Journal of Communication Disorders, Deaf Studies & Hearing Aids

Blood et al., Commun Disord Deaf Stud Hearing Aids 2014, 2:4
DOI: 10.4172/2375-4427.1000121

Research Article Open Access

Bullying in Schools: Speech Language Pathologists' Responses to Specific Bullying Incidents

Gordon W. Blood*, Kathryn L. Decker, Kristen A. Raviotti, Abbey M. Leibig and Ingrid M. Blood

Department of Communication Sciences and Disorders, The Pennsylvania State University, USA

***Corresponding author:** Gordon W. Blood, Ph.D., Department of Communication Sciences and Disorders, 308 Ford Building, The Pennsylvania State University, University Park, PA16802, USA, Tel: (814) 865-3177; Fax: (814)863-3759; E-mail: f2x@psu.edu

Received: October 19, 2014; **Accepted:** November 15, 2014; **Published:** November 22, 2014

Abstract

Objective: The perceptions of school-based Speech-Language Pathologists (SLPs) about the seriousness of different bullying incidents, the likelihood of their intervention, and their selection of management strategies were examined. The following hypotheses were tested: 1) SLPs view all four types of bullying of children with SLI (Speech Language Impairment) as equally serious, 2) SLPs are equally likely to intervene in all four types of bullying of children with SLI, and 3) SLPs are likely to use similar intervention strategies in all four types of bullying of children with SLI.

Methods: A mailed survey describing 4 types of bullying (physical, verbal, relational and cyber) of students with Specific Language Impairment was completed by 436 SLPs (93.1% female; mean age=45.6 years, SD=13.9).

Results: A majority (89%) of SLPs perceived the bullying as serious, and 87% were likely to intervene. SLPs consistently rated relational bullying as less serious than the other types of bullying. There was a significant positive correlation between two constructs; the more likely an SLP perceived the bullying vignette as serious, the more likely s/he reported some intervention. A factor analysis of 14 bullying management strategies found 3 main factors: (1) reporting the incident and consulting with other personnel, (2) teaching the child self-defense strategies, and (3) reassuring and comforting the victim.

Conclusions: The SLPs, as a group, did not view all four types of bullying of children with SLI as equally serious. They also were not equally likely to intervene in all four types of bullying of children with SLI or report using similar intervention strategies in all four types of bullying of children with SLI. As a group, they responded with management strategies that assisted the child in reporting the incident, sharing information with other school personnel, bystanders and parents.

Keywords: Bullying; Speech-Language Impairment (SLI); Speech-language pathologists; Perceived seriousness; Likelihood of intervention

Introduction

Bullying is a major social and health problem faced by millions of school-age children around the world. One of the most widely accepted definitions of bullying is derived from the work of Olweus [1] which maintains bullying is a form of aggression characterized by an intent to do harm, a repetition of the bullying behavior and the existence of a power imbalance between the bully and the victim. Bullying involves physical, verbal, relational and cyber forms of aggression and abuse. Prevalence rates of bullying in US schools vary greatly ranging from 30% to more than 60% of all school-age students depending on whether data includes victims, bullies, bystanders, and/or bully victims [2-4].

There are four types of bullying reported in the literature: physical, verbal, relational and cyber bullying. Physical bullying involves direct contact between the victim and perpetrator (e.g. punching, spitting, hitting, kicking, tripping), whereas verbal bullying involves the use of hurtful words to another peer (e.g., name calling, insults, taunting, threats, malicious teasing), relational bullying involves using social relationships to cause harm to others (e.g., spreading rumors, gossip, ostracizing, exclusion from social groups, peer discrimination), and cyber bullying involves the use of technology (texting, cell phones, Facebook, and Twitter) for bullying. Cyber bullying is unique because it is invasive and persistent. It leaves the victim feeling powerless due to the bully's anonymity. It also leads to greater exposure to bystanders because of access to technology when compared with the other three forms of bullying [3-5].

Children with cognitive, communication, emotional and physical disabilities are reported to be at greater risk for victimization and abuse than their non-disabled peers [6-11]. Blake, Lund, Zhou, Kwok and Benz [12] reported the prevalence rates for bullying in children with disabilities were more than one and a half times the rates for children without disabilities.

In US schools, school personnel are responsible for protecting students in their care and ensuring their safety. When children with disabilities are bullied due to their disability, this victimization may escalate to harassment and discrimination. School personnel may be held legally liable for peer-to-peer bullying citing Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 which prohibits discrimination on the basis of disability [13]. Regrettably, many school personnel report they are not

trained in how to correctly respond to bullying incidents or even comfortable in differentiating among the seriousness of different types of bullying [14-18]. School personnel play a critical role in a student's overall well-being, development and adjustment. The knowledge, beliefs and attitudes of school personnel are important to the successful implementation and outcome of anti-bullying programs [19,20]. Another problem with implementing anti-bullying programs is that school personnel often do not observe or witness these incidents, especially in children with disabilities [9]. School personnel must not only determine ways to become more vigilant and identify these incidents but also verify student reports of unobserved reported incidents [3-5]. Thus, it is important to determine the knowledge and skill sets of school personnel in identifying and understanding bullying if they are expected (or legally obliged) to actively respond to this educational, psychological, social and health problem.

