Finally, there was a significant interaction between severity and problem type, such that moderate female internalizing problems were rated as more worrisome, serious, and less common than moderate male externalizing problems (see Figures 1b, 1d, and 1f).

Teacher Ratings of Responses and Supports for Students

Initial exploration of the responses and supports data suggested a possible six-factor structure (eigenvalues = 5.8, 2.2, 1.9, 1.5, 1.2, 1.1). However, two of the items did not load above .30 on any factor, and were therefore eliminated from further analysis. A third item was also eliminated because it was the only item to load onto its corresponding factor. The EFA with the remaining 20 items resulted in a relatively clearly interpretable five-factor solution representing specialized supports (e.g., perform or request a functional behavioral assessment, teach relaxation/breathing strategies), classroom-based emotional/behavioral supports (e.g., give a role/task in the class, provide more positive reinforcement), reduced expectations for classroom work (e.g., reduce required work, reduce grading standards), academic supports (e.g., provide organizational strategies), and referrals (e.g., suggest that the student see a counselor, social worker, or psychologist). Final items and factor analysis results are presented in Table 3. Three of the subscales had good internal consistency reliability (Specialized Supports $\alpha = .77$; Classroom-Based Emotional/Behavioral Supports $\alpha = .72$; Academic Supports $\alpha = .87$; Nunnally, 1978). Two of the subscales had lower Cronbach's alphas (Reduced Expectations $\alpha = .66$; Referrals $\alpha = .67$). We calculated a subscale score for each factor by taking the mean of item responses (subscale scores range = 1–4). Subscale scores are presented in Table 3, and indicated that teachers were most likely to endorse providing academic supports ($M = 3.27, SD = 0.75$) and least likely to endorse reducing expectations ($M = 2.30, SD = 0.55$).

Mean ratings of the five response and support subscales are reported in Table 4, and demonstrated significant differences by school level and problem type. Results of linear mixed-effects models indicate that teachers at the elementary

Table 1. Teacher Ratings of Their Level of Concern, Problem Seriousness, and the Typicality of Problems by Vignette Severity, Disorder Type, and School Level.

Vignette	Worried	Serious	Common
	M (SD)	M (SD)	M (SD)
Elementary			
Internalizing moderate (<i>n</i> = 40)	7.8 (1.8)	8.3 (1.6)	4.1 (2.1)
Internalizing severe (<i>n</i> = 40)	8.1 (1.3)	8.3 (1.3)	3.3 (1.5)
Externalizing moderate (<i>n</i> = 41)	6.1 (1.8)	5.8 (1.7)	7.9 (2.0)
Externalizing severe (<i>n</i> = 40)	7.9 (1.5)	8.1 (1.4)	6.9 (1.8)
Middle			
Internalizing moderate (<i>n</i> = 20)	7.9 (1.8)	8.1 (1.2)	4.0 (2.1)
Internalizing severe (<i>n</i> = 20)	8.4 (1.4)	8.5 (1.2)	4.0 (2.2)
Externalizing moderate (<i>n</i> = 20)	8.0 (1.1)	7.6 (1.0)	5.3 (2.2)
Externalizing severe (<i>n</i> = 20)	8.4 (1.4)	8.4 (1.6)	3.6 (1.9)
High			
Internalizing moderate (<i>n</i> = 26)	7.7 (1.2)	8.1 (1.4)	3.7 (1.9)
Internalizing severe (<i>n</i> = 28)	8.3 (1.3)	8.4 (1.3)	4.6 (2.4)
Externalizing moderate (<i>n</i> = 27)	6.8 (1.7)	6.8 (1.7)	4.3 (1.9)
Externalizing severe (<i>n</i> = 27)	7.7 (1.8)	7.9 (1.5)	3.7 (1.8)
School level			
Elementary (<i>n</i> observation = 121)	7.5 (1.8) ^a	7.6 (1.8)	5.5 (2.7) ^{a,b}
Middle (<i>n</i> observation = 80)	8.1 (1.2)	8.2 (1.3)	4.2 (2.2)
High (<i>n</i> observation = 108)	7.7 (1.5)	7.8 (1.7)	4.1 (2.0)
Internalizing (<i>n</i> observation = 171)	8.0 (1.4) [*]	8.3 (1.4) [*]	3.9 (2.0)
Externalizing (<i>n</i> observation = 172)	7.4 (1.7)	7.3 (1.8)	5.7 (2.5) [*]
Moderate (<i>n</i> observation = 169)	7.3 (1.7)	7.3 (1.8)	5.1 (2.6) [*]
Severe (<i>n</i> observation = 174)	8.1 (1.4) [*]	8.2 (1.4) [*]	4.5 (2.3)

^aElementary < middle. ^bElementary > middle and high.

