



Teachers' Motivation to Participate in Anti-bullying Training and Their Intention to Intervene in School Bullying: a Self-determination Theory Perspective

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Abstract

Bullying has become a pervasive threat for education, health, and policy. Inadequate professional development in bullying prevention and intervention has compounded this issue. Since teachers' professional development is a critical aspect in shaping supportive, healthy, and safe learning environments as well as creating and maintaining high-quality education, the purpose of this study is to gain more insight into the motivational processes that contribute to teachers' intention to participate in future anti-bullying professional development and intervene upon encountering school bullying. The study employed self-determination theory to examine associations between K-12 teachers' ($N=414$) autonomous (intrinsic and identified) and controlled (introjected and external) motivation for participating in anti-bullying training and their intention to (a) participate in future anti-bullying training and (b) intervene upon encountering school bullying. Structural equation modeling revealed that, unlike controlled motivation, teachers' autonomous motivation for participating in anti-bullying training was positively related to their intention to participate in future training and intervene upon encountering school bullying, implying that school policy and professional development should foster autonomous motivation to increase intention to intervene upon encountering school bullying. Implications for professional development, educational practice, and future research are discussed.

Keywords Self-determination theory · Anti-bullying · Teacher professional development · Motivation · Intention to intervene

Introduction

Bullying in schools and its detrimental effects has long been a pervasive threat to the well-being and academic success of students and consequently a major concern for education, health, and policy (Hall, 2017; Whitted & Dupper, 2005). Bullying refers to negative and aggressive (verbal, relational, physical) behaviors that intentionally and repetitively harm a specific individual including a power imbalance between the perpetrator and the victim (Hall, 2017; Olweus, 1993). With one out of every five students between the ages of 12–18 reporting school bullying

victimization (Musu-Gillette et al., 2017), bullying is a widespread phenomenon. Within the school environment, teachers are at the forefront of being exposed to school bullying and are more likely to witness bullying and view bullying as a major problem at their school than other education support professionals (Bradshaw et al., 2013). Beyond exposure to and concerns about bullying, teachers play an integral role in the management of bullying (De Luca et al., 2019). When teachers intervene upon encountering a bullying situation, they communicate that bullying and its associated behaviors are not acceptable. In contrast, failing to intervene can lead to the perceived justification of behaviors associated with bullying, which may in turn reinforce bullying behaviors and discourage victims from reporting incidents (Dedousis-Wallace et al., 2014; Yoon & Kerber, 2003). Thus, teachers are in a powerful position as their interventions and responses to school bullying can help to foster positive relationships among students and a healthy classroom and school climate (De Luca et al., 2019). Teachers' adequate response to school

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bullying (e.g., through the implementation of effective anti-bullying strategies) largely depends on professional development through anti-bullying training and, perhaps more importantly, on teachers' motivation, intention, and willingness to participate in anti-bullying training. In particular, autonomous motivation (i.e., self-determined motivation; motivations that emanate from the self, such as intrinsic motivation; Ryan & Deci, 2000) is one of the most fundamental factors of successful professional development (Assor et al., 2009; Gorozidis & Papaioannou, 2014). Autonomous motivation tends to be domain specific, which led to a suggestion by Fernet et al. (2008) that when examining teachers' autonomous motivation for professional development or any other tasks, it is vital to differentiate between specific tasks as well as types of professional development. This consideration reflects that teachers' levels of autonomous motivation likely depend on the specific content of the professional development, such as bullying prevention and intervention (Gorozidis & Papaioannou, 2014). In order for professional development content to be translated into behavior—in this context in terms of intervening upon encountering school bullying by implementing strategies acquired during anti-bullying professional development—motivation theory and research suggest that autonomous motivation should be present. According to self-determination theory (SDT; Ryan & Deci, 2000), autonomous motivation arises when the adoption of content and strategies emanates from the self and is consistent with one's identity, values, and goals (Assor et al., 2009).

While prior research on school bullying has focused on students' motives for school bullying (Fluck, 2017) or the prevalence and impact of school bullying (Musu-Gillette et al., 2017), there are no studies—to the best of our knowledge—that examine teachers' motivation and intention to participate in anti-bullying training and intervene upon encountering school bullying from a self-determination perspective. Within the context of school bullying, teachers play a vital role in the management of bullying as their beliefs about and their responses to bullying can shape (a) positive relationships among students, (b) a supportive and healthy classroom climate and school environment, and (c) future behaviors of the victim, perpetrator, and bystanders (De Luca et al., 2019; Eldridge & Jenkins, 2020; Hektner & Swenson, 2012; Yoon & Bauman, 2014; Yoon & Kerber, 2003). In particular, understanding factors that predict teachers' intentions to respond and intervene upon encountering school bullying and consequently counteract school bullying should be considered a priority for school bullying prevention professional development (De Luca et al., 2019). Thus, building on prior research, this study examines teachers' (a) motivation to participate in anti-bullying professional

development and (b) intention to intervene upon encountering school bullying and apply anti-bullying training. Understanding how teachers' motives to participate in anti-bullying professional development relate to their intention to participate in future anti-bullying training and respond to school bullying has important implications for professional development regarding bullying prevention and response strategies. Further, gaining a better understanding of factors related to teachers' intentions to respond to bullying is critical since teachers are the adults in school most likely in a position to intervene, which in turn can influence students' bullying behaviors (Yoon & Bauman, 2014). Recognizing the importance of teacher motivation regarding professional development as well as anti-bullying prevention and intervention, the purpose of this study is to examine teachers' motivation for participating in professional development anti-bullying training and how it relates to their intention to (a) participate in future professional development and (b) intervene upon encountering bullying in school and apply anti-bullying training.