Blood and colleagues [7,15,16] have assessed school-based Speech-Language Pathologists (SLPs) knowledge, attitudes, perceptions and likelihood of intervention in bullying incidents. One common reported predictor of teacher intervention is perceived seriousness. Greater perceived seriousness of the bullying incident is associated with an increased likelihood of teacher intervention [21-23]. SLPs are part of a group of unique school personnel that participate in school-wide curriculum [24]. Although, they are usually not present in the school for the full school-day and work with multiple students and groups, they serve as child advocates and have a unique "go-between" role between students and other school personnel. Similar to school counselors, school nurses, physical therapists, librarians or coaches, SLPs may be viewed as "safer havens" to discuss negative experiences like bullying. SLPs' work focusing on students and their abilities, changing behaviors, discussing attitudes and/or feelings may encourage and facilitate exchanges on topics of bullying and harassment. Blood, Boyle, Blood and Nalesnik [16] reported on the important role of SLPs' perceptions of bullying in children who stutter. Using vignettes similar to Craig, Hendeson and Murphy [21] and Bauman and Del Rio [25] they reported that SLPs viewed relational bullying as a less serious problem and needing less intervention than physical, verbal or cyber bullying for children who stutter. In another study, Blood, Robins, Blood, Boyle and Finke [7] reported on SLPs' perceptions of the seriousness and the likelihood of intervention for children who were English Language Learners (ELLs) with co-occurring communication disabilities. Similarly, they found that SLPs, like other school personnel, perceived relational bullying as less serious than physical, verbal or cyber bullying. In contrast, Blood et al, [15] reported on SLPs' views of children with Autism Spectrum Disorders (ASD) described in vignettes as victims of physical, verbal, relational and cyber bullying. They found SLPs' perceived all four types of bullying as serious and in need of intervention. The researchers speculated that SLPs may perceive the diagnosis of ASD as more of a social communication disorder and might explain why relational bullying was perceived as serious as other types of bullying. That study also found a positive relationship between the number of children with ASD on the SLPs' caseload and likelihood of intervention. If SLPs working in schools perceive some types of bullying (relational) as more serious for a child with one type of communication disorder (ASD) than a child with a different type of communication disorder (stuttering), it is important to determine which diagnoses are perceived as requiring intervention.

To investigate this question, we examined SLPs' perceptions of bullying for one of the most frequently occurring types of communication disabilities, Specific Language Impairment (SLI). SLI is one of the most common childhood learning disabilities, affecting 7 to 8 percent of children in kindergarten and having social and behavioral impact persisting into adulthood [26,27]. Redmond [28] states "SLI refers to those cases of language impairment that occur in the absence of concomitant perceptual, cognitive, or behavioral impairments" (p.521). Children with SLI may have difficulty with both receptive and expressive language [29-38]. Students with SLI may struggle with peer acceptance, feelings of loneliness and isolation, poorer quality of friendships, lower level of contact with peers, lower self-esteem, poorer abilities to express themselves leading to social and communication breakdowns. Children with SLI are also more likely to be bullied compared to their typically developing peers [30-42].

This research was undertaken to contribute to our understanding of the perceptions and characteristics of SLPs regarding bullying of students with a common social communication disorder and the association of two potential predictors used to explain the likelihood of intervention. This research should add to the current literature on why and how SLPs assist in the management and reduction of bullying in schools and could be potentially used to develop training programs and policies about the role of SLPs in managing bullying in schools.

This study is a part of a larger investigation studying perceptions, knowledge, confidence, empathy and interventions of SLPs working in the schools regarding bullying. The following questions were examined: 1) Do SLPs view all four types of bullying of children with SLI as equally serious, 2) Are SLPs equally likely to intervene in all four types of bullying of children with SLI, and 3) Are SLPs likely to use similar intervention strategies in all four types of bullying of children with SLI.

Method

Participants

Surveys were mailed to 1000 SLPs whose names were obtained from the American Speech-Language-Hearing Association's (ASHA) Speech-Language-Hearing Mailing Lists for a fee. Of the 477 surveys returned, 436 (43.6%) were deemed usable. Surveys were not included if they contained incomplete demographic information, failure to complete scales properly, or working part-time. The majority of the participants were female (93.1%), white, non-Hispanic (87.4%), with an age ranging between 26 to 68 years (M=45.6; SD=13.9). The participants' reported working experience as SLPs in the schools ranged from 1 to 35 years (M=17.2; SD=9.3).

Procedure

The study was approved by the Institutional Review Board at the Pennsylvania State University prior to the initiation of any of the research activities. Procedures paralleled those in earlier studies [7,15,16]. Participants were mailed an introductory letter (with informed consent), a three-part survey containing demographic and practice variables, the vignettes, the questions about seriousness, likelihood of intervention, a list of 14 strategies to select for intervention, and a return envelope. A follow-up letter/packet was sent at two, four and eight weeks after the initial mailing requesting participation to increase the response rate.

Participants were requested to: (1) read the first vignette in their packet, (2) respond to the likelihood of intervention item (using a five-point rating scale), and (3) complete the 14-item strategy list (using a

five-point rating scale). Participants were directed to read the remaining seven vignettes and complete the same process.

