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Exploring the gaps between teachers' beliefs about bullying and research-based knowledge

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ABSTRACT

With the growing recognition of the serious problem of bullying in schools, attention is drawn to the gap between what is known through research about school-based bullying and what is being applied in schools. This article seeks to identify areas in which the beliefs of teachers about school bullying agree with, or diverge from, what has been claimed through research. To do so, a 40-item assessment questionnaire was devised based on a selection of published research findings and administered online to Australian teachers (*N* = 451). Results indicate substantial consensus (over 75% considered "correct") among teachers on answers to just over half the questions; on other questions, however, there were marked divisions, with many teachers endorsing beliefs that were at variance with claims made in research. Differences in overall knowledge of bullying were found to be significantly related to the sources of information being accessed. Implications for further research and teacher education are discussed.

Bullying research and teacher beliefs: Overview

It is generally assumed that evidence-based findings should be utilized by schools in addressing identified problems. According to Cooper, Levin, and Campbell (2009), "It is virtually impossible for a reasonable person to disagree with the view that policy and practice [in education] should be based on the available evidence" (p. 161). At the same time, there continues to be much debate about what constitutes "evidence" and, therefore, what can be considered to be relevant knowledge (Cain, 2015). Taking at face value what is claimed to be research-based knowledge, it has been reported that, in many areas of educational policy and practice, a gap is to be found between what researchers broadly accept as "fact" and what teachers believe and act upon (Hirschkorn & Geelan, 2008; Procter, 2015). This article examines the so-called knowledge gap as it applies to a specific problem confronting schools, namely the prevalence and harmfulness of school-based peer victimization or bullying, and how it can be best addressed by schools.

Bullying research

Over the last 20 years or so there has been a remarkable rise internationally in research in the field of bullying in schools. An examination of the trend in the number of publications cited in the PsycINFO bibliographic database shows a steep rise in publications in peer-reviewed journals on bullying in schools. In 1995 there were 21 such publications; in 2005, there were 83, and in 2015, 347. It is generally agreed that bullying involves a systematic abuse of power (Smith & Sharp, 1994) that may arise when there is an imbalance of power between individuals or groups and the more powerful individual or group acts deliberately and repeatedly in an aggressive manner toward a person who cannot defend himself or herself adequately (Olweus, 1993). Its prevalence in schools has been extensively researched. Research based on 80 studies conducted internationally suggests that, on average, 35% of students are involved in traditional forms of bullying and 15% in cyberbullying (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). The harm to the well-being of children associated with sustained bullying, both short- and long-term, has been widely documented (Rigby, 2003; Vanderbilt & Augustyne, 2010).

With the ever-increasing knowledge about school bullying based on research evidence becoming more readily available through articles in journals and professional publications, one might expect to see a significant reduction in the prevalence of school-based bullying. This expectation is held by some researchers into school bullying, for example by Nicolaides, Toda, and Smith (2002) and by Bauman and del Rio (2005), who advocate increased education and training for

teachers based on evidence-based studies. Consistent with this view, there has been over the last 15 years a significant though modest reduction in the prevalence of bullying in a substantial number of countries, as reviewed by Rigby and Smith (2011). However, the findings are correlational and, as such, do not imply causation; the reported reductions may be due to other uncontrolled social factors. For example, in many countries, government bodies have promoted antibullying initiatives (Dewey & Limber, 2015); legal sanctions have been applied to censure schools that have not conformed to community expectations in dealing with cases of bullying (Holben & Zirkel, 2014). Motivated by such developments, teacher beliefs about bullying may, in part, derive from their engaging in critical reflection personally or collaboratively with colleagues on problems identified in the school environment (Carrington, Deppeler, & Moss, 2010). Whether increases in evidence-based knowledge among teachers can in fact result in the use of more effective antibullying policies and practices is at this stage an open question. However, before this question can be addressed, it is important to identify differences between the school personnel and researchers in terms of their beliefs regarding "knowledge" of school bullying. This article seeks to identify where differences in beliefs about bullying can be found.