Theoretical Framework

Self-Determination Theory

Self-determination theory (SDT; Ryan & Deci, 2000) provides a prominent theoretical framework to human motivation expanding the intrinsic/extrinsic dichotomy to a more differentiated continuum of self-determined and controlled forms of motivation. Within this framework, the form of motivation is determined by the degree to which the type of motivation is internalized and integrated (see Fig. 1). Internalization refers to individual's "taking in a value or regulation," whereas integration refers to "the further transformation of that regulation into their own so that, subsequently, it will emanate from their sense of self" (Ryan & Deci, 2000, p. 71). On the far-left end of the continuum is *amotivation* which refers to the lack of intention to act and can arise from not valuing a task or activity or perceiving a lack of control or competence. On the far right of the continuum is *intrinsic motivation/regulation*, the most autonomous, self-determined form of motivation, which refers to engaging in a task or activity simply due to one's interest, enjoyment, and inherent satisfaction. Four types of extrinsically motivated behaviors are conceptualized along the continuum between amotivation and intrinsic motivation. *External regulation* is the least autonomous and most controlled form of extrinsically motivated behavior and refers to behaviors that are driven by external contingencies such as demands, requirements, and rewards. Next along the continuum is *introjected regulation*, which refers to behaviors that are driven by self-control, ego involvement, and

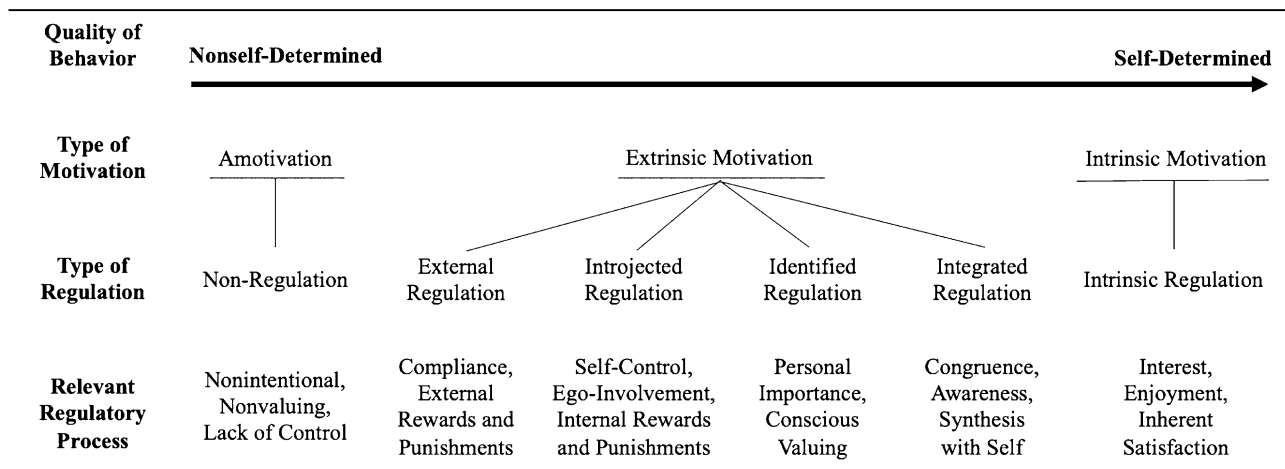


Fig. 1 The self-determination continuum, with types of motivation, types of regulation, and relevant regulatory process based on Ryan and Deci (2002)

internal rewards and punishments such as avoiding guilt, shame, or feeling unworthy, as well as attaining validation from others. The next form of motivation is *identified regulation* which is considered relatively self-determined because the individual identifies with the personal importance, value, or usefulness of an activity or behavior. The next form of motivation, which is positioned on the right side of the continuum next to intrinsic motivation, is *integrated regulation*. Integrated motivation, which is considered the most autonomous form of extrinsically motivated behavior, results when behaviors have been “brought into congruence with the personally endorsed values, goals, and needs that are already part of the self” (Ryan & Deci, 2002, p. 18). Because integrated motivation has been found to be empirically indistinguishable from identified motivation, studies examining motivation according to SDT simply include identified and intrinsic motivation as autonomous forms of motivation (Ryan & Connell, 1989). Given the importance of educators’ autonomous motivation for participating in professional development, it is crucial to understand the conditions that support or hinder intrinsic and identified motivation.

Within SDT, it is posited that all individuals have three innate, psychological needs: the needs for autonomy (i.e., the desire to experience a sense of psychological freedom and choice), competence (i.e., the desire to feel competent and effective), and social relatedness (i.e., the desire to interact with and be connected to others; Deci & Ryan, 2008; Klajnsen et al., 2018). Environments that facilitate the satisfaction of these three basic needs are considered to have a positive impact on autonomous motivation, whereas environments that thwart feelings of autonomy, competence, and

relatedness may have a diminishing effect on autonomous motivation (Deci & Ryan, 2000; Klajnsen et al., 2018).