^{*}*p* < .05.

school level had higher ratings on all response and support subscales than teachers of older students, with the exception of referrals, which were rated as more likely by high school teachers than elementary teachers. Furthermore, when presented with a severe vignette, teachers were more likely to indicate that they would reduce expectations than for moderate vignettes. Finally, teachers responding to male externalizing vignettes indicated that they would provide more classroom-based emotional/behavioral supports and academic supports, but teachers responding to female internalizing vignettes were more likely to indicate that they would reduce expectations and provide referrals. Results are presented in Table 5.

There were several significant interaction terms which are shown in Figure 2: First, high school teachers indicated that they would provide fewer specialized supports and classroom-based emotional/behavioral supports than elementary school teachers, but this difference was particularly marked when responding to high severity vignettes (see Figures 2a and 2b). Second, there was a series of significant interactions between school level and problem type, such that elementary school teachers were more likely than middle/high school teachers to indicate that they would

provide male externalizing vignettes with classroom-based emotional/behavioral supports, reduced expectations, and academic supports (see Figures 2c, 2d, and 2e). However, middle and high school teachers were significantly more likely than elementary school teachers to indicate providing referrals for male externalizing vignettes (see Figure 2f).

Sensitivity Analyses

To address the possibility that results were due to differences in the type of externalizing vignette provided to elementary school teachers (ADHD) as compared with middle and high school teachers (ODD), we conducted a series of sensitivity analyses. We took the subset of data that included middle and high school teachers only and replicated the main effects models described above. As in the full dataset, there were significant main effects for severity and problem type, indicating that teachers were more likely to rate severe and female internalizing problem vignettes as worrisome and serious than moderate and male externalizing problem vignettes. The coefficients for typicality of behavior, however, became nonsignificant. In models estimating teacher response and support subscales, results for the middle/high

Table 2. Associations of Teacher Ratings of Their Level of Concern, Problem Seriousness, and the Typicality of Problems With Vignette Severity, Disorder Type, and School Level.

Vignette	Worried			Serious			Common		
	B	SE	t	B	SE	t	B	SE	t
Model 1—Main effects model									
Intercept	6.77	0.17	38.94*	6.72	0.17	38.84*	6.69	0.25	26.95*
Middle school	0.67	0.25	2.71*	0.52	0.25	2.12*	-1.36	0.33	-4.13*
High school	0.18	0.23	0.80	0.09	0.23	0.38	-1.44	0.31	-4.71*
Severity (high)	0.80	0.15	5.20*	0.89	0.15	5.79*	-0.56	0.24	-2.38*
Internalizing	0.60	0.13	4.73*	0.92	0.13	7.17*	-1.74	0.21	-8.16*
Model 2—Interaction model									
Intercept	6.33	0.21	29.75*	6.09	0.21	29.36*	8.02	0.28	28.53*
Middle school ^a	1.40	0.35	4.00*	1.25	0.34	3.66*	-3.06	0.46	-6.62*
High school ^a	0.50	0.32	1.56	0.52	0.31	1.66	-3.93	0.43	-9.21*
Severity (high) ^b	1.33	0.26	5.11*	1.76	0.25	6.92*	-1.32	0.34	-3.82*
Internalizing ^c	1.28	0.23	5.52*	1.97	0.22	8.78*	-4.05	0.30	-13.30*
Middle School × High Severity	-0.44	0.39	-1.15	-0.44	0.38	-1.18	0.19	0.51	0.36
High School × High Severity	-0.32	0.35	-0.91	-0.36	0.34	-1.04	1.09	0.46	2.36*
Middle School × Internalizing	-1.01	0.31	-3.24*	-1.01	0.30	-3.33*	3.21	0.41	7.82*
High School × Internalizing	-0.31	0.29	-1.07	-0.50	0.28	-1.77	3.85	0.38	10.15*
High Severity × Internalizing	-0.68	0.29	-2.34*	-1.32	0.28	-4.71*	0.78	0.38	2.06*

^aElementary is the reference group. ^bModerate severity is the reference group. ^cExternalizing is the reference group.

* $p < .05$.

subsample differed somewhat from results for the full sample. Here, severity became a nonsignificant predictor of reduced expectations. Female internalizing problems remained significantly negatively associated with classroom-based emotional/behavioral supports, and positively associated with reduced expectations and referrals. However, male externalizing problems were previously associated with increased likelihood of academic supports in the full sample, but female internalizing problems were associated with increased likelihood of academic supports in the middle/high school only sample. Full results are available from the first author on request.

Discussion

Most studies of teacher identification of student emotional and behavioral challenges have focused on identification by elementary school teachers (Chang & Sue, 2003; M. T. Green et al., 1996; Percy et al., 1993; Weisz et al., 1989). By examining patterns in teacher identification across three school levels, this study is able to identify developmental differences that might inform understanding of the relatively low rates of mental health service use among children and adolescents (Merikangas et al., 2011). Results indicate that ratings of concern and support provision by teachers vary across school levels, as well as for students as a function of their gender/problem type and the severity of their problems. These results highlight critical areas to address in

teacher preparation and training designed to detect and support students with emotional and behavioral challenges.

