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Associations between individual and collective efficacy beliefs and students' bystander behavior

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Abstract

This study examined whether defending and passive bystanding during peer victimization episodes were associated with individual- and classroom-level efficacy to stop peer victimization. Self-report survey data were analyzed from 1,467 Swedish fourth-grade students (mean age = 10.55) from 100 classrooms in 63 schools. Multilevel analyses revealed that, when witnessing peer victimization, students more often defended victims if they were high in defender self-efficacy and if they belonged to classrooms high in collective efficacy. In contrast, students were more likely to remain passive if they were low in defender self-efficacy and if they belonged to classrooms low in collective efficacy. Taken together, our findings suggest that efficacy beliefs both at the individual and at the classroom level contribute to explaining variability in students' bystander behaviors, which has potential implications for prevention and intervention work.

KEYWORDS

bystander behaviors, defender self-efficacy, collective efficacy, peer victimization

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1 | INTRODUCTION

Peer victimization is a group phenomenon in which most members, not only perpetrators and victims, are involved (Salmivalli, 2010). In a majority of cases, peers who are not initially involved in the peer victimization episode are present as bystanders (Atlas & Pepler, 1998; O'Connell, Pepler, & Craig, 1999). Bystanders can assume different social roles (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). They join in with or encourage the victimizers (henceforth referred to as "pro-aggressive bystanding"), remain passive or stay outside the episode (henceforth referred to as "passive bystanding"), or help or support the victims (henceforth referred to as "defending"). A growing body of research suggests that bystanders influence the occurrence of peer victimization, which is more common in school contexts where bystanders tend to act pro-aggressively than in contexts where bystanders are more inclined to defend victims (e.g., Salmivalli, Voeten, & Poskiparta, 2011; Thornberg & Wänström, 2018). Consequently, targeting the attitudes and behaviors of bystanders could constitute a key element in intervention and prevention programs (Salmivalli, 2014). Given the negative consequences of peer victimization and bullying on health (Gini, Card, & Pozzoli, 2018; Gini, Marino, Pozzoli, & Holt, 2018; Hanish & Guerra, 2002; Reijntjes, Kamphuis, Prinzie, & Telch, 2010) and academic achievement (Schwartz, Gorman, Nakamoto, & Toblin, 2005), it is important to learn about why some students act pro-aggressively or passively, whereas others defend the victims. In this study, we put focus on individual- and classroom-level correlates of defending and passive bystanding.

Previous research has linked defending and passive bystanding to various cognitive, emotional, and moral correlates (for a recent review on correlates of defending, see Lambe, Della Cioppa, Hong, & Craig, 2019). For instance, a sense of responsibility to intervene, anti-bullying attitudes, and self-efficacy beliefs have been positively associated with defending and negatively associated with passive bystanding (Pozzoli & Gini, 2010, 2013; Pronk, Goossens, Olthof, De Mey, & Willemen, 2013; Salmivalli & Voeten, 2004; Thornberg & Jungert, 2013). Moreover, empathy has been positively associated with both defending and passive bystanding (Gini, Albiero, Benelli, & Altoè, 2008), and moral disengagement has been negatively associated with defending (Thornberg & Jungert, 2013). Beyond such individual-level characteristics, there has been an increasing interest in peer and classroom-level correlates (see Lambe et al., 2019 for correlates of defending). For instance, defending is more common among students who possess high social status in the peer group (Pöyhönen, Juvonen, & Salmivalli, 2010) and belong to classrooms characterized by caring, warm, supportive, and respectful student–student relationships (Thornberg, Wänström, Hong, & Espelage, 2017). Furthermore, passive bystanding is more common among students who belong to classrooms with lower level of pro-victim attitudes (Pozzoli, Gini, & Vieno, 2012), and to classrooms with a higher degree of collective moral disengagement (Gini, Pozzoli, & Bussey, 2015).

