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Students' Problem Behaviors as Sources of Teacher Stress in Special Needs Schools for Individuals With Intellectual Disabilities

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Students with intellectual disabilities in special needs schools often exhibit high levels of problem behaviors. Besides the challenges such behaviors present for the students themselves, their peers, and their caregivers, problem behaviors can also be a source of stress for teachers. However, less is known on the degree to which different types of problem behaviors are perceived as stressful in special needs schools for students with intellectual disabilities. Using paper-pencil questionnaires, 295 special needs school teachers (47.81 years, *SD* = 10.49; 83.4% female) in Switzerland ranked the perceived stressfulness (from 0 = *not stressful* to 3 = *very stressful*) of 93 student behaviors. These 93 behavior descriptions stemmed from the Developmental Behavior Checklist (Einfeld and Tonge, 1995). Results suggest behaviors endangering the student or others, such as kicking, hitting, biting, or talking about suicide, were rated as most stressful. Behaviors from the domain disruptive/antisocial behaviors were reported as most stressful and behaviors from the domain of communication disturbance as least stressful. Implications for work-related stress prevention in relation to different types of student problem behaviors for special needs school teachers are discussed.

Keywords: problem behaviors, intellectual disabilities, special needs schools, stress, teachers

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INTRODUCTION

Students with intellectual disabilities (ID) often exhibit high levels of problem behaviors, such as self-injury, hyperactivity, aggression, stereotypies, anxiety, or impulsivity (Dykens, 2000). Statistical reports suggest that problem behaviors occur three times more frequently in individuals with ID than in the general population (Dekker et al., 2002). Exhibiting high levels of problem behaviors is associated with increased risk of social isolation and unemployment (Stevens and Martin, 1999) and with a higher probability of being taught in special needs schools (Kurth et al., 2014). However, problem behaviors can pose challenges not just for individuals with ID but also for the key people in their environment. Besides parents, siblings, peers, or caregivers, they can also be a source of stress for teachers (Hastings and Brown, 2002). While teachers who work with students with ID face various challenges, such as a perceived lack of students' progress or heavy workloads (Antoniou et al., 2000), dealing with students' problem behaviors is one of the most frequently reported sources of stress for special needs teachers (Kokkinos and Davazoglou, 2009; Ghani et al., 2014). The more teachers perceive that a student's behavior deviates from their instructional goals (e.g., because of the amount of time it takes to manage the problem behavior), the higher the intensity of unpleasant

emotions (Chang, 2013), which can lead to the experience of stress. The reaction to prolonged and high rates of stress can produce feelings of emotional exhaustion, which is often referred to as a key aspect of burnout (Wisniewski and Gargiulo, 1997). Studies suggests that teacher-rated student misbehavior is linked to teacher exhaustion and turnover intentions (Hastings and Brown, 2002; Tsouloupas et al., 2010; Aldrup et al., 2018).

Although the problematic relationship between students' problem behavior and teachers' stress is well-established, less is known about the degree to which individual behaviors of students with ID are perceived as stressful by teachers. Additional knowledge on this issue may assist in the development of specific preventive actions to prepare teachers to handle such student behaviors and adopt adequate coping strategies. Hence, the aim of this study was to systematically assess the degree to which teachers perceive as stressful specific student behaviors from a broad set of known problem behaviors in students with ID. We focused on teachers working in special needs schools for students with ID, who are known to often face problem behaviors by students (Kurth et al., 2014).

Problem Behaviors in Students With Intellectual Disabilities

In addition to the term "problem behavior" (e.g., Tassé and Lecavalier, 2000), the literature includes other terms, such as "challenging behavior" (Emerson et al., 2001) or "emotional and behavioral problems" (Einfeld and Tonge, 1995) that describe behaviors of individuals with ID which can be difficult to manage. In the current study we use the broad term "problem behaviors." We conceptualize such behaviors of students with ID according to the definition used by Einfeld and Tonge (1995), who characterize an individual's emotional and behavioral disturbances as an "abnormality or quantitative or qualitative deviance, distress to person or carers, and impairment to adaptive functioning beyond that resulting from developmental disability itself" (Einfeld and Tonge, 1995, p. 97).

Students with ID can exhibit a broad spectrum of problem behaviors and there are different ways to classify them. Generally, problem behaviors are often distinguished along two major dimensions: externalizing and internalizing problem behaviors. Externalizing behaviors include, for example, overactive, impulsive, and aggressive behaviors. These behaviors have a disturbing effect on an individual's environment, such as other people or objects. Internalizing behaviors, in contrast, are characterized by depressive, anxious symptoms, or social withdrawal, and are considered disturbing to the individual concerned (Achenbach and Edelbrock, 1978). Other conceptualizations focus specifically on problem behaviors typically seen in individuals with ID. For example, based on case analyses of individuals with ID, Einfeld and Tonge (1995) developed a broad list of behaviors often seen in individuals with ID and identified the five domains of disruptive/antisocial behaviors (e.g., abusive, swearing), self-absorbed behaviors (e.g., poor sense of danger), communication disturbance (e.g., echolalia), anxiety (e.g., distressed when separated), and problems in social relating (e.g., does not show affection).

Students with ID exhibit increased rates of problem behaviors. A study by Emerson et al. (2001) indicated that over 40% of children and adolescents (0–19 years) with ID in two areas of England exhibited challenging behaviors. Among all children with ID identified as showing challenging behaviors, the prevalence of specific behavior topographies was as follows: 59% showed aggression, 37% demonstrated destructive behavior, 28% showed self-injurious behaviors, and 87% exhibited other forms of problematic behaviors (e.g., generalized non-compliance or temper tantrums). A study conducted at a special needs school showed that 53% of the 321 students (3–19 years) exhibited at least one type of challenging behavior. Self-injurious behavior was exhibited most frequently (36.4%), followed by aggressive/destructive behavior (30.2%), and stereotyped behavior 25.9% (Nicholls et al., 2019).