Questionnaire items

Part 1 of the questionnaire consisted of eight vignettes (two of physical, two of verbal, two of relational and two of cyber bullying (Table 1) all including specific reference to the child's vulnerable status as a child with SLI. Four vignettes described bullying episodes which were not observed but told to the SLP by the victim, the remaining four vignettes described bullying episodes which were witnessed by the SLP.

1. Verbal bullying not observed. An 11 year-old student with SLI tells you during a therapy session about being called "weirdo boy, freak" by another classmate. He explains that it happens every day and now he just walks away and sits by himself. You did not see the event. As an SLP working in the schools, do you think you would….
2. Physical bullying not observed. An 11 year-old student with SLI tells you during therapy that another child in his class keeps kicking his chair and kicks him when they are in their reading group. He asked the classmate to stop and the other child tells him to "shut up and take it". You did not see the event. As an SLP working in the schools, do you think you would….
3. Cyber bullying not observed. An 11 year-old student with SLI tells you during therapy that another child keeps sending e-mails, instant messaging and texts to other classmates saying he can't talk and does weird things all the time. He doesn't know why the other student is doing these things. You did not see the event. As an SLP working in the schools, do you think you would….
4. Relational bullying not observed. An 11 year-old student with SLI tells you during therapy that another child keeps calling him "stupid", and then a number of the students start mocking him for his speech and laughing. You did not see the event. As an SLP working in the schools, do you think you would….
5. Verbal bullying observed. You are walking down the hall and see an 11 year-old student with SLI who is on your caseload being called "weirdo boy, freak" by another classmate. He just walks away and sits down by himself. As an SLP working in the schools, do you think you would….
6. Physical bullying observed. You are observing for a colleague and see an 11 year-old student with SLI who is on your caseload being kicked and having his chair kicked during a reading group. You observe the student ask the classmate to stop and the other child tells him to "shut up and take it". As an SLP working in the schools, do you think you would….
7. Cyber bullying observed. An 11 year-old student with SLI on your caseload shows you copies of e-mails and text messages that another child keeps sending other classmates saying he can't talk and does weird things all the time. He explains he doesn't know why the other student is doing these things. As an SLP working in the schools, do you think you would….
8. Relational bullying observed. You see an 11 year-old student with SLI leaving your therapy room and another child starts calling him "stupid", and then a number of the students start mocking him for his speech and laughing. As an SLP working in the schools, do you think you would….

Table 1: Vignettes*. *None of bolded descriptors were included in the participant's mailings. These are provided only in the manuscript for explanation purposes.

Part 2 consisted of two questions used in earlier studies [7,15,16,25,43]. The first question addressed the seriousness of the situation with the prompt, "In your opinion, how serious is this situation?", using a 5-point Likert rating scale with descriptors from 1 (not at all serious), 2 (not very serious), 3 (moderately serious), 4 (serious), to 5 (very serious). The second question assessed the likelihood of intervention for each of the vignettes with the prompt, "How likely are you to intervene in this situation?", using a 5-point Likert scale with descriptors from 1 (not at all likely), 2 (not very likely), 3 (somewhat likely), 4 (likely) to 5 (very likely). None of the terms (i.e. intervention, seriousness, sympathetic) were defined for participants. Cronbach's alpha was computed for each question based on the participants' scores, with α=0.79 for seriousness and α=0.84 for intervention.

Part 3 of the questionnaire consisted of a set of 14 strategies for managing bullying incidents used in previous research [7,15,16]. Briefly, a review of earlier studies using this methodology was performed [21,23,25,42-44]. Fourteen strategies which were reported to be used by school personnel when managing bullying incidents were derived. The header, was adapted from Nicolaides et al. [18] and the words "Pre-service Teacher" were replaced with "SLP" to read "As an SLP working in the schools, do you think you would……", followed by the 14 randomly ordered strategies (Table 2). The strategies were rated using a 5-point scale with descriptors from 1 (Definitely No), 2 (Maybe No), 3 (Neither Yes/No), 4 (Maybe Yes), to 5 (Definitely Yes). The 14 strategies, the vignettes and the bullying definitions for physical, verbal, relational and cyber bullying had been validated by 25 randomly selected SLPs working in the schools in earlier studies [7,15,16]. The first author reviewed judges' comments, suggested word changes and then included these changes in the final version.

1. Report the bully to other education personnel
2. Refer the victim to the school counseling staff for help
3. Educate student to report when events occur
4. Talk with onlookers about their responsibility
5. Help onlookers take a more active role to support victims
6. Work with other school personnel
7. Work with parents of victims
8. Work with parents of bullies
9. Educate student to be more assertive
10. Teach student to pretend not to be bothered
11. Educate student to blend in better
12. Educate student to ignore the other child
13. Talk with student and try to calm him down
14. Talk with student and offer to protect him from this happening again

Table 2: 14 Management Strategies.

Analyses

Data were submitted for descriptive analysis including means, standard deviations, and percentages. To determine the dimensionality of the 14 items and enhance understanding of latent constructs, an Exploratory Factor Analysis (EFA) was conducted on the 14 response strategies to bullying. The analysis was conducted using principal axis factoring with promax (oblique) rotation, as the variables were thought to be related.