No single theory of bullying has yet succeeded in accommodating the range of findings that have been reported in research (see Dixon & Smith, 2012). Perhaps the most comprehensive and highly regarded explanation for bullying is the socioecological perspective proposed by Espelage and Swearer (2004) and further developed by Swearer and Hymel (2015). According to this theory, bullying can best be viewed as a resultant of multiple causes and risk factors, ranging from individual characteristics to school settings and to broader social contexts. Drawing on such an understanding, both proactive (or preventive) and reactive (or direct intervention) strategies have been proposed and incorporated in school antibullying programs, for example the Olweus Bullying Program, extensively implemented in the United States (Olweus, 1997), and the KiVA Antibullying Program widely used in Finland (Salmivalli, Karna, & Poskiparta, 2011). Arguably, the nature of the actions taken by schools in addressing bullying is influenced by the beliefs held by school personnel regarding the validity of the claims that are made through research.

There are theoretical and empirical grounds for supposing that beliefs can influence action. Contrary to the view that beliefs are induced by actually having taken action—a view popularized by Festinger (1957) in his *Theory of Cognitive Dissonance*—it has been shown that, under some circumstances, beliefs can lead to corresponding action (Fishbein & Ajzen, 1975). Support has been found for this view in research into cyberbullying behavior of students (Doane, Pearson, & Kelley, 2014). Whether beliefs regarding knowledge about bullying based on research findings can give rise to effective antibullying actions by schools remains to be seen. The immediate task is to identify what these beliefs may be.

Studies of teacher beliefs about bullying based on research

Much of the research literature concerned with teacher beliefs about bullying is of a general nature and unrelated to specific research findings; for example, whether teachers feel confident to intervene in cases of bullying (Hektner & Swenson, 2012; Williford, 2015), and whether students should be told to assert themselves if they are being bullied (Kochenderfer-Ladd & Pelletier, 2008). To date, only two studies have attempted to assess knowledge of bullying in schools while citing research findings for the selection of test items. In each case, the selection was essentially ad hoc rather than systematic. In a questionnaire administered to trainee teachers in England, Nicolaides et al. (2002) included several questions for which published research had provided affirmative answers: namely, whether self-reported victimization of students declined with age, whether girls were less likely to be bullies than boys, and whether bullies were no more likely than others to be low in self-esteem and lacking in social skills. They noted that the trainee teachers tended to give answers to these questions that were at variance with research findings. They added that "it may be going beyond the evidence to say categorically that the beliefs [of the trainee teachers] are wrong; but they are certainly all questionable" (p. 115). Replicating this study in the United States, again with preservice teachers, Bauman and del Rio (2005) concluded that "pre-service teachers in the US and UK hold similar attitudes, knowledge and beliefs about bullying" (p. 436). On the basis of these studies and of observations made by other researchers, such as Craig, Bell, and Leschied (2011), Asimopoulos, Bibou-Nakou, Hatzipemou, Soumaki, and Tsiantis (2014), and Gorsek and Cunningham (2014), it has been concluded that teachers have not been adequately prepared to address the problem of school bullying. No study has hitherto assessed relevant research-based knowledge about bullying among practicing teachers.

This article seeks to extend inquiry into teacher beliefs about bullying by drawing on a wider sample of research-related beliefs than has so far been attempted. In so doing, it is recognized that the choice of test items to perform this task poses difficulties. Published findings continue to increase over time and a perfect consensus on what has been established is unattainable. Yet, if the task of examining what gaps exist in this field between teachers and researchers is to be attempted, decisions must be made about what is generally being claimed by researchers. The strategy employed in this study has been to seek to identify a number of specific beliefs held by researchers about bullying on the basis of a systematic search of the relevant literature. The "gaps" of prime interest in this article relate to specific beliefs. But in addition, an attempt is made to discover how beliefs about *school bullying in general* that are consistent with what is being claimed by research are related to a number of variables of interest; namely the type of school where teachers are employed, the gender and age of the teacher, the main source of information accessed by teachers about school bullying (that is, apart from personal experience in teaching), and the level of motivation teachers may have in accessing research-based knowledge in this area.

Aims of the study

The study has three primary aims:

(1) To identify a set of beliefs about school bullying that are widely, if not unanimously, held in the research community, and to devise a test of Knowledge of School Bullying.
(2) To determine the level of agreement between practicing teachers and judgments made by researchers and also among teachers themselves.
(3) To examine the relationship between the overall level of teacher knowledge of bullying and (a) the kind of school at which they teach, (b) gender, (c) age, (d) source of information about bullying, and (e) the motivation of teachers to access such information.