Problem Behaviors as a Source of Teacher Stress

Problem behaviors of individuals with ID are exhibited in different contexts, such as the home (Woodman et al., 2015), living arrangements (Jenkins et al., 1997; Mitchell and Hastings, 1998), and school (Hastings and Brown, 2002), and can therefore affect different people. Given the association between higher levels of problem behaviors and increased probability of attending special needs schools (Kurth et al., 2014), teachers working in such environments face especially high levels of such behaviors.

Various work stress theories have been applied to research on the ways in which students' problem behaviors may relate to teachers' stress (Devereux et al., 2009). Using a cognitive-behavioral framework, which emphasizes that a stimulus only becomes a stressor if it is perceived as such, stress can be understood as "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus and Folkman, 1984, p. 19). Focusing specifically on teacher stress, Kyriacou (2001, p. 28) describes it as a "negative emotional experience being triggered by the teacher's perception that their work situation constituted a threat to their self-esteem or well-being." In this understanding, a student's problem behavior represents a stimulus from the environment that is not stressful *per-se* for teachers. However, it becomes a stressor if teachers perceive it as causing a discrepancy between a demand and their ability to cope with this demand. This understanding also corresponds with the job demands-resources model (Bakker and Demerouti, 2007). In this model job demands, such as emotionally critical interactions with clients, represent job aspects that can evoke strain when exceeding the employee's adaptive capability. Job resources, such as social support from coworkers, refer to aspects that are functional in achieving work goals, reduce job demands and the associated costs, and stimulate personal growth, learning, and development (Bakker and Demerouti, 2007). Hence, teachers' lack of resources may have the consequence that they perceive their job demands as stressors.

Researchers have sought insights into teachers' perception of different types of problem behaviors, and initial studies were conducted in regular classrooms. For example, Kokkinos et al. (2004) asked teachers to rate the seriousness with which they perceived 25 undesirable student behaviors. Results suggested that antisocial behaviors (stealing, cruelty/bullying, and destroying school property) were perceived as most serious, whereas behaviors indicative of emotional and attentional difficulties were considered least serious. Alter et al. (2013) asked 800 teachers in mainstream classes where only a few students with special needs were included to report on the degree to which they perceive nine types of student behaviors as problematic. Results showed that externalizing behaviors (e.g., off-task, verbal disruption) were perceived as more problematic than internalizing behaviors (e.g., self-stimulation, isolation/no interaction). Corresponding with these findings, Friedman-Krauss et al. (2014) found that higher levels of externalizing student problem behaviors in the fall subsequently predicted higher stress in spring among teachers working in preschool classrooms.

Studies conducted in special needs settings have often collected data on a broad inventory of potential factors that can contribute to teacher stress. With student problem behavior as just one factor among many, it has often been assessed broadly (e.g., "facing difficult students"; Antoniou et al., 2000), with little detail available on specific types of behaviors. For example, several studies have suggested special needs teachers perceive student misbehavior and behavior management to be the greatest factors contributing to their stress levels (e.g., Kokkinos and Davazoglou, 2009; Ghani et al., 2014). Focusing on a specific group of students, Lecavalier et al. (2006) investigated the impact of problem behaviors by young people with autism spectrum disorders (64% had an additional ID) on teacher stress. The authors found significant associations between teachers' stress and students' conduct problems, irritable behaviors, self-isolated/ritualistic behaviors, hyperactive behaviors, and self-injury/stereotypic behaviors. No relation was found between teachers' stress and students' insecure/anxious behaviors.

Concerning individuals with ID, a study by Elgie and Hastings (2002) provides insights into which behaviors are considered challenging. The authors asked support staff in the community residential homes or day centers of adults with ID to rate 48 behaviors in terms of questions like "Is this a challenging behavior?" and "Is it important to intervene in some way?" Results showed that staff were more likely to rate behaviors that disrupt the environment (e.g., hitting others, spitting) as challenging behaviors that require intervention, compared to behaviors that disrupt the individual (e.g., head banging, inactive). While these results indicate what support staff in service units consider to be challenging behavior in adults with ID, it remains unclear the degree to which behaviors in children and adolescents with ID are perceived as stressful by teachers in special needs school settings. This distinction is important because differences may exist due to both the differing ages (i.e., children and adolescents vs. adults) and the differing professional demands in schools compared to service units. Male (2003) conducted a study in special schools for individuals with severe learning disabilities whose findings indicated teachers were generally concerned about challenging behaviors and found them to be stressful. The teachers were presented with five vignettes, each describing one behavioral domain. They rated self-injurious behavior as the most challenging, followed by aggressive, destructive, stereotypic, and disruptive behaviors. In addition, they were asked to describe a challenging behavior in a specific student and a majority of teachers (51.4%) identified aggressive behavior. While these results shed light on the general domains of behaviors that are perceived as challenging and the degree of perceived stress associated with each, it is still unclear the degree to which specific behaviors of students with ID are perceived as stressful by teachers.

The Current Study

This study investigated the degree to which individual problem behaviors of students with ID were perceived as sources of stress for teachers working in special needs schools for students with ID. We asked teachers to rate a broad spectrum of behaviors typically seen in this student population. The behavioral descriptions were based on the conceptualization by Einfeld and Tonge (1995), who distinguish between different domains of problem behaviors. First, we sought to determine, for every single type of behavior, the degree to which it was perceived as stressful; this determination would then allow us to order the behavioral descriptions according to their relevance for teacher stress. Second, our goal was to test whether the different domains of student problem behavior differ in terms of perceived stressfulness.