The SLPs ratings data was analyzed using the nonparametric Krustal-Wallis one-way analysis of variance due to unusually skewed results. A series of Krustal-Wallis ANOVAs were conducted on the

median scores of participants' ratings of seriousness, likelihood of intervention and management strategies to test for possible significant differences, with Bonferroni corrections for multiple comparisons. If a significant effect was found then a Mann-Whitney test for between group comparisons was computed. In addition, the results of the factor analyses revealed a three-Factor solution. The mean of the items in each Factor was computed for each participant (e.g., eight items for Factor 1, four items for Factor 2 and 2 items for Factor 3). The mean was used as a Factor score in subsequent analyses. If a significant effect was found then a Mann-Whitney test for between group comparisons was computed. A series of Spearman's Rank Order Correlations were performed to investigate associations between the variables.

Results

Seriousness and likelihood of intervention

Overall, ratings indicated the majority (89%) of SLPs perceived the bullying described in the vignettes as "moderately serious", "serious" or "very serious". Four percent of participants' rated the vignettes as "not at all serious", 7% as "not very serious", 9% as "moderately serious", 23% as "serious" and 57% as "very serious". Assessing bullying types, the majority of SLPs reported the seriousness of physical (99%), verbal (96%), relational (65%) and cyber bullying (97%) using the "moderately serious", "serious" or "very serious" categories. Table 3 presents the means and median ratings of perceived seriousness for the four types of bullying in both the observed and non-observed vignettes.

The Kruskal-Wallis test revealed a significant effect for the type of bullying vignette on SLPs' ratings ($H(3)=351$, $p< .001$). Median scores of 5.0, 5.0, 4.0 and 5.0 for the physical, verbal, relational and cyber bullying vignettes, respectively, were submitted to Mann-Whitney tests to determine significant differences among the bullying types. The majority of SLPs perceived physical, verbal, relational and cyber bullying as serious, although the findings suggested that compared to the physical, verbal or cyber bullying vignettes, SLPs ratings rated relational vignettes significantly lower (less serious). SLPs do not view all four types of bullying of children with SLI as equally serious (Question 1).

Mean ratings of likelihood to intervene for children with SLI was 4.3 (SD=1.4) for the observed conditions, and 4.4 (SD=1.3) for the not observed conditions, while the median rankings for the two groups were 5.0 and 5.0. Overall, ratings indicated the majority (87%) of SLPs perceived the bullying described in the vignettes as ones they were likely to intervene. Four percent of participants' rated the vignettes as "not at all likely", 9% as "not very likely", 7% as "somewhat likely", 21% as "likely" and 59% as "very likely" in terms of intervention. When examining the four bullying types, results revealed the majority of SLPs described the likelihood to intervene for children with SLI for physical (99%), verbal (95%), relational (60%) and cyber bullying (93%) using the "somewhat likely", "likely" and "very likely" categories. Table 3 presents the means and median ratings of the likelihood to intervene for the four types of bullying in both the observed and non-observed vignettes.

The Kruskal-Wallis test revealed a significant effect for the type of bullying vignettes on SLPs' ratings ($H(3)=351.9$, $p< .001$) for the likelihood of intervention. Median scores of 5.0, 5.0, 4.0 and 5.0 for the physical, verbal, relational and cyber bullying vignettes, respectively, were submitted to Mann-Whitney tests to determine significant differences among the bullying types. The findings suggested that compared to the physical, verbal or cyber bullying vignettes, SLPs ratings rated relational vignettes significantly lower (less likely to intervene) . SLPs do not view all four types of bullying of children with a similar likelihood on intervention (Question 2).

Strategies for managing bullying

The number of factors retained in the exploratory factor analysis was determined by eigen values greater than one, which generated a three-factor solution explaining 67.4% of the shared variance after rotation. Substantial loadings were set at .40 or greater and none of the 14 items had cross-loadings (Table 4).

The first extracted factor accounted for 39.5% of the variance was labeled "Reporting and Consulting Activities" and included eight strategies representing the reporting of bullying and consulting with others about the bullying (Table 4). The computed coefficient alpha was .82, indicating good internal consistency of the items for this factor. The second factor extracted was labeled "Self-Defense Activities" dealing with activities a victim should use. The four strategies in this factor (Table 4) explained 19.1% of the shared variance. The coefficient alpha computed was .78, indicating good internal consistency of the items constituting this factor. The third factor was labeled "Reassuring Activities" consisted of strategies representing comforting the victim. The two strategies in this factor (Table 4) explained 8.8% of the shared variance. The coefficient alpha was .81, indicating good internal consistency of the items constituting this factor. Table 3 presents the means and medians for the three factors for the four types of bullying vignettes.

Factor 1 - Reporting and consulting strategies

Mean ratings of Factor 1 were 4.3 (SD=1.4) for the observed conditions, and 4.4 (SD=1.3) for the not observed conditions, while the median ratings for the two groups were 4.9 and 4.9 for the two conditions. The medians were 4.9, 4.9. 3.5 and 4.9 for the physical, verbal, relational and cyber bullying vignettes, respectively. Overall, ratings indicated the majority (70%) of SLPs endorses these strategies using the "Maybe Yes" and "Definitely Yes" categories. Seven percent of participants' rated the strategies as "Definitely No", 6% as "Maybe No", 17% as "Neither Yes/No", 14% as "Maybe Yes" and 56% as "Definitely Yes" categories. Results revealed the majority of SLPs endorsed Factor 1 strategies for physical (86%), verbal (83%), and cyber bullying (82%) using the "Maybe Yes" and "Definitely Yes" categories. In contrast, only 28% of SLPs endorsed these strategies for relational bullying using the "Maybe Yes" and "Definitely Yes" categories. Table 3 presents the means and median ratings of the likelihood to intervene for the four types of bullying in both the observed and non-observed vignettes.