Despite the recent increasing interest in contextual correlates of bystander behaviors, there are still several gaps to be filled. Drawing on social-cognitive theory, the current study examined whether defending and passive bystanding were associated with efficacy beliefs to stop peer victimization, both at the individual and classroom level. For the purpose of this study, we used the term peer victimization to encompass both peer victimization and bullying since we treat it as a broader and more inclusive concept than bullying. In contrast to bullying, peer victimization also includes harmful behaviors that are not repeated, intended to harm, or carried out in a context of power imbalance (see Hunter, Boyle, & Warden, 2007; Noret, Hunter, & Rasmussen, 2018; Turner, Finkelhor, Shattuck, Hamby, & Mitchell, 2015). For instance, even though it is plausible to assume that peer victimization often is performed with the intention to inflict harm, there can be cases in which it is difficult to determine "where the joke ends and the abuse begins" (Carrera, DePalma, & Lameiras, 2011, p. 486), and where the perpetrators are not aware that their behaviors are being received as hurtful by the target (Hellström et al., forthcoming).

1.1 | Efficacy beliefs

In contrast to global constructs such as self-esteem and self-confidence (i.e., general feelings and concepts about oneself across actions and situations), self-efficacy refers to the belief in one's ability to successfully carry out a

particular action required to produce the desired results (Bandura, 1997). A student may, for instance, have a great self-efficacy in mathematics but a low self-efficacy in playing football. Self-efficacy beliefs are a cardinal tenet of social cognitive theory, which provides an agentic conceptual framework for understanding human behavior. In particular, social cognitive theory emphasizes that behavior is the result of both personal characteristics and the social environment (Bandura, 1986). However, self-efficacy beliefs are especially important for understanding human behavior (Bandura, 2000). Applied to the peer victimization context, bystanders who would like to defend victims may remain passive unless they feel confident of succeeding, or in other words, are high in *defender self-efficacy*. Although self-efficacy beliefs are central to human agency in general, this should be particularly true for defender self-efficacy beliefs because defending victims is a risky and difficult project (see Gini et al., 2008; Huitsing, Snijders, Van Duijn, & Veenstra, 2014). Without having a strong belief in one's ability to help victims, intervention would be unlikely. In line with this tenet, previous research has found defender self-efficacy to be associated with greater defending and less passive bystanding (e.g., Pronk et al., 2013; Sjögren, Thornberg, Wänström, & Gini, 2020; Thornberg et al., 2017).

According to social cognitive theory (Bandura, 1997), strong personal efficacy may be insufficient to ensure the achievement of desired goals. Given that peer victimization is embedded in a social context (Hong & Espelage, 2012), and often occurs in the presence of bystanders (Atlas & Pepler, 1998; O'Connell et al., 1999), group characteristics will also influence whether bystanders intervene or remain passive. In addition to self-efficacy, Bandura (1997) introduced the concept *collective efficacy*, which refers to the capacity of a group to work together to produce given attainments (see also Hymel et al., 2015). Collective efficacy has been found to have positive effects on group performance in various domains, such as organizational, educational, sports, and military settings (Bandura, 2000; Stajkovic, Lee, & Nyberg, 2009). Importantly, collective efficacy cannot be considered as the sum of the personal efficacy beliefs of the group's members but should be regarded as an emergent group-level property (Bandura, 2000). Following this line, Barchia and Bussey (2011a, 2011b) developed the concept *collective efficacy to stop peer aggression*, which refers to the shared beliefs in the ability of students and teachers to work together to stop peer aggression in schools. To date, very few studies have empirically examined whether this concept is related to peer aggression and various bystander behaviors in peer victimization. Barchia and Bussey (2011b) investigated and found a longitudinal association between individual perceived collective efficacy and defending; students who perceived their school collective efficacy to stop peer aggression as high indicated that they engaged in more defending eight months later. In another study, Barchia and Bussey (2011a) demonstrated that individual perceived collective efficacy to stop peer aggression predicted change in peer aggression over time. To our knowledge, Thornberg, Wänström, and Hymel (2019) published the first study in which collective efficacy to stop peer aggression has been examined as a group variable, and they found that children who belonged to classrooms that decreased in collective efficacy from fourth grade to fifth grade were inclined to increase in bullying perpetration.