METHODS

Participants

The current study was part of the larger research project "Peer Influence on Adaptive Functioning and Behavioral Problems of Children and Adolescents with Intellectual Disabilities (KomPeers)" (Müller, 2019) in Switzerland, which involves teachers working in 16 special needs schools in six German-speaking cantons (provinces). In Switzerland inclusive schooling and special needs schools for students with ID exist in parallel. Exact numbers on how many students with ID attend which setting across Switzerland are lacking, due in part to the federally organized education system. However, a Swiss study indicated that the lower the level of a student's adaptive behaviors, the higher the probability they will be taught in special needs schools (Sermier Dessemontet et al., 2011). Given the association between adaptive and problem behaviors (de Bildt et al., 2005), it can therefore be expected that students with ID attending Swiss special needs schools exhibit higher levels of problem behaviors than those attending inclusive classrooms. Whether a student in Switzerland attends a special needs school for students with ID is determined following a standardized assessment procedure involving the student, parents and professionals (e.g., special needs teachers, psychologists, psychiatrists, and school administration). Assessment of students typically includes the use of a standardized IQ-test and clarification of the need of support.

In the present study, 295 (out of a total of 320) special needs teachers from 16 special needs schools for students with ID were surveyed (response rate = 92.19%). Teachers worked in 178

classrooms that were attended by 1,125 students (aged $M = 11.31$ years, $SD = 3.74$; range 4.17–19.08) and the mean number of students per class was 6.32 students ($SD = 1.47$). The schools were organized in classes of entry, lower, intermediate, upper and advanced level. The percentage of female teachers was 83.4 and mean age was 47.81 years ($SD = 10.49$). Most of the teachers had studied special education (82.6%), while others had degrees in social pedagogy, teaching degrees in kindergarten/primary school education, or others. The teachers reported a mean workload of 65.08% ($SD = 22.22$) compared to 100% full-time and a mean of 15.84 years ($SD = 10.61$) of work experience in this field. Of all the teachers from the final sample, 76.2% were head teachers in their classroom while the others were part-time teachers.

Measure

Teacher Stress Due to Problem Behaviors

Using paper-pencil based questionnaires, participants provided information on the degree to which they perceived different types of student problem behaviors as stressful (0 = *not stressful*, 1 = *a little stressful*, 2 = *stressful*, 3 = *very stressful*). The instructions were as follows: *"At special needs schools, teachers are sometimes faced with student problem behaviors. This study aims to find out the degree to which teachers perceive different types of problem behaviors as stressful. Please do not think about what it would be like if a student were to show such behavior (but in fact this behavior does not occur in daily school life). Instead, report whether the behavior in question is a source of stress for you in your actual school life. Do you find the following behaviors stressful in your daily school life?"* Teachers were additionally informed that it was not a condition that the student behavior occurs right now. Instead, a behavior may be reported as currently stressful because of experiences with this behavior in the past. For example, a teacher may perceive the student behavior "lighting fire" as stressful because she had a student who lit fire last year and at present she is confronted with a student who is focused on finding lighters (but did not yet light a fire). The 93 behavior descriptions of problem behaviors were taken, unchanged, from the German version of the Developmental Behavior Checklist, Teacher Version (DBC-T; Einfeld et al., 2007). The items of this instrument were generated by extracting descriptions from 664 case files of children and adolescents with ID and behavior disorders (Einfeld and Tonge, 1995). The DBC-T consists of 93 items that are grouped into five dimensions/subscales: disruptive/antisocial behaviors, self-absorbed behaviors, communication disturbance, anxiety, and social relating behaviors (for sample items, see **Table 1**). Four items occur in two different subscales and nine items belong to the additional subscale "Other" (see **Table 1**). The subscales were derived from factor analyses using data from 1,093 children and adolescents with ID and showed satisfactory internal consistency ($\alpha = 0.67$–0.91). Interrater and test-retest agreement were satisfactory and good evidence of concurrent validity was provided. Further, the discriminative validity in terms of identifying psychiatric cases using the total score was excellent (Einfeld and Tonge, 1995).

For the current analyses, we used information from the single-item ratings and the subscale and total scores (derived from calculating means across item ratings). The single subscales and the total scale demonstrated good to excellent reliability (stress due to: disruptive/antisocial behaviors $\alpha = 0.92$; self-absorbed behaviors $\alpha = 0.94$; communication disturbance $\alpha = 0.87$; anxiety $\alpha = 0.82$; social relating behaviors $\alpha = 0.83$; total behavior problems $\alpha = 0.97$).

Procedure

The institutional review board approved this study and ethics laws were followed throughout the research project. The recruitment of the participating schools was based on a first contact by phone, followed by written information about the study and a personal meeting with the school administration. From 20 schools contacted throughout the Swiss-German part of Switzerland, 16 decided to participate in the study. Researchers introduced the study and the questionnaires in detail at a meeting in each participating school. Data were assessed completely anonymously, meaning that researchers never had access to the names of any teachers. School administration likewise had no access to individual data reported by participating teachers. Participants were asked to complete the questionnaires in private and were assured that the school administration would not receive information on teachers' individual reports, to encourage independent and honest answering. Teachers could decline participation. Researchers collected the questionnaires after 3 work weeks.

Statistical Analyses

We used mean values and distributions of data to create a ranked list of perceived stressfulness of student behaviors. To assess the overall difference between behavioral domains (subscale means), we conducted a repeated measures ANOVA. The significance of the differences between the subscale scores were calculated using Bonferroni-adjusted pairwise comparisons.