The Kruskal-Wallis test revealed significant differences among the bullying types ($H(3)=504.4$, $p<0.001$) for the use of Factor 1- Reporting and Consulting strategies. Median scores of 4.9, 4.9, 3.5 and 4.9 for the physical, verbal, relational and cyber bullying vignettes, respectively, were submitted to Mann-Whitney tests to determine significant differences among the bullying types. Comparisons showed that strategies for dealing with physical, verbal and cyber bullying were rated significantly higher (more likely to use these strategies) than for relational bullying. SLPs do not view the use of Factor 1- Reporting and Consulting strategies for four types of bullying of children with SLI similarly.

Item	Bullying Type							
	Physical		Verbal		Relational		Cyber	
Seriousness								
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Observed	4.6	5.0	4.5	5.0	3.6	4.0	4.5	5.0
Not Observed	4.5	5.0	4.4	5.0	3.3	3.0	4.4	5.0
Likelihood of Intervention								
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Observed	4.6	5.0	4.4	5.0	3.6	4.0	4.3	5.0
Not Observed	4.6	5.0	4.5	5.0	3.3	3.0	4.4	5.0
Management Strategies								
Factor 1 Report/ Consulting	4.5	4.9	4.4	4.9	3.5	3.5	4.4	4.9
Factor 2 Self-Defense	2.5	2.6	2.7	2.6	3.6	3.8	2.7	2.6
Factor 3 Reassuring	4.7	4.9	4.7	4.9	4.6	4.9	4.7	4.9

Table 3: Means and medians of ratings for the 8 bullying vignettes (physical, verbal relational and cyber for observed and unobserved conditions) for perceived seriousness, likelihood of intervention and 3-Factors for management strategies.

Factor 2 - Self-defense activities

Mean ratings of Factor 2 were 2.9 (SD=1.1) for the observed conditions, and 2.9 (SD=1.3) for the not observed conditions, while the median ratings for the two groups were 2.6 and 2.6 for the two conditions. The medians were 2.6, 2.6, 3.8, and 2.6 for the physical, verbal, relational and cyber bullying vignettes, respectively. Overall, ratings indicated the majority (66%) of SLPs did not endorse these strategies using the "Definitely No" and "Maybe No" categories. Eight percent of participants' rated the strategies as "Definitely No", 58% as "Maybe No", 18% as "Neither Yes/No", 7% as "Maybe Yes" and 9% as "Definitely Yes" categories. Results revealed the majority of SLPs did not endorse Factor 2 strategies for physical (78%), verbal (75%), and cyber bullying (77%) using the "Maybe No" and "Definitely No" categories. In contrast, only 35% of SLPs did not endorse these strategies for relational bullying using the "Maybe No" and "Definitely No" categories. Table 3 presents the means and median ratings of the Factor 2 strategies for the four types of bullying in both the observed and non-observed vignettes.

The Kruskal-Wallis test revealed significant differences among the bullying types ($H(3)=504.4$, $p<0.001$) for the use of Factor 2 - Self-Defense strategies. Median scores of 2.6, 2.6, 3.8 and 2.6 for the physical, verbal, relational and cyber bullying vignettes, respectively, were submitted to Mann-Whitney tests to determine significant differences among the bullying types. Comparisons showed that strategies for dealing with physical, verbal and cyber bullying were rated significantly lower (less likely to use these strategies) than for relational bullying. SLPs do not view the use of Factor 2 - Self-Defense strategies for four types of bullying of children with SLI similarly.

Factor 3 - Reassuring activities strategies

Mean ratings of Factor 3 were 4.7 (SD=0.4) for the observed conditions, and 4.7 (SD=0.4) for the not observed conditions, while the median ratings for the two groups were 4.9 and 4.9. The medians were 4.9, 4.9. 4.9 and 4.9 for the physical, verbal, relational and cyber bullying vignettes, respectively. Overall, ratings indicated the majority (93%) of SLPs endorsed these two strategies using the "Maybe Yes" and "Definitely Yes" categories. No participants' rated the strategies as "Definitely No" or "Maybe No", whereas 7% selected "Neither Yes/No" category. When examining the four bullying types, results revealed the majority of SLPs endorsed Factor 3 strategies for physical (94%), verbal (93%), relational (91%) and cyber bullying (93%) using the "Maybe Yes" and "Definitely Yes" categories. The Kruskal-Wallis test revealed no significant differences among the bullying types ($H(3)=1.6$, $p=0.64$) for the use of Factor 3 - Reassuring Activities strategies. SLPs used Factor 3 strategies for four types of bullying of children with SLI similarly.