Whereas Barchia and Bussey (2011a, 2011b) examined collective efficacy at the individual level (i.e., individual perceptions of collective efficacy to stop peer aggression in school), the present study addressed collective efficacy as a group characteristic at the classroom level and in relation to bystander behaviors. The classroom level has been pointed out as an essential context to address to better understand and counteract peer victimization (e.g., Frey, Hirschstein, Edstrom, & Snell, 2009; Salmivalli, 2010). The classroom should be an important context to consider when investigating students' bystander behavior given that in Sweden, as in many other countries, elementary school students remain with the same classmates throughout the day and for at least one school year. With reference to the social cognitive theory (Bandura, 1997; Barchia & Bussey, 2011b; Fernández-Ballesteros, Díez-Nicolás, Carpara, Barbaranelli, & Bandura, 2002), it would be plausible to assume that high collective efficacy to stop peer aggression at the classroom level would function as a group characteristic that facilitates and supports defending. Similarly, low collective efficacy to stop peer aggression at the classroom level would inhibit defending and instead encourage passive bystander responses among the classmates.

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1.2 | The current study

Previous research has demonstrated that defender self-efficacy is associated with greater defending and less passive bystanding. However, very little research has been conducted to address the possible role of collective efficacy on students' bystander behavior. The current study was the first to examine simultaneously whether defender self-efficacy and collective efficacy at the classroom level were associated with defending and passive bystanding. Based on social cognitive theory and the above-discussed empirical evidence, we hypothesized that defender self-efficacy is associated with greater defending and less passive bystanding. Collective efficacy to stop peer aggression is still a rather unexplored construct, but with reference to the social cognitive theory on agency and collective efficacy, we hypothesized that collective efficacy to stop peer aggression at the classroom level is associated with greater defending and less passive bystanding. Further, because social cognitive theory emphasizes the interplay between individual and social factors, we tested whether there was a cross-level interaction between defender self-efficacy and collective efficacy to stop peer aggression on defending and passive bystanding. In other words, did the potential associations between defender self-efficacy and defending/passive bystanding depend on the levels of collective efficacy? The empirical literature did not offer us any clear hypotheses to deduce and test due to the lack of studies, and therefore, this cross-level interaction was investigated in an exploratory manner. We also included gender and class size as covariates. Previous research suggests that girls are more inclined to defend victims, boys are more inclined to stay passive (e.g., Pozzoli & Gini, 2013; Thornberg et al., 2017), and that defending is more frequent in classrooms with fewer students (Peets, Pöyhönen, Juvonen, & Salmivalli, 2015; Salmivalli et al., 2011; but see null results in Thornberg et al., 2017).

2 | METHOD

2.1 | Participants

This study is part of an ongoing longitudinal project that investigates social and moral correlates of peer victimization and bullying among Swedish students from fourth to eighth grade. The original sample included 2,408 fourth-grade students from 116 classrooms in 74 schools. However, 782 (32%) students did not participate, either because they did not get parental consent (599 students) or because they were absent on the day of data collection or chose not to participate (183 students). Among the 1,626 students who completed the questionnaire, 89 did not complete all the scales used in this study and 70 belonged to mixed-grade classrooms and were therefore excluded. We excluded students in mixed-grade classrooms because these are atypical in Sweden and would introduce within-classroom age difference as a possible confounder in the study. Thus, the final sample included 1,467 students (52% girls, mean age = 10.55 years) from 100 classrooms in 63 schools. The mean participation rate in each classroom was 69%, ranging from 32% to 100%. In 57 of the 100 classrooms, at least two-thirds of the students participated, and in 85 of the 100 classrooms, at least half of the students participated. We selected participating schools based on a strategic sampling technique to obtain a heterogeneous sample. Thus, our sample included schools in different socioeconomic areas (from lower to upper-middle socioeconomic status) and from different socio-geographic locations (from rural areas to mid-size and large cities). Eighty percent of the sample, compared with 78% of the whole population (Swedish National Agency for Education 2016), had a Swedish ethnic background (i.e., born in Sweden and having at least one Swedish-born parent).