RESULTS

The mean total score across all 93 items on perceived stressfulness of problem behaviors was $M = 0.78$ ($SD = 0.43$). On a scale from 0 (*not stressful*) to 3 (*very stressful*) this indicates a relatively low value. Regarding the question of the degree to which individual student problem behaviors are perceived as stressful, **Table 1** shows the descriptive results on the item level. The means of all 93 items are sorted in descending order with higher means indicating higher perceived stress. "Kicks, hits others" was rated with a mean of 1.85 ($SD = 0.99$) and was therefore considered by teachers to be the most stressful of all the listed behaviors. This item was followed by "talks about suicide" ($M = 1.64$, $SD = 1.36$) and "bites others" ($M = 1.63$, $SD = 1.19$). In the used four-point scale ranging from 0 to 3, the theoretical mean equals 1.5. The three other problem behaviors rated above this theoretical scale mean of 1.5 were "screams a lot" ($M = 1.57$, $SD = 1.04$), "deliberately runs away" ($M = 1.54$, $SD = 1.04$), and "throws or breaks objects" ($M = 1.53$, $SD = 0.99$). The standard deviations of the abovementioned highly ranked items were around 1, which suggests a relatively large variation in teacher perceptions. This variation can also be seen in the histograms in **Figure 1** that show results for the 10 most highly ranked items (the frequency on

TABLE 1 | Item means and distributions of perceived stress due to different student problem behaviors in ranked order.

Rank	Item	*M*	*SD*	Min	Max	Subscale from DBC-T
1.	Kicks or hits others.	1.85	0.99	0	3	Disruptive/antisocial
2.	Talks about suicide.	1.64	1.36	0	3	Other
3.	Bites others.	1.63	1.19	0	3	Self-absorbed
4.	Screams a lot.	1.57	1.04	0	3	Self-absorbed
5.	Deliberately runs away.	1.54	1.04	0	3	Disruptive/antisocial, Self-absorbed
6.	Throws or breaks objects.	1.53	0.99	0	3	Disruptive/antisocial, Self-absorbed
7.	Soils outside the toilet, although toilet-trained. Smears or plays with feces.	1.48	1.25	0	3	Self-absorbed
8.	Has a poor sense of danger.	1.48	0.93	0	3	Self-absorbed
9.	Lights fires.	1.47	1.30	0	3	Disruptive/antisocial
10.	Tries to manipulates or provoke others.	1.46	0.90	0	3	Disruptive/antisocial
11.	Bangs head.	1.44	1.14	0	3	Self-absorbed
12.	Hits or bites self.	1.43	1.09	0	3	Self-absorbed
13.	Has inappropriate sexual activity with another.	1.39	1.27	0	3	Other
14.	Has temper tantrums (e.g., stamps feet, slams doors).	1.36	0.89	0	3	Disruptive/antisocial
15.	Masturbates or exposes self in public.	1.32	1.17	0	3	Self-absorbed
16.	Is noisy or boisterous.	1.32	0.87	0	3	Disruptive/antisocial
17.	Is stubborn, disobedient, or uncooperative.	1.28	0.90	0	3	Disruptive/antisocial
18.	Seeks attention more than others.	1.22	0.80	0	3	Disruptive/antisocial
19.	Is very active or restless. Can't stand still.	1.22	0.83	0	3	Disruptive/antisocial, Self-absorbed
20.	Is abusive. Swears at others.	1.21	0.82	0	3	Disruptive/antisocial
21.	Mood changes rapidly for no apparent reason.	1.17	0.86	0	3	Disruptive/antisocial
22.	Urinates outside toilet, although toilet-trained.	1.13	1.04	0	3	Self-absorbed
23.	Steals.	1.11	1.02	0	3	Disruptive/antisocial
24.	Refuses to go to school, activity center, or work.	1.09	1.02	0	3	Disruptive/antisocial
25.	Is unpopular with other children.	1.06	0.88	0	3	Other
26.	Hyperventilates, vomits, has headaches, or complains of being sick for no physical reason.	1.02	0.99	0	3	Social relating
27.	Is impulsive, acts before thinking.	1.00	0.81	0	3	Disruptive/antisocial
28.	Eats non-food items (e.g., dirt, grass, soap).	0.95	0.91	0	3	Self-absorbed
29.	Is very bossy.	0.95	0.89	0	3	Disruptive/antisocial
30.	Appears depressed, down, or unhappy.	0.94	0.80	0	3	Social relating
31.	Strips off clothes or throws away clothes.	0.93	0.95	0	3	Self-absorbed
32.	Is irritable.	0.93	0.79	0	3	Disruptive/antisocial
33.	Stands too close to others.	0.93	0.76	0	3	Communication disturbance
34.	Scratches or picks his or her skin.	0.89	0.94	0	3	Other
35.	Sees or hears something that isn't there. Has hallucinations.	0.89	0.98	0	3	Other
36.	Lacks self-confidence. Has poor self-esteem.	0.88	0.80	0	3	Disruptive/antisocial
37.	Tells lies.	0.88	0.86	0	3	Disruptive/antisocial
38.	Is easily led into trouble by others.	0.88	0.77	0	3	Disruptive/antisocial
39.	Becomes overexcited.	0.86	0.78	0	3	Self-absorbed
40.	Cannot attend to one activity for any length of time. Has poor attention span.	0.86	0.84	0	3	Self-absorbed
41.	Eats greedily. Will do anything to get food (e.g., takes food out of garbage bins or steals food).	0.86	0.88	0	3	Self-absorbed
42.	Has delusions: has a firmly held belief or idea that can't possibly be true.	0.83	0.92	0	3	Other
43.	I easily distracted from tasks (e.g., by noises).	0.82	0.76	0	3	Other
44.	Is distant, in his or her own world.	0.8	0.79	0	3	Self-absorbed, Social relating
45.	Wanders aimlessly.	0.77	0.84	0	3	Self-absorbed
46.	Whines or complains a lot.	0.73	0.72	0	3	Disruptive/antisocial
47.	Is overly affectionate.	0.72	0.71	0	3	Communication disturbance
48.	Is distressed about being alone.	0.70	0.76	0	3	Anxiety
49.	Is tense, anxious, or worried.	0.68	0.71	0	3	Disruptive/antisocial