Teacher Concern for Students

Teachers in the current sample reported a high degree of concern for students across all vignettes. In particular, however, they reported more concern for females with internalizing problems than for males with externalizing problems. This finding diverges from some prior research (Chang & Sue, 2003; M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010) that found that teachers reported greater concern for males with externalizing than for females with internalizing problems. One reason for the discrepancy may be that prior studies used vignettes with acting-out or aggressive behaviors (consistent with the ODD vignette provided to middle and high school teachers), whereas elementary teachers in the current study responded to a vignette describing ADHD, which they might consider more common and less concerning than ODD. In fact, when we look at results among middle school teachers, we see the more familiar pattern of rating male externalizing problems as more serious and worrisome than female internalizing problems. The decline in concern for male students with externalizing problems by high school teachers is a new finding, as we are aware of no prior studies examining ratings of externalizing problem vignettes by high school teachers. In combination, these

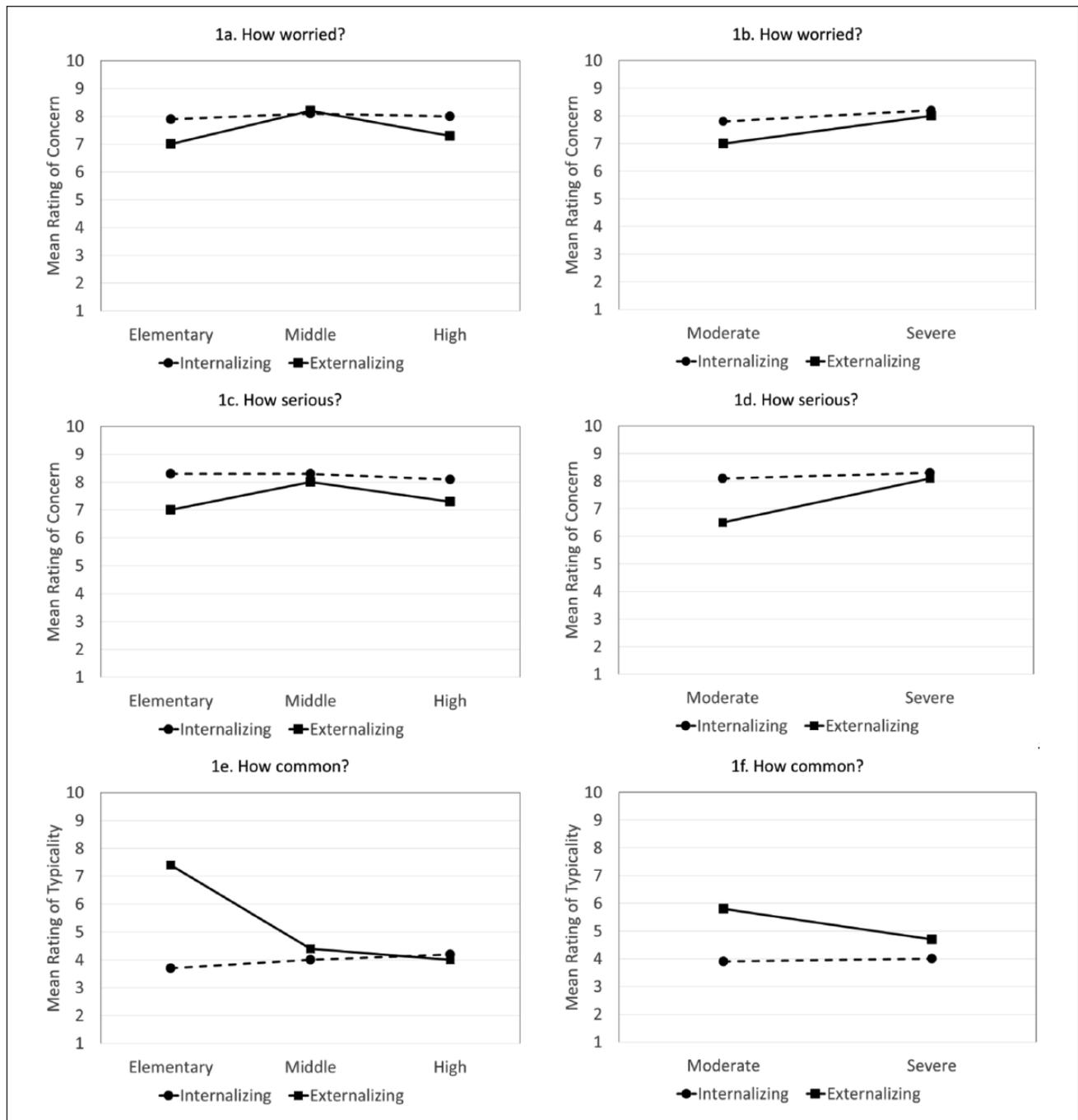


Figure 1. Interaction terms for teacher ratings of concern for students and typicality of behaviors (scale range = 1–10).

results raise the possibility that behavioral expectations change with age, adding more nuanced information to prior studies that have generally found that elementary school teachers are more likely to identify students with externalizing than internalizing problems as needing mental health services and supports (Chang & Sue, 2003; M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010). It might be that teacher identification strategies are specific to

certain types of externalizing problems (i.e., acting out) and student age (i.e., younger students).