2.2 | Procedure

The study received ethical approval from the Regional Ethical Review Board at Linköping. Students answered a web-based questionnaire on tablets in their ordinary classroom settings. Either a member of the research team or a

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teacher was present throughout the session to be able to explain the study procedure and assist participants who needed help (e.g., gave reading support and clarified particular items or words of the questionnaire). The average completion time of the questionnaire was about 30 min. We obtained written informed parental consent and verbal student assent from all participating students. We also informed them that the code key was kept separate from the data and that no peers, parents, or teachers would have access to their individual answers.

2.3 | Measures

2.3.1 | Bystander behaviors

We used a 15-item 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) to measure students' reported bystander behavior (Thornberg et al., 2017) but we revised it to measure bystander behavior in peer victimization (instead of the more limited context of bullying as in the original scale). Thus, the participants were asked, "Try to remember situations in which you have seen one or more students victimizing another student (e.g., teasing, mocking, threatening, physically assaulting, or freezing out). What do you usually do?" Five items treated assistant and reinforcer behavior and thus were not of interest in this study. The remaining ten included five items depicting passive bystanding (e.g., "I just walk away," Cronbach's α = .75); and five items depicting defending (e.g., "I help the victimized student," Cronbach's α = .81). As all our response scales were ordered categorical, we consequently used diagonal weighted least squares (DWLS; see Li, 2016) robust estimation for estimating the confirmatory factor analysis (CFA) models. For our bystander scale, the CFA supported the two-dimensional solution for our sample, CFA: $\chi^2(34) = 360.020$, $p < .001$, $CFI_{robust} = 0.993$, $RMSEA_{robust} = 0.056$; 90% confidence interval (CI; 0.051, 0.062). Recent research has found bystander roles in peer victimization to be dimensional. That is, a student's bystander behavior may vary within and between peer victimization episodes (Gumpel, Zioni-Koren, & Bekerman, 2014; Huitsing & Veenstra, 2012). Therefore, we considered the bystander roles as fluid and did not categorize participants as belonging to one of the roles (see also Levy & Gumpel, 2017), but focused on various bystander behaviors as continuous variables.

2.3.2 | Defender self-efficacy

We used a six-item scale to measure students' beliefs in their ability to intervene successfully in peer victimization situations (i.e., defender self-efficacy; Thornberg et al., 2019). The students were asked to estimate how true the following statements were, starting with "I feel that I'm very good at…" which was followed by the six items (e.g., "…telling off/standing up to students who are mean toward another student" and "…stopping students from hurting others"). The response options for each item were on a 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*). The unidimensionality of the scale was confirmed, CFA: $\chi^2(9) = 200.178$, $p < .001$, $CFI_{robust} = 0.999$, $RMSEA_{robust} = 0.059$; 90% CI (0.052, 0.066). Cronbach's α was .91.

2.3.3 | Collective efficacy to stop peer aggression

To measure students' perceived classroom collective efficacy to stop peer aggression, we used a Swedish version of the 10-item scale for measuring collective efficacy at the school level developed by Barchia and Bussey (2011a), but adapted to the classroom level. Thus, the scale asked, "How well can the students and teachers in your class…" followed by the same items as in Barchia and Bussey (2011a). This scale has been validated for Swedish use (Wänström, Pozzoli, Gini, Thornberg, & Alsaadi, 2019). The response options for each item were on a seven-point