(Continued)

TABLE 1 | Continued

Rank	Item	*M*	*SD*	Min	Max	Subscale from DBC-T
50.	Is upset and distressed over small changes in routine or environment.	0.67	0.71	0	3	Anxiety
51.	Gets obsessed with an idea or activity.	0.66	0.66	0	3	Communication disturbance
52.	Underreacts to pain.	0.64	0.80	0	3	Self-absorbed
53.	Hums, whines, grunts, squeals, or makes other non-speech noises.	0.63	0.75	0	3	Self-absorbed
54.	Repeats the same word or phrase over and over.	0.63	0.74	0	3	Communication disturbance
55.	Moves slowly, underactive, does little (e.g., only sits and watches others).	0.62	0.71	0	3	Social relating
56.	Cries easily for no reason or over small things.	0.62	0.73	0	3	Anxiety
57.	Repeats back what others say like an echo.	0.62	0.73	0	3	Communication disturbance
58.	Chews or mouths objects or body parts.	0.60	0.75	0	3	Self-absorbed
59.	Has unconnected thoughts. Different ideas are jumbled together with unclear meaning.	0.59	0.74	0	3	Other
60.	Is a picky eater.	0.59	0.77	0	3	Anxiety
61.	Is impatient.	0.58	0.68	0	3	Disruptive/antisocial
62.	Hides things.	0.57	0.67	0	3	Disruptive/antisocial
63.	Talks too much or too fast.	0.54	0.64	0	3	Disruptive/antisocial
64.	Has a loss of appetite.	0.53	0.72	0	3	Anxiety
65.	Is excessively distressed if separated from familiar person.	0.50	0.62	0	3	Anxiety
66.	Is jealous.	0.50	0.65	0	3	Disruptive/antisocial
67.	Doesn't respond to others' feelings (e.g., shows no response if a family member is crying).	0.49	0.71	0	3	Social relating
68.	Fears particular things or situations (e.g., the dark, insects).	0.48	0.62	0	2	Anxiety
69.	Flicks, taps, or twirls objects repeatedly.	0.48	0.64	0	3	Self-absorbed
70.	Switches lights on and off, pours water over and over, or does some similar repetitive activity.	0.47	0.66	0	3	Self-absorbed
71.	Laughs or giggles for no obvious reason.	0.45	0.65	0	3	Self-absorbed
72.	Prefers the company of adults or younger children. Doesn't mix with his or her own age group.	0.40	0.58	0	3	Communication disturbance
73.	Doesn't show affection.	0.39	0.64	0	3	Social relating
74.	Grinds teeth.	0.39	0.63	0	3	Self-absorbed
75.	Is unrealistically happy or elated.	0.38	0.57	0	3	Communication disturbance
76.	Covers ears or is distressed when hears particular sounds.	0.35	0.56	0	2	Other
77.	Smells, tastes, or licks objects.	0.35	0.55	0	3	Self-absorbed
78.	Talks to self or imaginary people or objects.	0.34	0.59	0	3	Communication disturbance
79.	Refers to do things alone. Tends to be a loner.	0.33	0.54	0	2	Social relating
80.	Says things he or she can do things that he or she is not capable of.	0.32	0.58	0	3	Disruptive/antisocial
81.	Avoids eye contact. Won't look you straight in the eye.	0.31	0.51	0	3	Social relating
82.	Has repeated movements of hands, body, head, or face (e.g., hand flapping or rocking).	0.29	0.56	0	3	Self-absorbed
83.	Is preoccupied with only one or two particular interests.	0.27	0.50	0	3	Communication disturbance
84.	Speaks in a whisper, high-pitched voice, or other unusual tone or rhythm.	0.26	0.54	0	3	Communication disturbance
85.	Has great interest in looking at, listening to, or dismantling mechanical things (e.g., lawn mower, vacuum cleaner).	0.23	0.49	0	2	Communication disturbance
86.	Arranges objects or routine in a strict order.	0.20	0.45	0	3	Communication disturbance
87.	Is shy.	0.20	0.43	0	2	Anxiety
88.	Has unusual body movements, posture, or way of walking.	0.19	0.47	0	2	Self-absorbed
89.	Has facial twitches or grimaces.	0.17	0.41	0	3	Self-absorbed
90.	Resists being cuddled, touched, or held.	0.17	0.37	0	1	Social relating
91.	Likes to hold or plays with unusual objects (e.g., string, twigs) or is overly fascinated with something (e.g., water).	0.15	0.38	0	2	Self-absorbed
92.	Stares at lights or spinning objects.	0.13	0.36	0	2	Self-absorbed
93.	Confuses the use of pronouns (e.g., uses *you* instead of *I*).	0.09	0.32	0	2	Communication disturbance

0, not stressful; 1, a little stressful; 2, stressful; 3, very stressful.