Methodology

Assessing teacher beliefs about bullying

As a preliminary step toward undertaking this study, a Knowledge of Bullying Test was constructed based on an examination of published research findings in the area. This involved a search for relevant research publications using the research engine Academic Research Premier. Entering the two terms *bullying* and *schools* and stipulating only publications in peer-reviewed journals yielded 4,264 articles. These articles were then sorted into specific subthemes using the following search terms: age trends, bystanders, classroom climate, crime, definition, ethnicity, gender, genetics, health, homophobia, interventions, intervention effectiveness, intervention methods, law, parenting, personality, policy, prevalence, school, and students. The numbers of papers identified in this way ranged from 1,367 for "health" to 10 for "age trends." As expected, the publications tended to overlap in the areas being addressed. In reading the papers, it was possible to identify specific evidence-based beliefs about bullying that were claimed and shared by different researchers.

The resulting Knowledge of Bullying Test consisted of 40 statements to which respondents could indicate whether, in their opinion, each was true or false. Twenty statements were scored as "correct" if the respondent agreed with it, and 20 were scored as "correct" if the respondent disagreed with it. The items used in this study are given in Table 1, listed according to the percentages of teachers giving responses consistent with judgments based on research reports.

Statements deemed to be true, indicated as (T), were scored as 1; those deemed to be false (F) as 0. Scores for the 40 items were summed to provide a scale. The internal consistency of this measure computed on results obtained from 476 Australian teachers (Rigby & Johnson, 2016) was low, with an unsatisfactory coefficient alpha of 0.50.

To provide a more reliable scale, items with the lowest item-total correlations were systematically removed from the original set of 40 items to produce a 19-item scale with an enhanced alpha of 0.68. In this shorter scale, item-total correlation (corrected) ranged from 0.16 to 0.38, each of which was positive and significant at the .001 level. The mean correlation was 0.25. The items employed in this scale are indicated in Table 1 above in italics. This 19-item scale was employed in comparing knowledge in general about bullying between subgroups of teachers. Responses of teachers to the remaining 21 items are also included in the Results section with the caveat that they should not be used in making a general estimate of teacher beliefs about bullying. Given that each of these items had been found to reflect a view held among researchers in the field, it was of interest to consider how these too were viewed by teachers.

Table 1. Percentages of answers to the Knowledge of Bullying Test seen as "correct" for 40 items. Items in *italics* make up the 19-item scale.