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scale (1 = *strongly disagree* to 7 = *strongly agree*). In contrast to Barchia and Bussey, a one-factor solution did not fit the data well. A closer look at the scale revealed (see also Wänström et al., 2019) that some items deal with physical aggression (items 2–4), some with relational aggression (items 5–7), and some with verbal aggression (items 8–10). Therefore, we excluded the first item, a general item about bullying, and carried out a higher-order CFA with the global construct of collective efficacy as a general factor and the three types of aggression as first-order factors and found a good fit, CFA: $\chi^2(24) = 334.016$, $p < .001$, $CFI_{robust} = 1.00$, $RMSEA_{robust} = 0.037$; 90% CI (0.034, 0.041). Cronbach's α was .97. Collective efficacy at the classroom level was obtained by averaging the scores of classroom members.

2.3.4 | Gender and class size

At the end of the questionnaire, participants indicated their gender. In the analyses, boys were coded 0 and girls were coded 1. Class size was conceptualized as the number of students in each classroom. Fourth-grade Swedish students have one classroom (homeroom) in which most of their lessons take place, and they have the same classroom teacher across most school subjects. Information on class size was obtained from the class lists from the schools.

2.4 | Statistical analyses

Because the students were nested within classrooms and we were theoretically interested in classroom effects, we used multilevel modeling techniques (Bickel, 2007) to analyze the data. We ran two separate multilevel analyses, one with defending and one with passive bystanding as the dependent variable. For the composite variables (i.e., defender self-efficacy, collective efficacy, defending, and passive bystanding), we used factor scores to give more weight to the items with higher loadings. Individual-level variables gender and defender self-efficacy (DSE) were included in the first model, which can be written as

$$y_{ij} = \beta_{0j} + \beta_1 GENDER + \beta_2 DSE + \varepsilon_{ij},$$
$$\beta_{0j} = \beta_0 + u_{0j},$$

where y_{ij} is the response for the ith child in the jth class, β_{0j} is the intercept in classroom j, $\beta_1$and β_2 are slopes for individual-level effects, ε_{ij} is the residual for the ith child in the jth class, β_0 is the mean intercept across classrooms, and u_{0j} is the residual for classroom j.

In the second model, the classroom-level variables class size (size) and collective efficacy (CE) was added:

$$y_{ij} = \beta_{0j} + \beta_1 GENDER + \beta_2 DSE + \varepsilon_{ij},$$

$$\beta_{0j} = \beta_0 + \beta_3 size + \beta_4 CE + u_{0j},$$

where β_1 and β_2 are slopes for individual-level effects and β_3 and β_4 are the slopes for the classroom-level effects.

The third and final model added a cross-level interaction term between defender self-efficacy and collective efficacy. Thus, the model examined whether the effect of defender self-efficacy was different across classrooms depending on their levels of collective efficacy. The third model can be written as

$$y_{ij} = \beta_{0j} + \beta_1 GENDER + \beta_{2j} DSE + \varepsilon_{ij},$$

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$$\beta_{0j} = \beta_0 + \beta_3 size + \beta_4 CE + u_{0j},$$

$$\beta_{2j} = \beta_2 + \beta_5 CE + u_{2j},$$

where β_{2j} is the slope for defender self-efficacy in classroom j, β_2 is the mean regression coefficient across classrooms, and β_5 is the slope for the classroom-level effect, and u_{2j} is the residual for classroom j. Substitution of the bottom equation into the top equation creates the cross-level interaction effect between defender self-efficacy and collective efficacy.

In all models, the intercept was allowed to vary between classes. Additionally, the slope of defender self-efficacy was allowed to vary between classes in the third model. Defender self-efficacy was grand-mean centered. Collective efficacy was centered around its overall mean. Effect sizes were computed as $b_k^{'} = b_k{}^* s_{xk}/s_y$ where b_k is the unstandardized coefficient for variable k, s_{xk} is the sample standard deviation for the explanatory variable k, and s_y is the sample standard deviation for the dependent variable. Akaike Information Criterion (Akaike, 1974) was used to evaluate whether the more complex models fitted the data better than the simpler ones. We conducted all analyses in R 3.6.1 (R Core Team, 2018). For the multilevel analyses, we used the lme4 package, version 1.1-21.