A second, encouraging, finding is that severe problems were generally rated as more concerning than moderate problems. Results indicated, however, that this difference was particularly pronounced for ratings of male externalizing problems, where teachers rated moderate male externalizing problems as significantly less severe than moderate

Table 3. Factor Loadings and Percentages of Variance for Maximum-Likelihood Exploratory Factor Analysis With Promax Rotation for Teacher Responses.

How likely would you be to do each of the following for David/Anna?	Specialized supports	Classroom-based emotional/behavioral supports	Reduced expectations	Academic supports	Referrals
Ask a colleague to come in and observe	.732				
Perform or request a functional behavioral assessment	.721				
Take data or document the behavior	.578				
Teach relaxation/breathing strategies	.550				
Meet with both David/Anna and parents to discuss what is going on	.533				
Have a conversation with David/Anna to learn more about what is going on		.686			
Provide more positive reinforcement		.639			
Ask David/Anna to take a break (e.g., go for a walk, go to library)		.539			
Give David/Anna a role/task in the class (e.g., help pass out papers)		.474			
Discuss with David/Anna the long-term consequences of behavior		.396			
Design a system of rewards and consequences for David/Anna		.314			
Reduce the required work for David/Anna (e.g., less writing, fewer problems to complete)			.772		
Reduce grading standards			.604		
Let David/Anna just sit and not participate			.578		
Ignore minor behaviors that do not seem to disrupt the class			.410		
Offer extended time on tests or assignments			.376		
Provide David/Anna with organizational strategies				.957	
Break long-term assignments into smaller chunks				.819	
Suggest to David/Anna that they see a counselor, social worker, or psychologist					.879
Suggest to David/Anna that they see the nurse					.653
% variance	25.39	9.60	8.36	6.40	4.93
<i>M</i> (<i>SD</i>)	2.82 (0.68)	3.16 (0.50)	2.30 (0.55)	3.27 (0.75)	2.43 (0.87)

Note. Factor loadings <.3 are suppressed.

female internalizing problems. This pattern of results suggests that teachers might not have effectively distinguished between moderate and severe internalizing problems in the current study, perhaps because of being unfamiliar with identifying depression. Alternatively, this result could be interpreted as teachers not being sufficiently concerned about moderate male externalizing problems. Given that previous studies have found a strong association of externalizing problems with poor educational outcomes (Breslau, Miller, Chung, & Schweitzer, 2011; McLeod, Uemura, & Rohrman, 2012; Porche, Costello, & Rosen-Reynoso, 2016), the finding here that moderate male externalizing problems are rated as less severe than moderate female internalizing

problems might be an indication that teachers are more likely to interpret male externalizing symptoms as signs of “troubling” rather than “troubled” behavior that should be interpreted as concerning (Rosenblatt et al., 1998).

Teacher Responses and Supports

Turning to teacher ratings of responses and supports, results suggest that the supports that teachers report they are likely to provide also differ by school level and problem type. In general, and consistent with our hypothesis and prior research (Wagner et al., 2006), middle and high school teachers reported that they were less likely to provide supports than

Table 4. Teacher Ratings of Responses by Vignette Severity, Disorder Type, and School Level.