High consensus: Greater than 75%		Percentage correct
1.	*It is widely agreed that schools should adopt a whole-school approach. (T)*	97.1
2.	*Bullying occurs when a person or group repeatedly abuses their power over someone. (T)*	96.9
3.	*Deliberate unfair exclusion is a form of bullying. (T)*	94.9
4.	*Social skills training has been employed to help children to avoid being bullied. (T)*	94.0
5.	Bullying has at times been conceived as the desire to hurt someone or put them under pressure. (T)	92.2
6.	*Bystanders usually speak out when they see bullying happening. (F)*	91.8
7.	*Homophobia is a factor that can lead children to bully those they think are gay. (T)*	91.6
8.	*Positive behaviour support commonly makes use of a nonpunitive strategy for dealing with cases of schoolyard bullying. (T)*	90.7
9.	Schools have no legal obligations in responding to cases of bullying. (F)	90.7
10.	*Children identified as repeated victims of school bullying in primary schools have been reported as having much poorer mental health than others as adults. (T)*	89.8
11.	*When children leave their primary school and enter a secondary school, bullying typically decreases. (F)*	88.5
12.	*Peer supporters are sometimes trained to be mediators to resolve student conflicts. (T)*	88.5
13.	*Children who are bullied never act provocatively. (F)*	86.7
14.	*Some children quit bullying when they become aware of the hurt they have caused. (T)*	85.4
15.	*The most effective way of stopping a case of bullying is to punish the offender. (F)*	85.4
16.	*The Support Group Method involves a meeting at which the perpetrators of the bullying are invited to meet with some supporters of the victim to help resolve the problem. (T)*	84.5
17.	Research indicates that about 1 child in 6 is bullied in schools on a weekly basis. (T)	82.7
18.	*Parents of children who are being bullied should sort out the problem with the parents of the bully. (F)*	82.7
19.	*Classroom management is unrelated to bullying among schoolchildren. (F)*	82.0
20.	Restorative practices seek to induce a state of remorse on the part of the offender. (T)	78.7
21.	Children who are cyberbullied are more often than not also being bullied at school using traditional means. (T)	75.6
Divided beliefs, with the majority giving the "correct" answers		Percentage correct
22.	According to teachers, their interventions in cases of bullying are successful in about two cases out of three. (T)	73.4
23.	*For mediation to occur those involved should be free to discontinue their involvement in the procedure if they so wish. (T)*	69.8
24.	Children should be taught to delete every offensive message they receive on their computer. (F)	64.7
25.	Children are more likely to tell their teachers than their parents if they are being bullied at school. (F)	64.1
26.	The Method of Shared Concern is considered inappropriate for use in cases of group bullying when there has been some provocation. (F)	57.9
27	*Most bullying nowadays is through cyber technology. (F)*	57.9
28.	The direct influence of teachers on bystander behavior is generally stronger than that of student peers. (F)	57.2
29.	The prevalence of bullying in school is much the same in all countries. (F)	54.3
30.	Typically bullying occurs when no one is watching. (F)	53.4
Divided beliefs, with the majority giving the "incorrect" answer		Percentage correct
31.	Insecure attachment to a caregiver in infancy is related to being involved in bully–victim problems later as schoolchildren. (T)	49.4
32.	Bullying at school is predictive of a greater likelihood of children engaging in crime as adults. (T)	49.2
33.	Schoolchildren tend to bully more as they get older. (F)	48.3
34.	Bullying is a statutory offense punishable by law. (F)	45.0
35.	Victimization (being bullied) at school tends to increase with age. (F)	40.4
36.	Bullying in schools is becoming more and more prevalent throughout the world. (F)	39.7
37.	Boys tend to bully more than girls, especially physically. (T)	39.0
38.	Strong parental protection does not increase the risk that a child will be bullied at school. (F)	38.4
39.	Children with high self-esteem are less likely to bully others. (F)	33.5
40.	Genetic factors can influence whether a child will bully at school. (T)	32.2

Background to the main study

The study reported in this article was a part of a larger project funded by the Australian Department of Education and Training undertaken by Rigby and Johnson (2016). That government-funded project sought to obtain information about the prevalence of bullying in schools as well as the actions being taken to address the problem, drawing on the responses of students, parents, and teachers. In addition, questions were included relating to the beliefs teachers held about bullying. This article is concerned specifically with such beliefs. Other aspects of the larger project may have helped to focus the minds of the respondents on the problem of school bullying and increased the salience of the inquiry into the beliefs of teachers.

Procedure and sampling

Permission to conduct the survey was obtained through the Ethics Committee of the University of South Australia and from six of the eight educational jurisdictions responsible for government schools in Australia. Consistent with the agreement undertaken with the educational jurisdictions, the names of the jurisdictions are not reported.

In 2014–2015, government schools in Australia were invited to take part in a project involving teachers, students, and parents in answering questions about bullying in schools (the present article examines one aspect of that project). To obtain respondents in 2014, invitations were sent to randomly selected mainstream government schools in jurisdictions from which permission had been obtained. In 2015, to increase the sample size, additional invitations were sent to Australian schools with the assistance of the Principals Australia Institute through their newsletter. The schools agreeing to take part were self-selected. Hence the sample must be regarded as a convenience sample.

The questionnaire was answered online by 451 teachers from 26 government schools (excluding special schools) in six of the eight States/Territories in Australia. The schools in the sample consisted of 17 primary, 5 secondary, and 4 combined schools (i.e., schools catering for students of all ages). These figures differ from what would be precisely representative of levels of Australian Government schools (excluding special schools): that is, 20 primary schools, 4 secondary schools, and 2 combined schools (Australian Bureau of Statistics, 2015). Survey respondents were invited to provide demographic data but were not *required* to do so. Some respondents opted to provide no information that could possibly identify them as individuals or as members of particular schools.