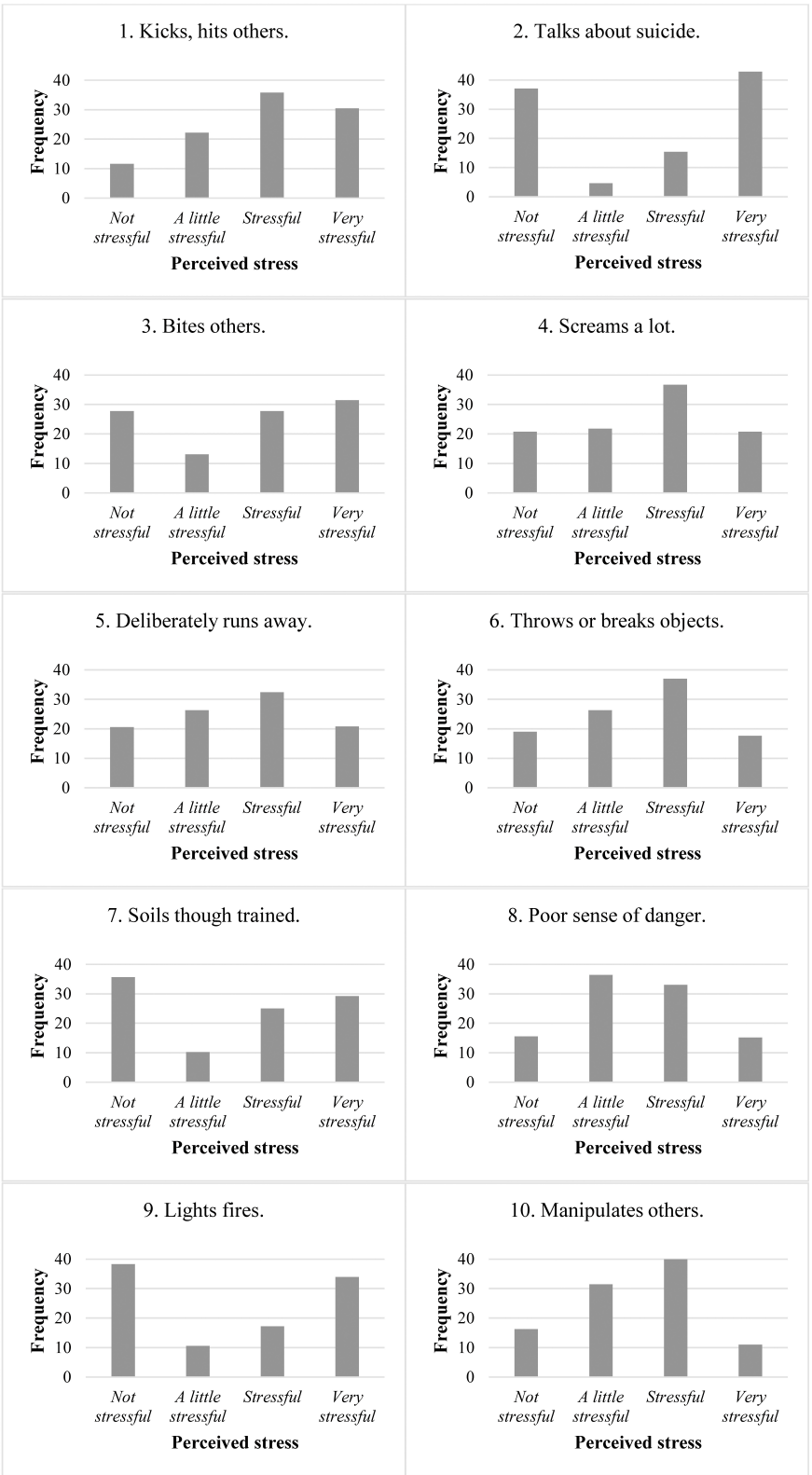

FIGURE 1 | Rating distributions of the 10 items on perceived stress due to the student problem behavior with the highest means.

the y-axis represents the valid percentages). Distributions tended to be left-skewed, which indicates that few teachers rated these behaviors as *not stressful* or *a little stressful*. **Figure 1** further indicates that the data distributions of "talks about suicide," "bites others," "soils outside the toilet, although toilet-trained, smears or plays with feces" and "lights fire" are bipolar, with peaks at the ends of the rating scales. Hence, many teachers rated these behaviors as either *very stressful* or *not stressful*.

Behaviors that teachers perceived to be least stressful were "has unusual body movements, posture, or way of walking" ($M = 0.19$, $SD = 0.47$), "has facial twitches or grimaces" ($M = 0.17$, $SD = 0.41$), "resists being cuddled, touched, or held" ($M = 0.17$, $SD = 0.37$), "likes to hold or plays with unusual objects (e.g., string, twigs) or is overly fascinated with something (e.g., water)" ($M = 0.15$, $SD = 0.38$), "stares at lights or spinning objects" ($M = 0.13$, $SD = 0.36$), and "confuses the use of pronouns (e.g., uses you instead of I)" ($M = 0.09$, $SD = 0.32$). In comparison to the six behaviors perceived as most stressful (M of $SD = 1.10$), the standard deviations of these items were smaller (M of $SD = 0.38$).

When considering the different domains of problem behaviors, it is noticeable that items from the domain disruptive/antisocial behaviors (e.g., "kicks, hits others") and self-absorbed behaviors (e.g., "screams a lot") were most often represented at the top of the rankings. In contrast, behaviors from the domain social relating only occurred for the first time at number 26 on the rankings, communication disturbance at number 33, and anxiety at number 48. **Figure 2** shows subscale mean comparisons. The highest mean was for the domain disruptive/antisocial behaviors ($M = 1.04$, $SD = 0.48$), followed by self-absorbed behaviors ($M = 0.80$, $SD = 0.51$), social relating behaviors ($M = 0.56$, $SD = 0.45$), anxiety ($M = 0.54$, $SD = 0.45$), and communication disturbance ($M = 0.44$, $SD = 0.37$). A repeated measures ANOVA with a Greenhouse–Geisser correction showed a statistically significant difference between the subscale means [$F_{(3.33,869.25)} = 247.41$, $p < 0.001$, partial $\eta^2 = 0.49$]. The Greenhouse–Geisser adjustment was used to correct for violations of sphericity. All subscale means differed significantly from each other (Bonferroni-adjusted; $p < 0.001$), except the subscales concerning perceived stress due to social relating behaviors and anxiety (i.e., the third and fourth-highest ranked domains, $p > 0.999$).