Vignette	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
	Specialized supports	Classroom-based emotional/behavioral supports	Reduced expectations	Academic supports	Referrals
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Elementary					
Internalizing moderate (n = 40)	3.2 (0.4)	3.2 (0.4)	2.4 (0.5)	3.2 (0.8)	2.7 (0.9)
Internalizing severe (n = 40)	3.1 (0.6)	3.2 (0.4)	2.4 (0.5)	3.3 (0.7)	2.6 (0.8)
Externalizing moderate (n = 40)	3.0 (0.6)	3.5 (0.5)	2.2 (0.5)	3.8 (0.5)	1.5 (0.6)
Externalizing severe (n = 40)	3.3 (0.5)	3.7 (0.4)	2.5 (0.5)	3.8 (0.4)	2.0 (0.8)
Middle					
Internalizing moderate (n = 19)	2.7 (0.6)	3.0 (0.5)	2.6 (0.6)	3.2 (0.7)	2.5 (0.6)
Internalizing severe (n = 20)	2.9 (0.6)	3.0 (0.5)	2.6 (0.5)	3.2 (0.6)	2.7 (0.8)
Externalizing moderate (n = 19)	2.9 (0.5)	3.2 (0.5)	2.1 (0.7)	3.2 (0.8)	2.2 (0.8)
Externalizing severe (n = 19)	2.7 (0.6)	3.1 (0.4)	2.4 (0.4)	2.8 (0.8)	2.3 (0.8)
High					
Internalizing moderate (n = 25)	2.5 (0.7)	3.0 (0.6)	2.1 (0.6)	3.1 (0.8)	3.1 (0.7)
Internalizing severe (n = 28)	2.1 (0.6)	2.7 (0.4)	2.3 (0.5)	3.0 (0.5)	2.9 (0.7)
Externalizing moderate (n = 26)	2.5 (0.7)	3.0 (0.5)	2.0 (0.6)	3.0 (0.8)	2.8 (0.6)
Externalizing severe (n = 27)	2.2 (0.5)	2.8 (0.4)	2.0 (0.6)	2.8 (0.8)	2.5 (0.8)
School level					
Elementary (n observation = 120)	3.1 (0.5) ^{*a}	3.4 (0.4) ^{*a}	2.4 (0.5) ^{*b}	3.5 (0.7) ^{*a}	2.2 (0.9)
Middle (n observation = 77)	2.8 (0.6) ^{*c}	3.1 (0.5) ^{*c}	2.4 (0.5) ^{*c}	3.1 (0.7)	2.4 (0.8)
High (n observation = 106)	2.3 (0.7)	2.9 (0.5)	2.1 (0.6)	3.0 (0.7)	2.8 (0.7) ^{*d}
Internalizing (n observation = 169)	2.8 (0.7)	3.0 (0.5) [*]	2.4 (0.5) [*]	3.2 (0.7)	2.7 (0.8) [*]
Externalizing (n observation = 170)	2.8 (0.7)	3.3 (0.5)	2.2 (0.6)	3.3 (0.8)	2.1 (0.8)
Moderate (n observation = 167)	2.9 (0.7)	3.2 (0.5)	2.2 (0.6)	3.3 (0.8)	2.4 (0.9)
Severe (n observation = 173)	2.8 (0.7)	3.0 (0.5)	2.4 (0.5)	3.2 (0.7)	2.5 (0.8)

^aElementary > middle and high. ^bElementary > high. ^cMiddle > high. ^dHigh > elementary and middle.

*p < .05.

teachers of elementary students. The exception was for referrals to school-based providers, which were rated as more likely by high school than elementary teachers. While emotional and behavioral problems increase in adolescence (Merikangas et al., 2010), it appears that teachers at the middle and high schools were less likely to provide four of five of the responses and supports assessed, perhaps because teachers have a higher number of students in their middle and high school classes and therefore having fewer opportunities to offer the types of individualized supports measured here.

Teachers were also more likely to indicate providing classroom-based emotional/behavioral and academic supports to male students with externalizing than female students with internalizing problems. The relationship between classroom-based emotional/behavioral supports and externalizing problems might be explained by the inclusion of several supports that are behavioral in nature on that subscale (e.g., developing system of rewards and consequences). Furthermore, although prior research has found that teacher preparation to address emotional and behavioral challenges is limited across the board, some studies

have reported that teachers are more likely to receive training in classroom behavior management than in how to respond to internalizing problems (State et al., 2011). In sensitivity analyses, teachers in the middle/high school only sample continued to report increased provision of classroom-based emotional and behavioral supports for male students with externalizing problems, as compared with females with internalizing problems. In contrast, in the full sample, academic supports were more often provided to males with externalizing problems, but teachers in the middle/high school only sample were more likely to provide academic supports to females with internalizing problems. This result suggests that the original finding that academic supports were more likely to be provided to males with externalizing problems might have been driven by the elementary school teachers reading a vignette describing behaviors specific to ADHD (not ODD) where academic supports might be more clearly indicated.

A finding of particular note was that teachers were more likely to report that they would reduce their expectations for students in the severe than the moderate vignettes and in the

Table 5. Associations of Teacher Ratings of Responses With Vignette Severity, Disorder Type, and School Level.