Whereas extensive research on positive educational outcomes of autonomous motivation among students exist (Ryan & Connell, 1989; Sutter-Brandenberger et al., 2018; Taylor et al., 2014), fewer studies have investigated the impact among teachers. The studies that exist on teachers’ motivation have systematically revealed that autonomous forms of motivation among teachers is strongly linked to positive teacher learning outcomes such as higher job satisfaction (Richer et al., 2002), work commitment (Fernet et al., 2016), well-being (Deci & Ryan, 2000), less job burnout (Fernet et al., 2004), whereas controlled forms of motivation have been linked to negative outcomes (Gagné & Deci, 2005; Gagné et al., 2010) such as higher stress and burnout (Slemp et al., 2020). Overall, autonomous motivation has been found to be more strongly related to teacher outcomes than controlled motivation (Gagné et al., 2010). Similarly, within the context of teacher professional development, teachers’ autonomous motivation has been shown to be more strongly associated with their intentions to participate in training and to teach innovative subjects than controlled motivation (Gorozidis & Papaioannou, 2014; Zhang et al., 2021). However, teachers’ autonomous and controlled motivation to participate in professional development within the context of school bullying has yet to be explored. Since teachers are often at the forefront of school bullying, understanding their intention to intervene upon encountering school bullying as well as their motivation to participate in anti-bullying training carries important implications for professional development regarding bullying prevention and response strategies.

Self-Determination Theory and Professional Development Anti-Bullying Training

Beyond teaching, one of the key responsibilities of educators is to create a healthy and safe environment for their students (Jennings & Greenberg, 2009), which can for instance be facilitated through professional development anti-bullying training, including professional training to improve teachers' relationship-building skills (Dietrich & Cohen, 2019). Importantly, teachers need to gain competencies in both social- and relationship-building skills to prevent bullying as well as strategies to react to bullying once it has already occurred. Teachers' motivation and willingness to learn is an integral prerequisite not only for their participation in professional development but also for the translation of the professional development content into practice (Gorozidis & Papaioannou, 2014). If teachers solely participate in professional development for external reasons (e.g., to comply with a curriculum or performance standards or to earn credits that would increase their pay) without perceiving the content as reflective of their identity or values, the less they are self-determined toward professional development and consequently, translation of professional development content into practice is less likely to occur (Assor et al., 2009; Roth et al., 2007).

The importance of professional development for teachers has been identified as a core component of effective bullying prevention programs (Bradshaw, 2015). A meta-analysis of bullying prevention training indicated that anti-bullying programs can increase teachers' self-efficacy to intervene when bullying occurs (Verseveld et al., 2019). Likewise, the results indicated a statistically significant moderate effect of professional development on factors that determine teacher willingness to intervene in bullying situations including (a) teachers' attitudes, (b) subjective norms, (c) self-efficacy, and (d) knowledge. Bullying prevention programs indicated a statistically significant small to moderate effect on teachers' expectancy to intervene when bullying was observed.

Context of Summary

Whereas research on school bullying from the perspectives of students exists, a gap from the standpoint of teachers remains. The importance of teacher motivation in professional development has received increasing recognition within the context of teaching and teacher education with teachers' motivation having been proposed as one of the most crucial features of teacher learning and successful professional development that can translate into action and behavior as well as predict teachers' intentions (Gorozidis & Papaioannou, 2014, p. 2). However, in the prediction of teachers' future behavior in terms of their intention to intervene upon encountering school bullying, it is essential to differentiate between different types of motivation, since—in line with self-determination theory—different

types of motivation can have differential effects. SDT offers a theoretical framework for examining different forms of motivation (i.e., autonomous versus controlled forms of motivation) and predicting motivational consequences of these different types of motivation with teachers' autonomous motivation being associated with positive outcomes. However, few studies have focused on teachers' motives for participating in professional development (Gorozidis & Papaioannou, 2014), in particular within the context of anti-bullying professional development.

The Present Study

Since teachers are key mediators in bullying prevention and intervention, their participation in anti-bullying professional development training is vital for their adequate response to school bullying as well as for creating a healthy and safe learning environment for students. However, further research is warranted to examine what influences teachers' intention to participate in professional development as well as their response to bullying situations (Yoon & Bauman, 2014). Overall, SDT-based research on teachers' motivation to participate in professional development indicates that autonomous motivation is related to positive outcomes, whereas controlled motivation is closely associated with negative outcomes (Gagné et al., 2010; Gorozidis & Papaioannou, 2014); however, the relationships within the context of school bullying have not yet been empirically tested. Thus, this study aimed at exploring (1) different types of K-12 teachers' motives for participating in in-service anti-bullying training and (2) whether autonomous (i.e., intrinsic and identified regulation) and controlled motivation (i.e., introjected and external regulation) relate to teachers' intention to (a) participate in future anti-bullying training and (b) intervene upon encountering school bullying (see Fig. 2). The following two research questions with corresponding hypotheses—based on self-determination theory, previous research, and literature review—guided the present study:

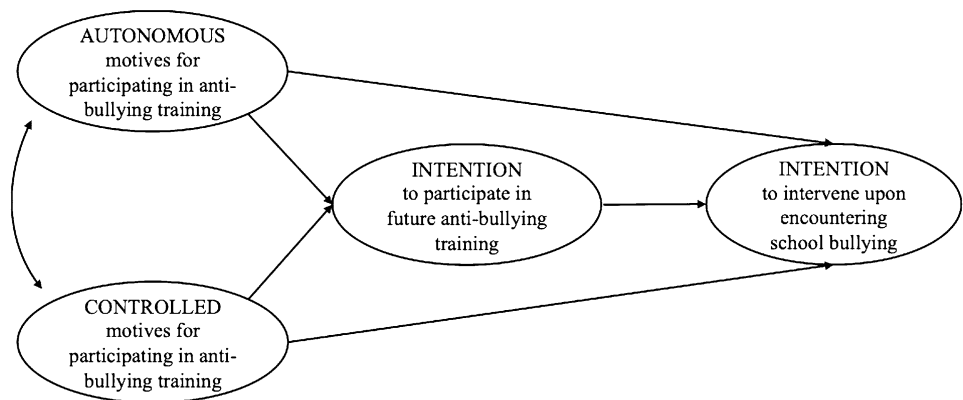
RQ₁: Why do teachers participate in in-service anti-bullying training?

Hypothesis H₁: Given that participation in in-service anti-bullying training can be mandatory or voluntary, it is expected that teachers will express both autonomous as well as controlled forms of motivation according to the different types of behavioral regulations conceptualized within the SDT continuum.

RQ₂: Do both types of motivation, autonomous and controlled, predict teachers' intention to participate in future anti-bullying training and intervene upon encountering school bullying?

Hypothesis H_{2a}: Teachers' autonomous motives to participate in in-service anti-bullying training will be

Fig. 2 Proposed theoretical model linking teachers' autonomous and controlled motivation to their intention to participate in future anti-bullying training and to intervene in school bullying



positively associated with their intention to (a) participate in future anti-bullying training as well as (b) intervene upon encountering school bullying, whereas controlled motives will not be positively associated.

Hypothesis H_{2b}: Teachers' intention to participate in future anti-bullying training will positively predict their intention to intervene upon encountering school bullying.

Method

Sample and Procedure

Data were collected through Amazon Mechanical Turk (M-Turk),¹ an online data collection method, from 414 teachers aged between 21 and 65 years ($M = 32.78$; $SD = 7.58$) from 46 States. Inclusion criteria included educators who—at the time of the survey (December 2019)—(a) were working as teachers in a K-12 setting in the USA and (b) have attended any in-service training offered to teachers at their school or district on school bullying in the past five years.² Permission to carry out the study was obtained from the International Review Board (IRB) of the authors' university. Participants' teaching experience ranged from 1 to 32 years ($M = 5.99$; $SD = 4.68$); 49.5% were female; 65.3% were white; 15.2% were black; 7.2% were Hispanic; 7.5% were

Asian; 1.9%, were American Indian or Alaska Native, and 2.9% were multiracial (see Table 1).

Measures

Teachers' Motivation to Participate in In-Service Anti-Bullying Training

To assess teachers' motives for participating in in-service anti-bullying training, an adapted version of the Work Task Motivation Scale for Teachers (WTMST; Fernet et al., 2008) was used. Originally, Fernet and colleagues (2008) developed and validated the WTMST as a measure of teachers' motivation toward specific work tasks (e.g., doing administrative tasks). For the present study, a slightly adapted version of the WTMST was used in order to capture teachers' motivation to participate in anti-bullying training (Gorozidis & Papaioannou, 2014). Preceding the WTMST, teachers were asked whether they have attended any in-service anti-bullying training offered to teachers at their school or district on school bullying in the past five years. Only teachers who have participated in in-service training within the past five

Table 1 Demographics of the sample

	<i>N</i>	%
Sex		
Female	205	49.5
Male	208	50.2
Non-binary	1	0.2
Race		
African American or Black	63	15.2
Asian	31	7.5
American Indian or Alaska Native	8	1.9
White	270	65.2
Hispanic/Latinx	30	7.2
Two or more	12	2.9

¹ Participants were offered a \$0.50 incentive to complete the online questionnaire via Qualtrics. To ensure data quality, inattention checks were implemented to detect inattentive respondents and study completion time in seconds were evaluated. Based on a general formula for predicting the time, it takes to complete survey items on MTurk (10.3 s per question), we anticipated this survey (which in its total comprised 38 questions) would take approximately 7 min (391 s) to complete. In total, 22 outliers were deleted (10 participants with less than 100 s and 2 participants with more than 1500 s). The average completion time of the remaining 414 participants was 400.25 s ($SD = 246.65$).

² Including bullying, training recency was important since the benefits of training may diminish over time (Shtivelband et al., 2015).

years proceeded to complete the WTMST. The instructions preceding the WTMST was as follows: “Using the scale below, please indicate for each statement to what extent you agree or disagree with each of the reasons for which you have participated in in-service training on school bullying.” Consistent with the SDT framework (Ryan & Deci, 2002), the subscales of the WTMST reflect the following four types of motivation: intrinsic (3 items, e.g., “Because it is pleasant to participate in the training,” $\alpha=0.80$), identified (3 items, e.g., “Because it is important for me to participate in this training,” $\alpha=0.79$), introjected (3 items, e.g., “Because I would feel guilty not doing it,” $\alpha=0.84$), and external (3 items, e.g., “Because the school obliges me to participate,” $\alpha=0.67$) regulation. All items are rated on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha was 0.82 for autonomous motivation (intrinsic and identified regulation combined) and 0.78 for controlled motivation (introjected and external regulation combined) at the index level.