Of the 347 respondents who indicated the type of school they attended, 57.6% were employed at primary schools, 20.2% at high schools, and 22.2% at combined schools. Excluding combined schools (for which figures were unavailable), the Australian Bureau of Statistics reported that 48.6% of teachers were employed in primary schools compared with 51.4% in secondary schools. Gender data was provided by 83.4% of respondents; of these, 75.8% were females, indicating that female teachers were somewhat overrepresented in this sample; the estimated population figure is 70% (McKenzie, Weldon, Rowley, Murphy, & McMillan, 2014). Information on age was provided by 81.6% of respondents using intervals ranging from 20–29 to 65+ years. The modal age group was 40–49 years. This is comparable to the population mean age for Australian teachers of 44 years given by McKenzie et al. (2014).

The Knowledge of Bullying Test was presented to teachers as a "quiz" with the following instructions:

> Knowledge about school bullying is gradually advancing, but there is still uncertainty on some issues. In this exercise you are asked to say what you think is true or false based on your personal experience and understanding. Given below are 40 statements about bullying in schools. Please read each of them carefully and indicate whether it is, in your opinion, true or false. In some cases you may feel unsure, in which case, indicate which is more likely to be the case.
>
> Bear in mind that the questions are to be answered anonymously. Immediately on completion you can receive information about what appear to be the best answers—and, more importantly, explanations based on published research as to why the claims have been made.

In addition to answering the Knowledge of Bullying Test, respondents were asked two further questions:

(1) "What is your main source of knowledge about bullying?" The options were (a) university courses, (b) professional reading, (c) general media, and (4) the Internet.
(2) "Do you want to see information about what appears to be the best answers and, most importantly, explanations based upon research about why such claims have been made?" The options provided were (a) No thanks, (b) Yes, please (For those who answered [a], information was downloaded for their perusal).

Data analysis

Data were analysed by IBM SPSS (Version 23). Due to the occurrence of missing data for gender and age, numbers for specific analyses vary.

The results

Responses to the Knowledge of Bullying Test

Responses to items on the Knowledge of Bullying Test are given in Table 1. Three levels of responding are identified: (a) items for which there was a high degree of consensus (over 75%) giving "correct" answers; (b) items for which there was substantial disagreement among teachers but with the majority (50–75%) giving the "correct" answers; and (c) items for which most teachers (less than 50%) gave the "correct" answers.

Subgroup comparisons on the Knowledge of Bullying Scale

Mean differences in scores on the 19-item Knowledge of Bullying Scale were examined using two-way ANOVA with type of school and gender as factors. Overall differences were found between types of schools, $F(2,264) = 3.15$, $p < .05$; however, post-hoc analyses (Tukey) did not yield significant differences between any types of school ($p > .05$). Gender differences were nonsignificant, $F(1,265) = .019$, $p < 05$. A significant gender–school type interaction effect was found: $F(2,264) = 3.04$, $p < .05$. Mean scores given in Table 2 suggest that females score higher than their male counterparts in primary schools, while the opposite is the case in the other types of school.

The relationship between knowledge of bullying and age was examined using the Spearman correlation statistic. Older teachers tended to score higher on this scale: $r(372) = .16$, p < .01.

Sources of knowledge about bullying

The main source endorsed by practicing teachers as providing the most information about bullying was Professional Reading, followed by the General Media, University Courses, and the Internet. Table 3 gives the percentages of teachers, giving each of these as their main source, together with scores on the Knowledge of Bullying Scale according to the source mainly accessed.

By one-way ANOVA, the Knowledge of Bullying Test mean scores for the groups were overall significantly different, $F(3,364) = 28.57$, $p < .001$. Post-hoc testing (Tukey) indicated teachers reporting Professional Reading as their main source of informa-

tion scored higher than those indicating the General Media ($p < .001$) and also the Internet ($p < .001$). The use of the Internet accessed by a small minority of teachers as a main source was associated with lower Scale scores than either University Courses ($p < 001$) or the General Media ($p < .001$). The scores of teachers giving University Courses or Professional Reading as their main source did not differ significantly ($p = 0.16$).