Associations among strategies, seriousness and intervention

A series of Spearman's Rank Order Correlations were performed to investigate associations between variables. Cohen's [43] definitions for strength of association defined by correlation coefficients as small (+/-. 10 to .29), medium (+/-.30 to .49) and large (+/-.50 to 1.0) were used to determine effect size. A significant, positive Spearman Rank Order correlation was found between the seriousness scores and the likelihood of intervention scores ($r_s=.77$, $p<.001$, large). Participants who perceived the vignettes as serious were more likely to report higher likelihood to intervene scores. Significant, positive, large Spearman Rank correlations were also found between seriousness scores and likelihood of intervention scores and the Reporting/ Consulting Factor ($r_s=.77$, $p<.001$, large; $r_s=.80$, $p<.001$, large,

respectively) suggesting SLPs who perceived the vignettes as depicting serious problems were more likely to intervene and use strategies included in Factor 1. In contrast, negative Spearman Rank correlations were found between seriousness scores and likelihood to intervene scores and the Self-Defense Factor (r_s=-.51, p<.001; large; r_s=-.39, p<001, medium, respectively) suggesting SLPs who found the vignettes serious and likely to intervene did not select Self-Defense management strategies for students with SLI. There were no significant correlations among the seriousness and likelihood of intervention scores and the Reassuring management factor scores. Therefore, overall SLPs used different intervention strategies for different types of bullying (Question 3).

Management Strategies	Factor 1 Reporting Consulting	Factor 2 Self-Defense	Factor 3 Reassuring
1. Report the bully to other education personnel	0.66		
2. Refer the victim to the school counseling	0.71		
3. Educate student to report when events occur	0.82		
4. Talk with onlookers about their responsibility	0.55		
5. Help onlookers take a more active role to support victims	0.51		
6. Work with other school personnel	0.71		
7. Work with parents of victims	0.58		
8. Work with parents of bullies	0.51		
9. Educate student to be more assertive		0.67	
10. Teach student to pretend not to be bothered		0.62	
11. Educate student to blend in better		0.59	
12. Educate student to ignore the other child		0.55	
13. Talk with student and try to calm him down			0.83
14. Talk with student and offer to protect him from this happening again			0.77

Table 4: Results of the factor analysis for the 14 bullying management strategies.

Discussion

The majority (89%) of SLPs perceived the various forms of bullying (listed in the vignettes) of children with a common social communication disorders – SLI – as moderately, serious, very serious. Similarly, (87%) of SLPs reported they would be "somewhat likely" "likely" or "very likely" to intervene in some way to deal with bullying incidents. There was also a significant positive correlation between these two constructs; the more likely an SLP perceived the bullying vignette as serious, the more likely she/he reported some intervention. This supports earlier research that school personnel who see a behavior as "serious" are more likely to intervene [45].

Interestingly, the management strategies associated with seriousness and likelihood of intervention were all part of Factor 1 'Reporting and Consulting'. SLPs, as a group, responded with management strategies that assisted the child in reporting the incident, sharing information with other school personnel, bystanders and parents. These are positive actions that facilitate an environment supporting anti-bullying campaigns [46]. Studies suggest that teacher or bystander intervention immediately reduce bullying behaviors [45]. SLPs should be encouraged to continue in these advocacy roles for anti-bullying programs.

Relational bullying (e.g. spreading rumors, gossip, ostracizing, exclusion from social groups, peer discrimination) was perceived as less serious than physical, verbal and cyber bullying, with a lower likelihood of intervention of Reporting and Consulting strategies. These data suggest SLPs might be unaware of the impact of relational bullying. This finding is in line with earlier studies reporting decreased awareness of the negative effects of relational bullying in general education students [47,48] and with students receiving therapy for communication disorders [7,16]. These findings suggest the need for enhanced intervention, especially in the area of relational bullying. Relational aggression has been shown to have the same negative psychological and health effects as physical bullying [49]. These results also provide new information about the specific type of management strategies reported by SLPs in these situations. It appears that support for the students with SLI comes in the form of building self-defensive postures which rely on their abilities (e.g., "teach the students with SLI to be more assertive and to pretend not to be bothered"). It is also possible, that although the definitions and strategies selected for use in this study were vetted by 25 SLPs prior to administration to the current sample, relational and verbal bullying vignettes may have been confusing to participants.

Unfortunately, the literature clearly shows that children with SLI are prone to victimization possibly due to their expressive and receptive language deficits, difficulties with reading, writing, listening, talking and making and maintaining friendships [32,37]. SLPs, with their knowledge and skills in social and pragmatic language assessments and treatments could not only improve language and overall functional communication but possibly offer the added benefit of reducing victimization in these at-risk children [28,33,39]. It appears that SLPs are already activity involved in advocating and intervening in bullying incidents. Based on the current data, SLPs may also want to determine if relational bullying is occurring and then use similar strategies to those already used with physical, verbal and cyber bullying incidents. SLPs reported they would most likely manage relational bullying using the strategies from Factor 2 – Self-Defense, which depends heavily on the student victim taking on a majority of the responsibility for reducing bullying behavior. There are currently successful programs to teach and inform school-based personnel on relational bullying prevention and intervention and these programs may be beneficial for SLPs [50]. Training programs and continuing education programs could include school-based SLPs in these school and district-wide initiatives. SLPs working closely with other school personnel in the school environment and also working with students with SLI on peer relationships, social skills, and pragmatic language skills could serve as a valuable resource for reducing bullying.