Teachers’ Intention to Participate in Future Anti-Bullying Training

To assess teachers’ intention to participate in future anti-bullying training a two-item scale based on Gorozidis and Papaioannou (2014) was used which read: “I plan to participate in an anti-bullying training” and “I am determined to participate in an anti-bullying training.” Both items were answered using a 7-point Likert scale ranging from 1 (very unlikely) to 7 (very likely).

Teachers’ Intention to Intervene upon Encountering School Bullying and Apply Anti-Bullying Training

To assess teachers’ intention to intervene upon encountering school bullying and apply anti-bullying training, four items were used that reflect their intentions to intervene more generally as well as applying strategies learned during anti-bullying training: “I plan to intervene upon encountering bullying in school,” “I am determined to intervene upon encountering bullying in school,” “I plan to implement strategies learned during the anti-bullying training,” and “I am determined to implement strategies learned during the anti-bullying training” (Gorozidis & Papaioannou, 2014). All items were answered using a 7-point Likert scale ranging from 1 (very unlikely) to 7 (very likely). Cronbach’s alpha was good ($\alpha=0.86$)³.

³ Confirmatory factor analysis (CFA) in Mplus confirmed the four-item factor structure. Detailed results of the CFA can be found in the [Supplement](#).

Demographic Variables

Teachers’ self-reported sex (male = 0; female = 1), race (African American or black = 1; Asian = 2; American Indian or Alaska Native = 3; white = 4; Hispanic or Latinx = 5; 6 = mixed/two or more), their age in years, and teaching experience in years (“How many years have you been a school teacher?”) were included as control variables in the model.

Data Analysis

To explore teachers’ motives for participating in anti-bullying training, descriptive statistics and Pearson’s correlations were computed in SPSS (Version 25). To examine the associations between teachers’ autonomous and controlled motivation and their intention for (a) participating in future anti-bullying training and (b) intervening upon encountering school bullying and apply anti-bullying training, a structural equation model (SEM) was specified in Mplus using Version 8.6 (Muthén & Muthén, 2017) controlling for age, sex, race, and teaching experience (see Fig. 2). The model specified latent factors for all included variables, i.e., autonomous motivation was specified using the three items of the intrinsic motivation scale and the three items of the identified motivation scale and controlled motivation was specified using the three items of the introjected motivation scale and the external motivation scale. Teachers’ intention to participate in future anti-bullying training was specified using the two items, and teachers’ intention to intervene upon encountering school bullying was specified using the two items assessing their intention to intervene in school bullying as well as the two items assessing their intention to intervene upon encountering school bullying by implementing strategies learned during anti-bullying training. The model further included correlated residuals for the individual observed items. Because of the nested structure of the data (teachers from different states) and hierarchical nature of the data, we ran all analyses using the “type = complex” command in Mplus.⁴ The recommended goodness-of-fit indexes comparative fit index (CFI), Tucker Lewis index (TLI), root mean square residual (RMSEA), and standardized root mean residual (SRMR) were used. Usually CFI and TLI values above 0.95, RMSEA less than or equal to 0.06, and

⁴ In the USA, bullying prevention laws, policies, and regulations are developed and adopted at the state level. While there are common components (e.g., prohibiting statements, district policy requirements, and consequences) agreed upon by the Department of Education for bullying prevention, states determine their compliance to these components. Regarding the component *staff training for bullying prevention in schools*, only 39 (78%) of the states have addressed professional development in their anti-bullying policies and regulations (US Department of Health and Human Services, 2019). However, bully-

Table 2 Descriptive statistics and Pearson's correlations for the WTMST to participate in anti-bullying training

Variables	Mean	SD	1	2	3	4	5	6
1. Intrinsic	4.99	1.39	–					
2. Identified	5.58	1.19	.48**	–				
3. Introjected	4.63	1.57	.40**	.20**	–			
4. External	5.34	1.21	.12**	.37**	.37**	–		
5. Intention to participate	5.33	1.41	.55**	.64**	.19**	.26**	–	
6. Intention to intervene	5.67	1.12	.29**	.69**	.11*	.42**	.61**	–

SRMR < 0.08 suggest an acceptable model fit (Hu & Bentler, 1999). Additionally, the total effect (the sum of both indirect and direct effects) is reported (Bollen, 1987).

Results

Descriptive Results

Descriptive statistics and correlations are presented in Table 2. Mean scores for the different motivation types ranged between 4.63 for introjected regulation and 5.58 for identified regulation. The participants scored higher in external regulation (controlled form of motivation) than intrinsic regulation (autonomous form of motivation). Consistent with self-determination theory, the correlations between the four types of motivation revealed that the conceptually close constructs correlated (e.g., intrinsic and identified motivation, $r=0.48$) stronger than the more distant ones (e.g., intrinsic and external motivation, $r=0.12$). All types of motivation were significantly correlated with teachers' intention to participate in future anti-bullying training as well as their intention to intervene upon encountering school bullying with identified motivation correlating highest ($r=0.64$ with the intention to participate and $r=0.69$ with the intention to intervene).