Vignette	Factor 1 Specialized supports		Factor 2 Classroom- based emotional/ behavioral supports		Factor 3 Reduced expectations		Factor 4 Academic supports		Factor 5 Referrals	
	B	SE	B	SE	B	SE	B	SE	B	SE
Model 1—Main effects model										
Intercept	3.14	0.07*	3.49	0.05*	2.24	0.06*	3.65	0.08*	1.82	0.09*
Middle school	-0.35	0.11*	-0.31	0.08*	0.05	0.08	-0.43	0.12*	0.22	0.13
High school	-0.81	0.10*	-0.49	0.07*	-0.31	0.08*	-0.57	0.11*	0.64	0.12*
Severity (high)	0.04	0.05	0.00	0.04	0.15	0.05*	0.09	0.07	0.14	0.08
Internalizing	-0.03	0.03	-0.23	0.03*	0.13	0.04*	-0.14	0.06*	0.56	0.06*
Model 2—Interaction model										
Intercept	3.04	0.08*	3.52	0.06*	2.27	0.07*	3.83	0.10*	1.60	0.11*
Middle school ^a	-0.30	0.13*	-0.33	0.10*	-0.07	0.12	-0.70	0.17*	0.56	0.18*
High school ^a	-0.60	0.12*	-0.56	0.09*	-0.34	0.11*	-0.82	0.15*	1.03	0.16*
Severity (high) ^b	0.22	0.08*	0.08	0.07	0.23	0.09*	-0.11	0.12	0.30	0.13*
Internalizing ^c	0.05	0.07	-0.39	0.06*	-0.01	0.07	-0.57	0.11*	0.92	0.11*
Middle School × High Severity	-0.08	0.12	-0.15	0.10	-0.05	0.13	-0.16	0.19	-0.09	0.19
High School × High Severity	-0.33	0.11*	-0.19	0.09*	-0.19	0.12	-0.13	0.16	-0.26	0.17
Middle School × Internalizing	-0.01	0.09	0.20	0.08*	0.29	0.10*	0.69	0.15*	-0.58	0.15*
High School × Internalizing	-0.08	0.08	0.32	0.07*	0.26	0.09*	0.64	0.13*	-0.51	0.13*
High Severity × Internalizing	-0.12	0.09	0.03	0.08	-0.02	0.10	0.16	0.13	-0.10	0.14

^aElementary is the reference group. ^bModerate severity is the reference group. ^cExternalizing is the reference group.

* $p < .05$.

female internalizing than the male externalizing vignettes. The first of these findings suggests that teachers might perceive expectation reduction to be most helpful for those students experiencing the most distress and impairment in functioning. However, researchers and educators have consistently raised concerns about the academic progress of students with severe emotional and behavioral disorders. Studies show that students with emotional and behavioral disorders are more likely to be disengaged from school, less likely to be academically successful, and more likely to leave school before graduating (Breslau, Lane, Sampson, & Kessler, 2008; Breslau et al., 2011; Porche et al., 2016). One reason proposed for these academic delays is that, over time, teachers might provide less demanding instruction to students with emotional and behavioral disorders than their peers (Wehby, Lane, & Falk, 2003). In particular, there might be a reciprocal dynamic, such that teachers who desire to support students with emotional and behavioral challenges might reduce academic demands, leading students with emotional and behavioral challenges to experience or report decreased academic competency, therefore further reinforcing teacher reduction in academic expectations. The finding that teachers are more likely to report reduced expectations for female students with internalizing than for male students with externalizing problems might again be related to the possibility that teachers have more limited training in responding to internalizing problems and

therefore seek to support students simply by reducing expectations, rather than providing proactive supports.

Together, these results suggest that teachers are more likely to indicate that they will provide supports that they can offer themselves (i.e., classroom-based supports, academic supports) when they are based in an elementary school and responding to a vignette describing a male externalizing problem. While prior research has found that provision of supports decreases with school level (J. G. Green et al., 2016; Wagner et al., 2006), the wider range of supports evaluated in the current study suggests that these patterns might be more complex, and that teachers of students in older grades might be more likely to reduce expectations and offer referrals to providers in their building. Furthermore, in the current study, teachers at the high school level were more likely to provide classroom-based supports to students with moderate than severe problems, perhaps because they were more confident in their ability to support students with less severe behaviors. These results have important implications for training teachers, particularly at older grade levels, in supporting students in their classrooms.

Because the current study linked internalizing and externalizing problems to female and male gender, respectively, it is also possible that the findings identified here are related to gender rather than problem type. Prior studies have produced mixed results regarding whether there is an association of gender with mental health service use for mood and