Requests for access to research findings about bullying

Indications of whether respondents wished to access the available information relating to the relevant research findings was obtained from 351 respondents. Among these, 43.6% indicated that they wished to do so. Respondents electing to access the information scored higher on the Knowledge of Bullying Scale ($M = 17.10$, $SD = 1.67$, $N = 153$) than others ($M = 16.31$, $SD = 2.11$, $N = 198$; $t(349) = 3.56$, $p < .001$.

Discussion

The first achievement of this study has been to identify a set of beliefs about school bullying that are widely held by researchers in the field. In this regard it has extended the earlier contributions of Nicolaedes, Toda, and Smith in England, and Bauman and del Rio in the United States, by identifying a much more extensive set of beliefs based on a systematic search. Secondly, it has provided evidence regarding specific beliefs on which teachers and researchers appear to agree or disagree and by inference where significant gaps may occur. Thirdly, this study identifies a subset of 19 beliefs about school bullying held by teachers that cohere to provide a general scale appropriate for investigating group differences. Finally, it reports on comparisons on teacher beliefs about bullying relating to the age, gender, source of information about bullying, and motivation to access further information about school bullying.

This article has sought to identify particular beliefs about school bullying that are held by teachers and to compare them to those held by researchers in the field. It does not suggest that where differences were found, the teachers were wrong or misinformed. The question of the validity of such beliefs as possible predictors of actions to address school bullying remains to be examined. This article does, however, help to identify gaps that currently separate the views of teachers and researchers and, as such, *may* have implications for both teacher and researcher education.

Table 2. Mean scores and *SD*s for male and female teachers on the Knowledge of Bullying Scale according to type of school and gender.

	Respondents					
	Males			Females		
Type of school	M	SD	N	M	SD	N
Primary	15.97	3.05	39	16.81	1.88	161
Secondary	17.24	1.15	17	17.08	1.44	53
Combined	17.14	2.01	21	16.68	1.68	52
Total	16.57	2.52	77	16.82	1.77	266

Table 3. Mean scores on the Knowledge of Bullying Scale, *SD*s, and percentages of teachers accessing their main source of information about school bullying.

Source	Mean	SD	N	Percentage
Professional reading	12.57	2.00	198	53.8
General media	11.93	2.09	121	32.9
University courses	12.57	2.50	30	8.2
Internet	10.42	2.06	19	5.2

The gap between teachers and researchers was much greater in some areas than others. On 21 of the 40 items included in the Knowledge of Bullying Test, there were comparatively few differences. However, substantial gaps were identified on other items of research-based knowledge. Teachers were divided among themselves on 9 of the items, with small majorities giving answers consistent with research findings. On a further 10 items, a majority of the teachers gave answers that were not consistent with research findings. In detailing the discrepancies between teachers' beliefs about bullying and those of researchers, it should not be assumed that either teachers or researchers are "right" in the sense of being in possession of knowledge that is necessarily accurate and useful. However, it is suggested that the identification of areas in which teachers and researchers agree or disagree is potentially useful in addressing the problem of bullying in schools.

A fairly close correspondence between teacher and researcher beliefs (operationally defined as over 75% agreement) was evident in how the concept of bullying was understood. Bullying was seen generally as the repeated abuse of power (Smith & Sharp, 1994); as the expression of a desire to hurt (Tattum & Tattum, 1992); as including deliberate unfair exclusion (Smith, 2014); and cyberbullying, often accompanied by the more traditional forms of bullying (Olweus, 2012; Smith et al., 2008). It was agreed that bullying was at times a consequence of homophobia (Rivers, 2011), sometimes a response to provocation (Solberg, Olweus, & Endresen, 2007), and typically ignored by student bystanders (Craig & Pepler, 1997). The negative effects of being bullied on health were acknowledged (Graham, 2016; Ronning et al., 2009). Teachers reported that bullying tended to increase when students entered secondary school, as reported in the research literature (Pellegrini & Long, 2002). The nature and value of various approaches supported by research in countering school bullying was recognized. These included social skills training (Fox & Boulton, 2003); positive behavior support (Ross & Horner, 2009); peer mediation (Burrell, Zirbel, and Allen, 2003); Restorative Practice (Morrison, 2006); the Support Group Method (Robinson & Maines, 1997); and classroom management (Roland & Galloway, 2002). It was agreed that punishing perpetrators was not necessarily the most effective approach (Maag, 2001). Advising the parents of bullied children to sort out the problem with the parents of the alleged perpetrator(s) was seen as counterproductive (Brown, Aalsma, & Ott, 2013). There was a recognition that some students experience remorse after reflecting on their bullying behavior, as noted in reports on the effectiveness of Restorative Practice