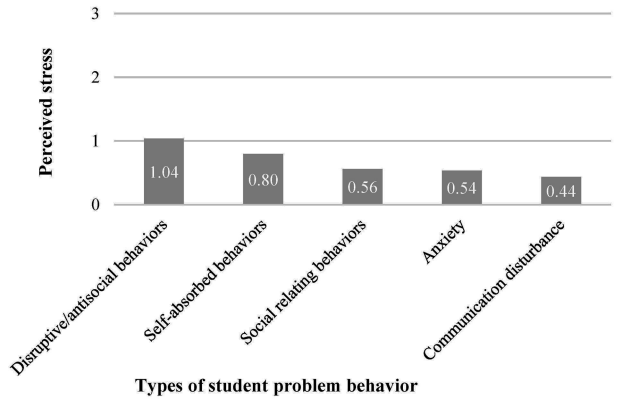

FIGURE 2 | Subscale means of perceived stress due to different student problem behavior domains in ranked order (0, not stressful; 1, a little stressful; 2, stressful; 3, very stressful).

DISCUSSION

This study sought to extend the literature on how stressful teachers working in special needs schools for individuals with ID perceive different types of student problem behaviors. In this study, the mean value of the scale used to assess the degree to which teachers perceive different problem behaviors as stressful was relatively low. At first glance this contradicts earlier findings suggesting that problem behaviors represent an important source of teacher stress (Male, 2003; Kokkinos and Davazoglou, 2009; Ghani et al., 2014). Several potential explanations for this apparent contradiction are offered below. Generally, most prior studies have investigated problem behavior as a broad construct that was assessed together with other sources of teacher stress. Compared to other sources of stress, respondents may have rated problem behaviors as more stressful in these studies. Another reason could be that teachers in this sample experienced lower overall stress levels due to adequate school resources (e.g., support by other staff) or good training. However, in our view, the most probable explanation is related to the characteristics of the instrument used in this study. The current research investigated a very broad set of problem behaviors, where many student behaviors were rated as not stressful. Only considering the mean across 93 items may disguise the fact that certain behaviors were indeed rated as stressful (see **Table 1**). Despite a low overall mean, these individual behavior types may cause significant stress to individual teachers, and furthermore it may be *those* behaviors that teachers think of when evaluating the stressfulness of problem behaviors as a broader construct. Furthermore, it can be expected that individual sources of stressful behaviors may accumulate when experienced simultaneously in a classroom, which may not be unusual in special needs schools for students with ID. We would therefore suggest the overall mean should *not* be taken as an indicator of general stress that results from problem behaviors of students. In contrast, the present instrument was used to describe the degree to which stressful specific behaviors are perceived as stressful.

Results showed that problem behaviors by students with ID that can severely injure others, such as kicking, hitting, or biting others, were perceived as most stressful by teachers in special needs schools. This confirms and adds to findings from Lecavalier et al. (2006), who reported that conduct problems of students with ASD, such as physically attacking people, were associated with teacher stress. Furthermore, our results correspond with those of a study conducted in service units for adults with ID, showing that hitting, kicking others, or pulling others' hair were perceived as challenging by support staff (Elgie and Hastings, 2002). Another important insight from our study was that behaviors endangering the individual student who displays the behavior, such as talking about suicide, running away, poor sense of danger, banging head, hitting or biting self, also represent important stressors for teachers. This

pattern of results may indicate that types of student problem behaviors that endanger the student in question or others lead to stress, because teachers feel responsible for avoiding injuries to individual students, peers, and themselves. To make sure nobody gets hurt, teachers face high demands regarding student monitoring and behavior management. By investing in harm avoidance, a teacher's goal to provide learning opportunities may be hampered, thereby causing negative emotions in the teacher. This line of explanations is supported by the results from an earlier study by Male (2003), which found that teachers working in special needs schools for students with severe learning disabilities were concerned about physical harm to self and others.

Interestingly, extreme forms of student problem behaviors, such as talking about suicide, lighting fires, soiling, and biting others had a bipolar distribution in terms of perception of stressfulness, indicating that teachers perceived these behaviors as either not stressful at all or very stressful. An explanation for this could be that students who exhibit such behaviors are relatively scarce. Teachers confronted currently or in the past with such extreme behaviors may experience them as very stressful, whereas teachers who never were confronted with such behaviors, do not perceive them as stressful. As the present data do not allow a differentiation between current stress due to past or present student behavior, more research will be needed on how past experiences with students can affect present teacher stress (e.g., worries that a present student may engage in a previously experienced problematic behavior). Another goal of our study was to compare the perceived stressfulness of different domains of student problem behaviors. Generally, behavioral domains differed substantially from each other in degree of perceived stress. In line with the direction of the results from the single-item analyses, findings suggest that teachers perceive disruptive/antisocial and self-absorbed behaviors as most stressful in their daily school life. Both domains can be considered externalizing behaviors in the instrument used here. This result therefore corresponds with findings that behaviors disrupting the environment, including antisocial behaviors, are perceived as challenging by teachers in mainstream schools and support staff in service units (Elgie and Hastings, 2002; Kokkinos et al., 2004). Further, our results suggest that perceptions of anxious behaviors by students with ID in special needs schools range between a little stressful and not stressful (see **Figure 2**). This corresponds with previous studies reporting no association between teacher stress and insecure and anxious behaviors of students with ASD (Lecavalier et al., 2006). The fact that internalizing behaviors were experienced as relatively less stressful can be interpreted in the light of prior findings indicating such behaviors often remain undetected and have a relatively low impact on teachers' daily instruction (Alter et al., 2013). Finally, social relating behaviors and communication disturbance were considered relatively less stressful for teachers. It is possible that special needs teachers experience these two types of student characteristics as having a rather small impact on instruction.