There are limitations to this research. Similar to all survey and questionnaire data, it is possible that the sample responding was

biased. Although randomization was used, it is possible that those responding had a stronger interest in this topic. It is also possible that some SLPs had already participated in anti-bullying campaigns and school-wide initiatives which could have confounded the data. Bauman Rigby and Hoppa [51] and Rigby and Bauman [52] reported that school personnel who participated in anti-bullying initiatives were more likely to intervene in bullying incidents. We did not control for this variable. There is a presumption in this type of research that participants would actually behave in the manner they reported, however, it is imaginable that SLPs' observing any type of actual bullying incident may respond differently than to a written vignette.

Finally, these data support earlier studies on perceptions and attitudes of SLPs and bullying in children with communication disabilities. With SLPs assuming a greater role in the assessment and treatment of the social and communication functions of students with SLI, a focus on programs collaborating with other school personnel on social skills, reporting victimization problems, building emotional and social literacy skills seems warranted. The next step in this research is to design, deliver and evaluate in-service and continuing education training programs for school-based SLPs to provide additional knowledge and skills in dealing with bullying for students on their caseloads.

References

1. Olweus D (1993) Bullying at school: What we know and what we can do. Blackwell Publishing, Malden.
2. Hong JS, Espelage DL (2012) A review of research on bullying and peer victimization in school: An ecological system analysis. Aggression and Violent Behavior 17: 311-322.
3. Nansel TR, Overpeck M, Pilla RS, Ruan WJ, Simons-Morton B, et al. (2001) Bullying behaviors among US youth: prevalence and association with psychosocial adjustment. JAMA 285: 2094-2100.
4. Wang J, Iannotti RJ, Nansel TR (2009) School bullying among adolescents in the United States: physical, verbal, relational, and cyber. J Adolesc Health 45: 368-375.
5. Stassen Berger K (2007) Update on bullying at school: Science forgotten? Developmental Rev 27: 90-126.
6. Blood GW, Blood IM (2007) Preliminary study of self-reported experience of physical aggression and bullying of boys who stutter: relation to increased anxiety. Percept Mot Skills 104: 1060-1066.
7. Blood GW, Robins LA, Blood IM, Boyle MP, Finke EH (2011) Bullying, school-based speech-language pathologists, and English language learners: Seriousness, intervention, and strategy selection. Perspectives School-Based Issues 12: 128-138.
8. Humphrey N, Symes W (2010) Perceptions of social support and experience of bullying among pupils with autistic spectrum disorders in mainstream secondary schools. European J Special Needs Ed 25: 77-91.
9. Rose CA, Monda-Amaya L, Espelage DL (2011) Bullying perpetration and victimization in special education: A review of the literature. Remedial Spec Ed 32: 114 -129.
10. Saylor CF, Leach JB (2009) Perceived bullying and social support in students accessing special inclusion programming. J Developmental Physical Disord 21: 69-80.
11. Zablotsky B, Bradshaw CP, Anderson C, Law PA (2013) The association between bullying and the psychological functioning of children with autism spectrum disorders. J Dev Behav Pediatr 34: 1-8.
12. Blake JJ, Lund EM, Zhou Q, Kwok OM, Benz MR (2012) National prevalence rates of bully victimization among students with disabilities in the United States. Sch Psychol Q 27: 210-222.
13. U.S. Department of Education, Office for Civil Rights (2010) Dear Colleague Letter Harassment and Bullying (October 26, 2010) Background, Summary, and Fast Facts.
14. Bauman S, Adrienne DR (2005) Knowledge and beliefs about bullying in schools. School Psychol International 26: 428-442.
15. Blood GW, Blood IM, Coniglio AD, Finke EH, Boyle MP (2013) Familiarity breeds support: speech-language pathologists' perceptions of bullying of students with autism spectrum disorders. J Commun Disord 46: 169-180.
16. Blood GW, Boyle MP, Blood IM, Nalesnik GR (2010) Bullying in children who stutter: speech-language pathologists' perceptions and intervention strategies. J Fluency Disord 35: 92-109.
17. Jacobsen KE, Bauman S (2007) Bullying in schools: School counselors' responses to three types of bullying incidents. Professional School Counsel 11: 1-9.
18. Nicolaides S, Toda Y, Smith PK (2002) Knowledge and attitudes about school bullying in trainee teachers. Br J Educ Psychol 72: 105-118.
19. Domino M (2013) Measuring the impact of an alternative approach to school bullying. J Sch Health 83: 430-437.
20. Ferguson CJ, Miguel CS, Kilburn JC, Sanchez P (2007) The effectiveness of school-based anti-bullying programs. A meta-analytic review. Crim Justice Rev 32: 401-414.
21. Craig WM, Henderson K, Murphy JG (2000) Prospective teachers' attitudes toward bullying and victimization. Sch Psychol International 21: 5-21.
22. Dedousis-Wallace A, Shute RH (2009) Indirect bullying: Predictors of teacher intervention, and outcome of a pilot educational presentation about impact on adolescent mental health. Australian J Edu Developmental Psychol 9: 2-17.
23. Yoon JS (2004) Predicting teacher interventions in bullying situations. Education Treatment Children 27: 37-45.
24. American Speech-Language-Hearing Association (2010) 2010 Schools Survey report: SLP caseload characteristics.
25. Bauman S, Del Rio A (2006) Preservice teachers' responses to bullying scenarios: Comparing physical, verbal, and relational bullying. J Educ Psychol 98: 219-231.
26. Tomblin JB, Records NL, Buckwalter P, Zhang X, Smith E, et al. (1997) Prevalence of specific language impairment in kindergarten children. J Speech Lang Hear Res 40: 1245-1260.
27. Whitehouse AJ, Line EA, Watt HJ, Bishop DV (2009) Qualitative aspects of developmental language impairment relate to language and literacy outcome in adulthood. Int J Lang Commun Disord 44: 489-510.
28. Redmond SM (2011) Peer victimization among students with specific language impairment, attention-deficit/hyperactivity disorder, and typical development. Lang Speech Hear Serv Sch 42: 520-535.
29. Flapper BC, Schoemaker MM (2013) Developmental coordination disorder in children with specific language impairment: co-morbidity and impact on quality of life. Res Dev Disabil 34: 756-763.
30. Conti-Ramsden G, Botting N (1999) Classification of children with specific language impairment: longitudinal considerations. J Speech Lang Hear Res 42: 1195-1204.
31. Conti-Ramsden G, Botting N (2000) Educational placements for children with specific language impairments. In: Speech and language impairments in children: Causes, characteristics, intervention and outcome. Psychology Press, New York, 211.
32. Conti-Ramsden G, Botting N (2004) Social difficulties and victimization in children with SLI at 11 years of age. J Speech Lang Hear Res 47: 145-161.
33. Conti-Ramsden G, Botting N (2008) Emotional health in adolescents with and without a history of specific language impairment (SLI). J Child Psychol Psychiatry 49: 516-525.
34. Conti-Ramsden G, Botting N, Faragher B (2001) Psycholinguistic markers for specific language impairment (SLI). J Child Psychol Psychiatry 42: 741-748.
35. Conti-Ramsden G, Mok PL, Pickles A, Durkin K (2013) Adolescents with a history of specific language impairment (SLI): strengths and difficulties in social, emotional and behavioral functioning. Res Dev Disabil 34: 4161-4169.