Prediction of Teachers' Intention to Participate in Future Anti-Bullying Training and Intervene upon Encountering School Bullying

The fit of the specified model (see Fig. 3) was acceptable ($\chi^2(155) = 297.589$, $p \leq 0.001$; CFI = 0.941, TLI = 0.923,

Footnote 4 (continued)

ing prevention training may be occurring among school personnel in the other 11 (22%) of the states, even though it is not required by the state or regulated by statute. Therefore, in an additional step, all states were coded as 1 if their state mandated professional development (i.e., component *staff training for bullying prevention in schools*) and 0 if their state did not mandate professional development. We then looked at whether teachers from states that mandate staff training for bullying prevention report higher levels of controlled forms of motivation and lower levels of autonomous motivation. There were no significant differences between the groups.

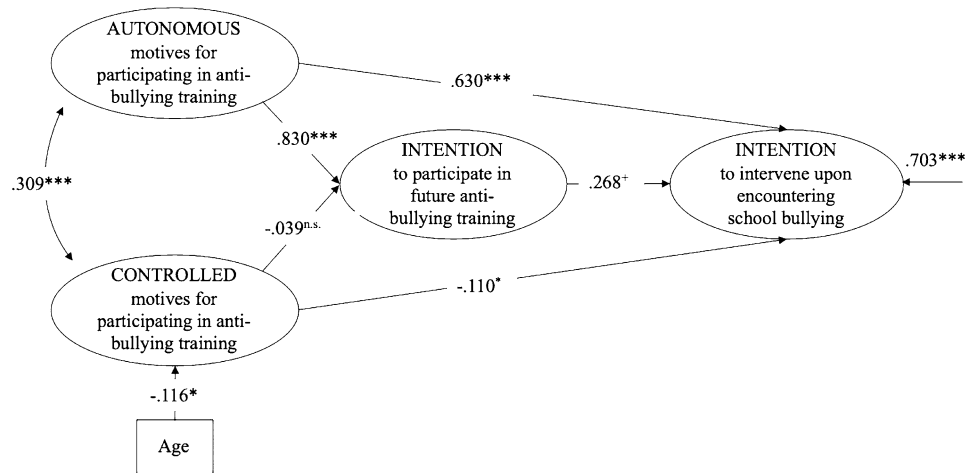
RMSEA = 0.049, SRMR = 0.086), with the exception of the SRMR, which fell just above the cutoff for a satisfactory fit (< 0.08). The association between teachers' autonomous motives for participating in anti-bullying training and teachers' intention to participate in future anti-bullying training was significantly positive ($\beta=0.830$, $SE=0.059$, $p \leq 0.001$). Thus, autonomous motivation positively predicts teachers' intention to participate in future anti-bullying training, which in turn positively predicts their intention to intervene upon encountering school bullying ($\beta=0.268$, $SE=0.143$, $p=0.061$), albeit missing statistical significance. An association between autonomous motivation and teachers' intention to intervene upon encountering school bullying was found ($\beta=0.630$, $SE=0.123$, $p \leq 0.001$), indicating that teachers' autonomous motives for participating in in-service anti-bullying training contribute to the explanation of variance of intentions to intervene in school bullying. Teachers' controlled motives for participating in anti-bullying training were not significantly associated with teachers' intention to participate in future anti-bullying training ($\beta = -0.039$, $SE=0.049$, $p=0.421$). However, controlled motivation was significantly associated with teachers' intention to intervene in school bullying ($\beta = -0.110$, $SE=0.048$, $p=0.021$), indicating that teachers' controlled forms of motivation were negatively associated with their intention to intervene upon encountering school bullying. Only one control variable was significantly related to teachers' motives to participate in anti-bullying training: Teachers' age was significantly negatively associated with teachers' controlled motives to participate in in-service anti-bullying training.

Results of the indirect effects between autonomous and controlled motivation on intention to intervene upon encountering school bullying are reported in Table 3. The total indirect effects of teachers' autonomous motivation ($\beta=0.223$, $p=0.056$) and controlled motivation ($\beta = -0.011$, $p=0.507$) on intention to intervene were not significant.

Discussion and Implications for Practice

The present study had two main goals: (a) to examine different forms of motivation expressed by K-12 teachers for participating in in-service anti-bullying professional

Fig. 3 Results of the structural equation model depicting relations between teachers' autonomous and controlled motives, their intention to participate in anti-bullying training and intervene upon encountering school bullying. *** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$; + $p \leq .10$; n.s. not significant



development and (b) to test whether both types of motivation, autonomous and controlled, predict teachers' intention to participate in future anti-bullying training and intervene upon encountering school bullying and apply anti-bullying training.

Overall, in line with the different types of behavioral regulations conceptualized within the SDT continuum as well as hypothesis H₁, teachers expressed both autonomous (intrinsic and identified motives) as well as controlled (introjected and external motives) motives for participating in in-service anti-bullying training. The most predominant form was identified regulation, followed by external regulation, intrinsic regulation, and introjected regulation (see Table 2). Thus, identified motivation was the most pronounced type of motivation reported by the teachers. It seems that teachers are particularly motivated to participate in anti-bullying training when they recognize the training as personally relevant and of great value and importance (e.g., “Because it is important for me to participate in this training”; “Because this training allows

me to attain work objectives that I consider important”). The subscale of identified motivation also included the item “Because I find this training important for the academic success of my students” indicating that teachers are autonomously motivated because they find the training meaningful for their students and attend them willingly without feelings of external pressure or control.