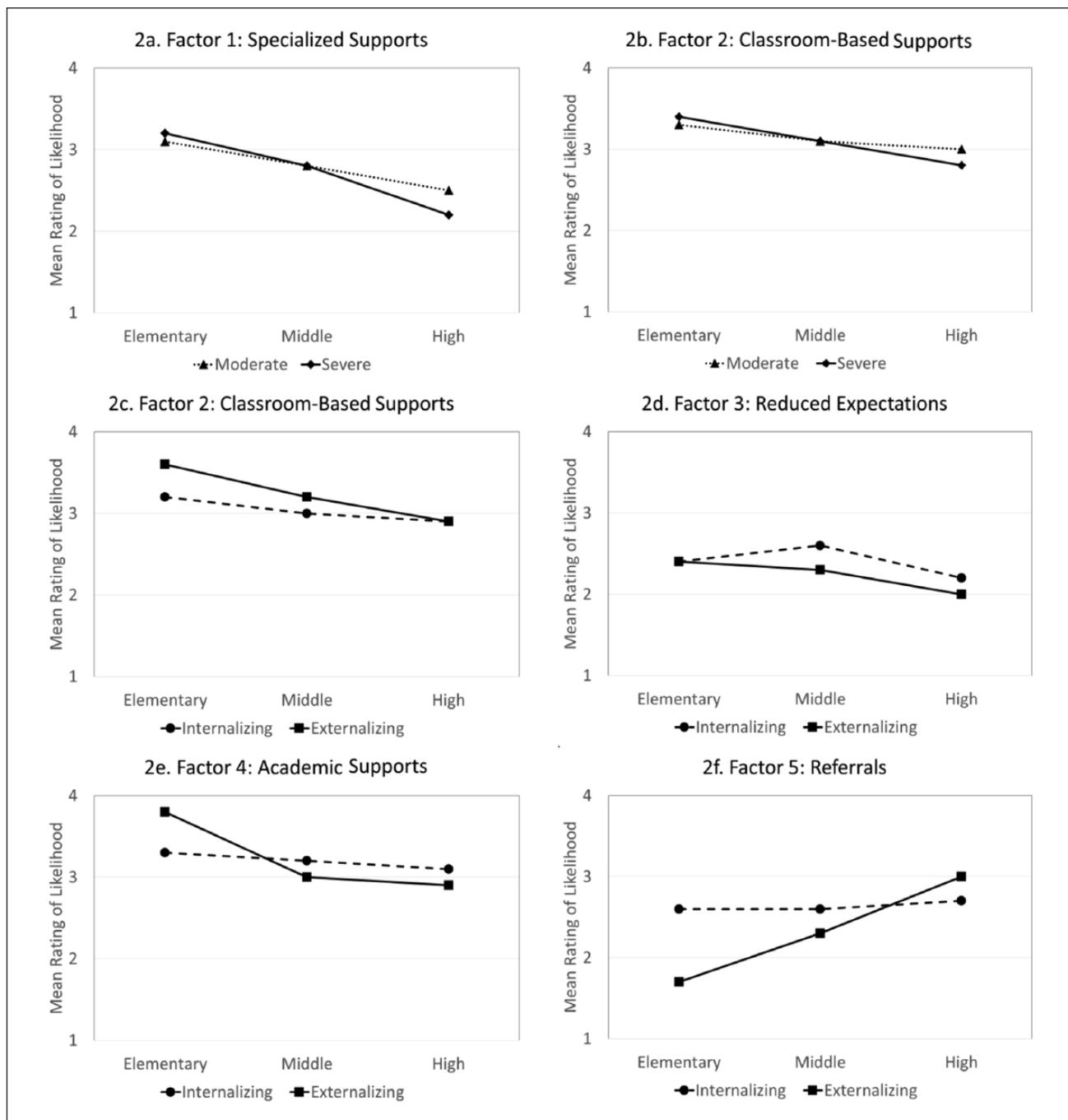


Figure 2. Interaction terms for teacher ratings of likely responses to students (scale range = 1–4).

behavior disorders (Merikangas et al., 2011; Wu et al., 2001). The few studies that specifically examined the association of student gender with teacher identification found that gender has a significant influence on whether teachers identify students as having emotional and behavioral problems (M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010), but more research is needed. It would be interesting, for example, to determine whether teachers would be more likely to provide supports to female than male students with

ODD, perhaps because they are more likely to perceive acting-out behaviors to be a sign of distress among female as compared with male students.

Limitations

This study has several limitations: First, there are a number of limitations inherent to the use of vignette methodology. Although the use of the vignettes in this study allowed us to

assess teachers' responses to a standard stimulus on a topic (student mental health) that is difficult to precisely evaluate in the context of real cases, teachers might respond differently to actual students than to vignettes (Jerolmack & Khan, 2014). In addition, the nature of vignettes is that they make explicit problems, like internalizing problems, which might not typically be noticed by teachers. In contrast, even moderate externalizing behaviors are likely to be identified in a classroom.

Second, this study evaluated some of the most common forms of internalizing (depression) and externalizing problems (ODD and ADHD). However, we did not assess a broad range of disorders or teacher responses to comorbid disorders. Furthermore, elementary teachers responded to a different externalizing scenario (ADHD) than middle and high school teachers (ODD). While we somewhat accounted for this limitation by conducting sensitivity analyses in the middle/high school only sample, the variation in externalizing vignettes might account for some of the school-level differences described above.

Third, students in the externalizing vignettes were described as being male, and the student in the internalizing vignette was described as female. Although this kept the number of different vignettes manageable for this study, the limitation prevented us from examining differences across student gender or gender-by-problem-type interactions in teacher ratings. Given evidence cited earlier that teacher identification of students is linked to gender (M. T. Green et al., 1996; Loades & Mastroyannopoulou, 2010), the lack of counterbalancing raises the possibility that results of the current study are a reflection of identification and support patterns that are related to gender rather than problem type. In future studies, gender should be counterbalanced to disaggregate these effects.