36. Conti-Ramsden G, St Clair MC, Pickles A, Durkin K (2012) Developmental trajectories of verbal and nonverbal skills in individuals with a history of specific language impairment: from childhood to adolescence. J Speech Lang Hear Res 55: 1716-1735.
37. Durkin K, Conti-Ramsden G (2007) Language, social behavior, and the quality of friendships in adolescents with and without a history of specific language impairment. Child Dev 78: 1441-1457.
38. Knox E, Conti-Ramsden G (2003) Bullying risks of 11-year-old children with specific language impairment (SLI): does school placement matter? Int J Lang Commun Disord 38: 1-12.
39. Knox E, Conti-Ramsden G (2007) Bullying in young people with a history of specific language impairment (SLI). Educ Child Psychol 24: 130-141.
40. Lindsay G, Dockrell JE, Mackie C (2008) Vulnerability to bullying in children with a history of specific speech and language difficulties. European J Special Needs Ed 23: 1-16.
41. Marton K, Abramoff B, Rosenzweig S (2005) Social cognition and language in children with specific language impairment (SLI). J Commun Disord 38: 143-162.
42. Yoon JS, Kerber K (2003) Bullying: Elementary teachers' attitudes and intervention strategies. Research in Education 69: 27-35.
43. Crothers LM, Kolbert JB (2004) Comparing middle school teachers' and students' views on bullying and anti-bullying interventions. J School Violence 3: 17-32.
44. Cohen J (1988) Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Earlbaum Associates.
45. Kochenderfer-Ladd B, Pelletier ME (2008) Teachers' views and beliefs about bullying: influences on classroom management strategies and students' coping with peer victimization. J Sch Psychol 46: 431-453.
46. Ttofi MM, Farrington DP (2011) Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. J Experimental Criminology 7: 27-56.
47. Menard S, Grotpeter JK (2011) Peer influence, social bonding, physical and relational aggression: Perpetration and victimization in an elementary school sample. Victims & Offenders 6: 181.
48. Pernice-Duca F, Taiariol J, Yoon J (2010) Perceptions of school and family climates and experiences of relational aggression. J School Violence 9: 303-319.
49. Dukes RL, Stein JA, Zane JI (2009) Effect of relational bullying on attitudes, behavior and injury among adolescent bullies, victims and bully-victims. Soc Sci J 46: 671.
50. Leff SS, Waasdorp TE, Crick NR (2010) A Review of Existing Relational Aggression Programs: Strengths, Limitations, and Future Directions. School Psych Rev 39: 508-535.
51. Bauman S, Rigby K, Hoppa K (2008) US teachers' and school counsellors' strategies for handling school bullying incidents. Educational Psychology 28: 837-856.
52. Rigby K, Bauman S (2010) How school personnel tackle cases of bullying: A critical examination. In: Handbook of bullying in schools: An international perspective. Routledge/Taylor & Francis Group.