Within the context of school bullying, teachers play a crucial role in the management of bullying as their responses to school bullying can (a) help promote positive relationships among students, (b) shape a supportive and healthy classroom climate as well as school environment, and (c) influence future behaviors of the victim, perpetrator, and bystanders (De Luca et al., 2019; Yoon & Kerber, 2003). If a teacher does not respond to a bullying episode, a victim may perceive the teacher as uncaring or they may fear retaliation from the perpetrator if they tell on them which may result in the victims not reporting any bullying incidents leading to the continued victimization (Yoon & Kerber, 2003). It can be expected that teachers' autonomous motivation regarding anti-bullying professional development training and their intention to participate in future training and intervene upon encountering school bullying has a desirable impact on the classroom climate, students' prosocial behavior, and consequently their learning behavior (Roth et al., 2011). Thus, it is essential that teachers recognize the importance and impact of their actions, behaviors, and responses on students' academic success. Future research is warranted that triangulates teachers' motivation and their intentions with students' perspectives, for instance students' perceived teacher support in terms of intervention efforts with respect to bullying. Such research is vital to clarify the interaction between teacher and student behaviors, to identify the necessary components of anti-bullying professional development training, and ultimately to facilitate student success (Schieb & Karabenik, 2011).

Table 3 Standardized total effect, total direct effect, total indirect effects, and specific significant indirect effects of autonomous and controlled motivation on intention to intervene

	Est	SE	Est./SE	<i>p</i> value
Effects from autonomous motivation to intention to intervene				
Total effect	0.853	0.043	20.513	$\leq .001$
Total direct effect	0.630	0.123	5.132	$\leq .001$
Total indirect effects via intention to participate	0.223	0.116	1.914	0.056
Effects from controlled motivation to intention to intervene				
Total effect	-0.121	0.047	-2.596	0.009
Total direct effect	0.110	0.048	-2.313	0.021
Total indirect effect via intention to participate	-0.011	0.016	-0.664	0.507

External motivation was the second most expressed type of motivation. In line with previous SDT research, autonomous and controlled forms of motivation are not contradictory and can coexist (Amabile, 1993; Lemos & Veríssimo, 2014). The context of the present study (i.e., the in-service anti-bullying training can be both mandatory and voluntary) and the item formulation of the subscale external motivation (e.g., “Because my work demands it”) illustrate that even if a teacher recognizes the importance and value of participating in anti-bullying training (i.e., identified motivation), their motives can still consist of participating in the professional development training because it is mandated from their school. In this case, the findings of the present study indicate that controlled forms of motivation were not significantly associated with their intention to participate in future training.

The findings regarding the associations between teachers’ intention to participate in future anti-bullying training and to intervene upon encountering school bullying revealed that teachers’ autonomous motivation was positively associated with their intention to participate in future anti-bullying training (H_{2a}), which in turn was positively related to their intention to intervene upon encountering school bullying (H_{2b}). Teachers’ autonomous motivation was further directly linked to teachers’ intention to intervene upon encountering school bullying. Controlled motivation did not significantly predict teachers’ intention to attend future anti-bullying training; however, it did negatively predict their intentions to intervene in school bullying and apply anti-bullying training (small effect). Again, the context of anti-bullying in-service training, which can be mandatory or voluntary, illustrates that teachers’ motives can consist of participating in the professional development training because it is mandated by their school, without it negatively (or positively) relating to their intentions to participate in future anti-bullying training. The findings of the present study may indicate that given the negative association between controlled forms of regulation and teachers’ intention to intervene upon encountering bullying and apply anti-bullying training, external controls should be avoided if possible. Instead, content that promotes autonomous forms of motivation should be emphasized (Roth et al., 2011). Overall, the findings of the present study add support to the existing research on the positive role autonomous teacher motivation plays in various work-related outcomes by specifically examining the role of autonomous and controlled motivation of attending anti-bullying training in teachers’ intentions to participate in future anti-bullying training, intervene upon encountering school bullying, and apply anti-bullying training.

The self-determination framework cannot only be used to better understand why teachers participate in in-service anti-bullying training, but more importantly the framework—together with the findings of the present study—offers

practical implications. For instance, it can guide school administration and policy makers in developing and designing adequate anti-bullying professional development that targets teachers’ autonomous motivation which in turn contributes to the likelihood that teachers will implement professional development content into practice (Grove et al., 2009; Schieb & Karabenick, 2011).