(Gauley, 2006; Howard, 2014). Consistent with research findings, schools recognized the need to counter bullying using a whole-school approach (Richards, Schneider, & Mallet, 2012) and had a legal obligation, at least in Australia, to respond to actual cases of bullying (Butler, 2006).

On the remaining items there were notable differences among teachers. First, one may consider items on which only a small majority of teachers provided answers consistent with research. One set of judgments in this category related to what teachers perceived or judged to be happening as far as students were concerned. Some 47% endorsed the view that bullying typically occurred when no one was watching, a view at odds with direct naturalistic observations reporting that bystanders are generally present (Pepler & Craig, 1995). Teachers (36%) also expressed the view that students seeking help after being bullied were more likely to tell teachers rather than parents, a view contradicted by results obtained in student surveys (Puhl, Peterson, & Luedicke, 2013). A second set of items related to views on cyberbullying. Many teachers (42%) were of the view that cyberbullying was currently the most common form of bullying, whereas research reports have suggested otherwise (Olweus, 2012). Many teachers (35%) expressed support for advising students to delete any abusive cyber messages they received, a practice discouraged by researchers on the grounds that it may prevent the identification of the perpetrator(s) (Bauman, 2011). Thirdly, there were beliefs relating to the perceived prevalence of bullying and the effectiveness of interventions. Some 46% of teachers believed the prevalence of bullying was much the same in all countries, contrary to cross-national studies (Due et al., 2009); and 37% believed the statement that two out of three cases of bullying are treated successfully by schools was false, a view inconsistent with results from teacher surveys in Australia (Rigby & Johnson, 2016). There were two questions relating to bullying interventions on which the views of teachers and researchers differed. Contrary to research reports, 40% of teachers saw the Method of Shared Concern as not being appropriate in cases of bullying in which there had been provocation (Rigby & Griffiths, 2011). The term *mediation* was understood by 30% of teachers as compatible with students being *required* to take part if asked, a view not accepted by researchers in this area (Burrell et al., 2003).

The gap could be said to be greatest where a *majority* of teachers give answers inconsistent with research. These included differences in judgments regarding age trends and gender differences. In the main, teachers opined that bullying behavior

increased with age, a view contrary to that supported by research (Smith & Gross, 2006). Also contrary to research reports (Sentse, Kretschmer, & Salmivalli, 2015), most respondents opined that boys were no more prone to bully than girls, especially physically. Some factors reported as contributing to bullying behavior or being victimized according to research were not recognized as such by most teachers: namely, parental overprotection (Bowers, Smith, & Binney, 1994), insecure attachment to a caregiver (Eliot & Cornell, 2009, Williams & Kennedy, 2012), having low self-esteem (Pollastri, Cardemil, & O'Donnell, 2010), and a genetic predisposition to engage in bullying (Ball et al., 2008). How school bullying related to crime and the law was viewed differently by teachers and researchers. Contrary to research findings (Butler, 2006), school bullying was viewed by teachers as a statutory offense. Most teachers did not see bullying at school as predictive of subsequent criminal behavior, as was reported by Farrington and Ttofi (2011). Finally, 60% believed that bullying is becoming more prevalent, a view often promoted by the media while contradicted by numerous reports based on longitudinal surveys (Rigby & Smith, 2011).

In addition to identifying teachers' beliefs about bullying that agree or disagree with judgments made by researchers, several subgroup comparisons were made using the 19-item Knowledge of Bullying Scale. In commenting on similarities and differences it should be noted that the reliability of this measure is not high and findings should be treated with caution. It can be said, however that the findings were in general not unexpected. That male and female teachers had similar levels of research-based knowledge of bullying is what one could expect, given that they are similarly trained and confront similar problems with student behavior. That more senior teachers appear significantly more knowledgeable about bullying again is predictable: an understanding of student interpersonal behavior can be expected to increase with teacher experience over time.