Considering these results as a whole, the different degrees of perceived stress depending on the domains of problem behaviors can also be viewed in the light of a cognitive-behavioral framework of teacher stress and the job demands-resources model (Lazarus and Folkman, 1984; Bakker and Demerouti, 2007). In both models it is assumed that a stimulus becomes a stressor if it exceeds the resources of a person in a specific job situation. It is thus likely that the different student problem behaviors require different amounts of resources to avoid stress. In this perspective, disruptive/antisocial and self-absorbed behaviors by students may pose the greatest demands for teachers and require the greatest resources to not experience stress.

Implications

Our results have implications for preventing teacher stress due to problem behaviors in special needs schools for students with ID. Given the pattern of findings in this study, it is useful for interventions to especially focus on supporting teachers in dealing with student behaviors that endanger themselves or others. A specific focus may be on externalizing behaviors that risk physical consequences (e.g., kicking, hitting, biting, throwing objects) and behaviors that strongly affect the environment and the students in question (e.g., screaming, soiling, poor sense of danger). One direction of prevention may be to foster adequate coping strategies in teachers. According to the stress model proposed by Lazarus and Folkman (1984), coping strategies affect the degree to which a person perceives a situation as stressful. Hastings and Brown (2002) found that teachers who apply maladaptive coping strategies in dealing with students' problem behaviors (e.g., self-distraction, denial, or self-blame) are exposed to higher risk for burnout compared to those who use adaptive strategies (e.g., planning, positive reframing, or using emotional support). Other studies that focus on teachers' stress in special needs settings suggest problem-focused coping strategies (e.g., changing the situation) are more effective for managing problem behaviors than emotion-focused strategies (e.g., regulating unpleasant emotions; Boujut et al., 2016). Teachers could thus be made aware of their current coping strategies and receive support in applying optimal coping mechanisms. In addition to working on stress management approaches, strategies for reducing students' problem behavior itself could be fostered. For example Male (2003), found that teachers working in special schools for students with severe learning disabilities considered the most effective approach for managing students' problem behaviors to be replacing inappropriate behaviors with functionally equivalent, appropriate communicative behaviors and behavioral approaches. In addition to individual strategies, structural opportunities exist for school administration to prevent stress due to student problem behaviors. Such measures to increase job resources may include allowing time for teachers to collaborate, specialized workshops and consulting, or hiring more support staff (Pullis, 1992). Given the bipolar distribution of perceived stress regarding extreme behaviors (e.g., talking about suicide or lighting fires), it may be useful to focus support measures especially on those teachers who actually experience stress due to such behaviors.

Although the low perceived stressfulness of student internalizing behaviors can be considered as positive, as mentioned above this finding can also be associated with an under-identification of such behaviors. Under-identification would be problematic given students' strain and the long-term

risks associated with internalizing behaviors (e.g., impaired functioning in work, social, and family life; Weissman et al., 1999). Hence, the results of the present study should not be interpreted as a suggestion that teachers only focus on externalizing behaviors in their classroom. In contrast, teacher training should include diagnostic competencies and strategies to support individuals with internalizing behaviors. However, increased awareness of these difficulties could also increase teacher stress levels, for which appropriate training in coping strategies may be needed.

STRENGTHS, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS

To the authors' knowledge, this is the first study to investigate teacher-perceived stressfulness of a very broad spectrum of problem behaviors typically seen in students with ID in special needs schools. The high specificity of the results (i.e., the situation of teachers in special needs schools for students with ID) may help inform teacher training and school-based prevention programs designed to decrease teacher stress. Given the rather high participation rate, threats to validity that arise from selective participation were likely reduced.

However, this study also has limitations. While our approach is in line with Lazarus and Folkman (1984) in that we assessed the perception of stressful events and not the events themselves, the study would have benefited further from including information on the prevalence of problem behaviors in the classrooms and schools assessed here. This would have increased the reliability of our findings as the prevalence of specific problem behaviors may be different across classrooms and schools. Considering the role of prevalence may be an especially interesting line of research for explaining the bipolar distributions of teacher stress due to extreme yet likely scarce behaviors, such as lighting fires. In addition, shedding further light on the factors that moderate the relation between exposure to student problem behaviors and perceived stress could provide interesting perspectives for developing prevention strategies. For example, earlier research suggests that supervisor support, innovativeness, information, appreciation, and organizational climate represent job resources that can buffer negative impact of student misbehavior on teacher work engagement (Bakker et al., 2007). Hence, future research may consider which contextual resources and which coping strategies are most effective in avoiding stress related to the different types of student problem behaviors identified here. In the same direction, it will be interesting to investigate in how far stress experience clusters across schools. This was less a focus in this study which compared stress across behavioral domains within individuals. However, it is an important question for explaining stress by school-related factors, such as support for teachers available or peer influence processes on stress experience among staff at school (see also Watanabe, 2013).

In conclusion, this study showed that not all common problem behaviors of students with ID are perceived as stressful by teachers who work in special needs schools. Instead, behaviors that endanger others or the students themselves were identified as particular sources of stress. Targeting these specific behaviors, either directly or by supporting teachers to enhance their coping abilities, may help improve instruction to students with ID as well as teachers' job satisfaction.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Commission of the Department of Special Education, University of Fribourg. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements. Data were assessed completely anonymously, meaning that researchers never had access to any participants' names. Teachers were informed about the study and could decline participation.

AUTHOR CONTRIBUTIONS

MA collected part of the data used, conducted all analyses, and wrote this paper. CM contributed to conception and design of the study and to manuscript revision. Both authors read and approved the submitted version.

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