Fourth, because teachers in the district were predominantly non-Latino White, we did not ask teachers to report their race/ethnicity. We were concerned that this information (in combination with school, grade-level taught, and gender) could identify individual teachers. We also collected no information about years of experience, or whether teachers received specific training in emotional and behavioral challenges and interventions. Fifth, the sample in our study was primarily female, reflecting the composition of teachers in the district. It is unclear whether teacher gender might have influenced ratings of female and male vignettes. Finally, data were collected in one, relatively affluent, school district. It is likely that teachers in a more racially/ethnically and socioeconomically diverse school district would have responded differently to these vignettes, particularly given prior studies suggesting racial/ethnic and socioeconomic disparities in identification of youth for special education services (Sullivan & Bal, 2013) and mental health services (Merikangas et al., 2011). Although surveying teachers in one district reduced the variability in teacher

experiences and student demographics, because of our partnership with the district we were able to obtain a high response rate, presumably integrating teachers with a range of interests, experiences, and skills identifying and supporting students with emotional and behavioral problems. The results of this study should be compared with the results of other research with more diverse school districts and samples, but perhaps with a lower response rate that might reflect bias in participating teacher perceptions of the importance of student mental health.

Conclusion and Significance

The current study provides new information about teacher decision-making processes when they identify and respond to emotional and behavioral challenges among their students. Consistent with prior research on behavioral health service use and the Gateway Provider Model (Andersen, 1995; Langer et al., 2015; Stiffman et al., 2004), results suggest that factors unrelated to student need (e.g., school level and problem type) influence teacher concern and support provision for students, in addition to need-based factors (severity). These results suggest that even when presented with identical students, which we were able to control in this study through the use of vignettes, teachers may inadvertently contribute to disparities in service and support receipt by students. The significance of this finding is that there might be opportunities to improve teacher identification of concerning behaviors among students and increase the provision of low-intensity (e.g., classroom-based) supports that have been identified as best practices for students with internalizing and externalizing problems. Furthermore, the high degree to which teachers reported that they were likely to reduce expectations for students is particularly concerning, and suggests an opportunity to provide teachers with training in maintaining expectations and supporting students to meet those expectations.

Future research in this area would benefit from exploring the following: First, teachers might benefit from increased knowledge of mental health needs of students and the ways that problems manifest in the classroom. Researchers have specifically explored the concept of Mental Health Literacy, which is conceptualized as knowledge, beliefs, and attitudes about mental health (Jorm, 2012; Kutcher et al., 2016). Studying mental health literacy among teachers could contribute to understanding barriers impacting teachers in the early identification of emotional and behavioral challenges.

Second, there are a number of training programs that have been designed to improve teacher identification of students with emotional and behavioral challenges. However, there is limited evidence for their effectiveness (for exceptions, see Jorm et al., 2010; Wyman et al., 2008). Furthermore, a number of questions about these programs

are unanswered, including their optimal mode of delivery and individual differences in teacher responsiveness to the trainings. As training programs become increasingly prominent in schools, it will be necessary to evaluate their impact on intended outcomes, including teacher mental health literacy, self-efficacy, and ultimately, improvement in support-provision skills and service referrals.

Third, many questions remain about the effectiveness of specific supports used by school staff, as well as when and to which students different supports should be implemented. For example, children with emotional and behavioral challenges are often given special permission to leave the classroom (J. G. Green et al., 2016). It is not clear how that intervention should be used to support students without facilitating avoidance of classroom-based activities. Similarly, there is limited information about whether reduced expectations might be useful to some students and in some contexts.

Fourth, in considering how teachers address student needs, it is also critical to determine school structures that allow teachers to effectively serve in a support-provision role. School structures that affect teacher supports for students with emotional and behavioral challenges include administrator support, opportunities for collaboration with colleagues, and school climate (Bettini, Crockett, Brownell, & Merrill, 2016; Langley et al., 2010). A multilevel framework for investigating teacher roles will necessarily include attention to these qualities of the school (and district) context. Data on these contextual characteristics can inform future efforts to identify how to most effectively prepare schools in supporting teachers and addressing disparities in emotional and behavioral supports for students.

Appendix

Sample Vignettes

Internalizing moderate. Anna is a student in your class. She is always kind with other people and follows instructions during class. In the last few months, Anna has been increasingly moody, and you have noticed that she often puts her head down on her desk. She also seems to have lost interest in many of her friends and classwork, including participating in class activities that she used to enjoy. Every day, Anna says that she feels very tired, but when you ask, she also says she is sleeping more than normal at night. In addition, the last few months, Anna seems to have trouble concentrating in class.

Externalizing severe. David is a student in your class. He has a long-standing group of friends, of which he is the leader. David is very articulate, and has maintained good grades in school without working hard. In the last few months, David has increasingly argued with his friends and put them down.

He often appears angry, and he frequently blames others for his mistakes. David's friends have begun to stay away from him because he has been overly sensitive, becomes annoyed easily, and at times he seems to try to annoy his friends on purpose. David defies his teachers, and he refuses to comply with adults' requests and rules. He argues loudly with his teachers, more than other students in his classes. Recently, his teachers have often had to place David in detention.

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