Self-determination theory proposes the satisfaction of three basic psychological needs that promote teachers’ autonomous motivation regarding professional development and teacher training as well as teachers’ workplace in general: the needs for autonomy, competence, and relatedness (Deci & Ryan, 2008). In line with prior research, this study suggests that professional development and teacher training is only successful when teachers feel autonomous with their actions (rather than controlled). Strategies to support teachers’ need for autonomy could include (a) incorporating teachers’ perspective on bullying issues and their experience into the professional development and (b) helping them make the connection between the professional development or training content and their own teaching practice (Aelterman et al., 2016; Assor et al., 2009; Roth et al., 2007). Thus, the more teachers value the professional development content as it relates to their daily work, the more likely they are to internalize and integrate its importance, and the more likely they are to be autonomously motivated to participate in future training and apply strategies acquired during the training (Power & Goodnough, 2019). In line with SDT and basic needs theory (Deci & Ryan, 2008), providing teachers with autonomy support, for instance by giving them a voice to share their experiences, concerns, and perspectives in the professional development training, should increase these processes, whereas controlling contextual conditions should undermine these processes. Similarly, obtaining teachers’ feedback through formal and informal evaluation following professional development training can enhance teachers’ buy-in as valued stakeholders in the process (Centers for Disease Control and Prevention [CDC], 2019).

Teachers’ need for competence and perceived self-efficacy during professional development training is also vital, as it impacts their willingness to implement strategies acquired during the training in their own teaching practice (Guskey, 1984; Power & Goodnough, 2019). Since the likelihood of teachers’ intention to intervene in school bullying largely depends on whether they know how to intervene, a fundamental goal for in-service anti-bullying professionals is that the teachers feel more competent about responding to bullying incidents using appropriate strategies (De Luca et al., 2019). For instance, providing teachers with clear reporting procedures and specific strategies to deal with bullying situations as well as intervene upon encountering bullying are strategies that could be effective. In addition, providing teachers with the opportunity to practice bullying

interventions and strategies through role plays and case studies can enhance perceived competence and efficacy, since active learning strategies can be important aspects of professional development training (Godoy Garraza et al., 2020). Strategies for supporting teachers' need for relatedness within the professional development setting include creating a supportive learning community. Promoting teachers' autonomous motivation to participate in anti-bullying professional development requires environments "in which teachers experience enough opportunities to make their own professional choices and decisions, and in which they feel competent to act successfully, and connected to relevant others" (Klaeijns et al., 2018, p. 779). However, it should be noted that beyond intervention strategies, anti-bullying training should also emphasize prevention strategies by for instance highlighting teachers' relationship-building skills to create positive and safe climates. Bullying group dynamics most likely occur much less in positive relationship climates, and the quality of student–student relationships tends to be much more positive in classrooms and schools with respectful teacher–student relationships (De Luca et al., 2019; Dietrich & Cohen, 2019; Jungert et al., 2016). Thus, complementary to strategies to intervene, anti-bullying professional development should also focus on strategies to prevent bullying from occurring in the first place (Dietrich & Cohen, 2019).

Limitations and Future Research Directions

This study has several limitations. First, the voluntary nature of the study participation conjoined with the incentive of \$0.50 to complete the online survey potentially limits the generalizability and interpretation of the present findings. Given the external (monetary) incentive, more non self-determined motivated teachers may have been attracted to taking the survey, which might also explain the rather high levels of external motivation for participating in anti-bullying training. Similarly, we do not know whether teachers' participation in the anti-bullying training was mandatory or voluntary; thus, future research could further differentiate between the motives of teachers who voluntarily participated in the training versus those who did not. Second, all data collected was collected using self-report measures, which is vulnerable to both conscious and unconscious social desirability. Additionally, the "intention to participate in future anti-bullying training" scale was measured using only two items, which can undermine reliability and validity. Although research exists that only used two items to measure unidimensional constructs at the latent level (e.g., Gogol et al., 2014; Kosovich et al., 2019), it must be acknowledged as a limitation that limits the interpretability of the findings.

Third, the cross-sectional design of the study does not allow for assumptions regarding the causal interplay

between the studied variables. Thus, the results should be interpreted with caution and should be complemented with experimental studies. Future research should use longitudinal data to explore whether teachers' motivation to participate in anti-bullying training and their intention to intervene upon encountering school bullying influence each other reciprocally, and if so, whether the two directions are equally strong. Future research could specifically explore whether supporting the needs for autonomy, competence, and relatedness during anti-bullying training increases teachers' autonomous motivation for participating in anti-bullying training as well as their intentions and perceived *competence* to intervene upon encountering school bullying.

Conclusion

Schools have a responsibility to provide a safe environment for students to learn. In particular, teachers play a crucial role as their interventions and responses to school bullying can help promote a positive classroom climate. With bullying becoming an increasing concern for teachers, school practitioners, and policy makers, it is vital that teachers are prepared to handle bullying situations. Teachers' response to school bullying largely depends on professional development through anti-bullying training and perhaps more importantly on teachers' motivation, intention, and willingness to participate in anti-bullying training. Employing a self-determination theory lens, this study examined the associations between different types of teacher motivation (i.e., autonomous and controlled forms of motivation) for participating in anti-bullying training and their intention to (a) participate in future anti-bullying professional development and (b) intervene upon encountering school bullying. In line with the main assumptions of SDT, the association between teachers' autonomous motivation and their intention to participate in further anti-bullying training and intervene upon encountering bullying in the school setting was positive, providing evidence that SDT provides an important framework in teacher in-service professional development. From this study, we can infer that school policy and professional development aimed at bullying prevention and intervention should explicitly encourage content that stimulates teachers' autonomous motivation, which in turn increases their intention to intervene upon encountering school bullying.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s42380-021-00108-4>.

Declarations

Conflict of Interest The authors declare no competing interests.

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