For educators who believe that a greater awareness of research-based knowledge of bullying is desirable among teachers, the findings are of particular interest. The results suggest that only a minority of teachers (44%) are motivated to access sources information based on research findings, even though they are interested in answering questions about what they believe to be true about bullying. One possible explanation is that many of them had higher priorities regarding how to make use of their time at school. Alternatively, it may be felt that research knowledge in this area is of little or no relevance to their work. The findings also suggest

that accessing some sources of information about bullying may result in a higher level of research-based knowledge. As one might expect, teachers whose main source of relevant information was from the general media and from the Internet appeared to be less informed than teachers who obtained their knowledge mainly from professional journals. The finding that only a quite small percentage (8%) named *university courses* as their main source of knowledge of bullying is a matter of much concern to some educators who believe that the issue of bullying requires more emphasis in teacher education (Bauman & del Rio, 2005; Nicolaides et al., 2002).

In conclusion, this article raises several questions. First, one may ask whether the differences between what teachers believe about bullying and what many researchers believe really matter. As noted earlier, an empirically supported answer requires an inquiry into whether holding specific research-based beliefs does in fact contribute to addressing the problem of bullying more effectively. At this stage, judgments must be speculative. It may be that some items but not others may prove to be valid predictors of effective school action against bullying. Although some beliefs may appear to be only remotely relevant to addressing school bullying, they may still influence teacher behavior. For instance, knowledge that bullying behavior is influenced by genetic factors (as well as environmental ones) may result in a teacher or counselor appreciating the greater resistance to behavioral change of some students, and thus influence how such students can best be counseled or referred to relevant specialists. Regardless of the predictive value of any of the items, especially those about which there are wide discrepancies between the opinions of teachers and researchers, it is important to consider what the effect of intrastaff differences in beliefs about bullying may have on the ability of a school to develop and implement an agreed antibullying policy. As noted, a very high proportion of the teachers (97.1%) believed that such an approach is desirable, a view consistent not only with research but also with mandatory policies of educational jurisdictions, for example, the Australian National Safe Schools Framework (Ministerial Council on Education, Early Childhood Development and Youth Affairs, 2004).

A further question is how the evident gap between the beliefs of teachers and researchers can, if so desired, be bridged. One answer could be to ensure that teachers are better informed about research-based beliefs concerning bullying. This study suggests that a majority of teachers, regardless of gender and type of school in which they teach, are not strongly motivated to access relevant

information. The task of motivating teachers in this area would appear to rest in part with teacher training and with leaders in schools responsible for providing opportunities for professional development through seminars and workshops. Responsibility also rests with the researchers in ensuring as far as possible that their research is relevant to the needs of schools and is effectively conveyed. One way forward may be, as Hirschkorn and Geelan (2008) have proposed, that schools and departments of education should employ "research translators" who are aware of the practical everyday needs of teachers and able to convey the findings from research more adequately. As suggested by Schad (2014), school psychologists have a particularly important role in communicating relevant evidence-based knowledge to schools.

Limitations

Limitations apply to the unavoidable selectiveness of the items included in the test of knowledge of bullying. Given the large and growing volume of findings published in the area of school bullying and, in some cases, their controversial nature, other equally or perhaps more important and relevant items may not have been included in this test. Although the primary focus has been on specific beliefs about bullying, subgroup differences on a measure of general research-based knowledge were assessed employing a Knowledge of Bullying Scale with a relatively low level of internal consistency. Findings based upon this measure must therefore be interpreted with caution. Generalizations about the levels of teacher knowledge must be limited to particular circumstances: in this case to practicing teachers in a convenience sample drawn from Australian government schools in 2015. As research in this area continues to expand and reported findings disseminated, it is likely that changes in beliefs and accepted knowledge will occur. Finally, one important issue not addressed in this paper is whether differences in levels of research-based knowledge and specific beliefs about bullying make a significant difference to the effectiveness of how bullying is countered in schools. This remains a significant question for further research.

Acknowledgments

Funding

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