3 | RESULTS

3.1 | Descriptive statistics and correlations

Descriptive statistics and correlation coefficients of individual- and classroom-level variables are presented in Tables 1 and 2, respectively. We interpreted the significant correlation coefficients from 0.1 to 0.29 as weak, from 0.3 to 0.49 as moderate, and 0.5 and above as strong (Cohen, 1988). Both defender self-efficacy and collective efficacy were strongly positively correlated with defending, and moderately negatively correlated with passive bystanding. Defending and passive bystanding correlated moderately negatively with each other. There were weak gender effects in that girls were more likely to act as defenders, whereas boys were more likely to act passively. Class size was weakly negatively correlated with defending.

3.2 | Multilevel analysis: Defending

Results from multilevel analyses for defending are summarized in Table 3. The intraclass correlation coefficient was 0.04, indicating that 4% of the total variance in defending was due to differences between classrooms. Both gender and defender self-efficacy were significant predictors in Model 1. Girls and students high in defender

TABLE 1 Intercorrelations, means, and standard deviations for individual-level variables

Variable	1	2	3	4	*M*	*SD*
1. Gender	–				–	–
2. Defender self-efficacy	0.08**	–			5.08	1.56
3. Defending	0.12***	0.58***	–		5.66	1.26
4. Passive bystanding	−0.12***	−0.40***	−0.44***	–	2.41	1.24

Note: N = 1,467. Gender (boys = 0, girls = 1).

**p < .01.

***p < .001.

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TABLE 2 Intercorrelations, means, and standard deviations for class-level variables

Variable	1	2	3	4	*M*	*SD*
1. Class size	–				22.24	5.22
2. Collective efficacy	0.17	–			5.41	0.56
3. Defending	0.26**	0.50***	–		5.66	0.41
4. Passive bystanding	−0.11	−0.40***	−0.43***	–	2.41	0.41

Note: $N = 100$.

**$p < .01$.

***$p < .001$.

self-efficacy reported being more likely to defend victims of peer victimization. These effects remained significant in Model 2, where we also found a significant positive association for collective efficacy, implying that students in classrooms high in collective efficacy were more likely to defend victims of peer victimization. Finally, the interaction term between defender self-efficacy and collective efficacy was not significant in Model 3. Akaike information criterion (AIC) values indicated that the first model was to be preferred over the second and third models (see AIC values in Table 3). Because class size was an insignificant correlate in Models 2 and 3, we reestimated these models excluding class size and made new AIC comparisons. When class size was excluded from the analyses, AIC values indicated that the second model was to be preferred over Models 1 and 3. Effect size calculations for Model 2 revealed that the strongest association was the effect of defender self-efficacy (0.59), followed by gender (0.07) and collective efficacy (0.05).

3.3 | Multilevel analysis: Passive bystanding

Results from multilevel analyses for passive bystanding are summarized in Table 4. The intraclass correlation coefficient was 0.04, indicating that 4% of the total variance in passive bystanding was due to differences between classrooms. In Model 1, gender and defender self-efficacy were significant predictors of passive bystanding; boys

TABLE 3 Estimates and standard errors from multilevel regression analyses for defending

	Model 1		Model 2		Model 3	
	Est.	*SE*	Est.	*SE*	Est.	*SE*
Level 1—Individual						
Gender	0.111***	0.030	0.109***	0.031	0.106***	0.031
Defender self-efficacy	0.673***	0.023	0.664***	0.023	0.672***	0.027
Level 2—Classroom						
Class size			0.001	0.003	0.001	0.004
Collective efficacy			0.134*	0.065	0.132*	0.066
Cross-level interaction						
Defender self-efficacy × Collective efficacy					−0.069	0.094
AIC	2,587.8***		2,587.0		2,588.8	

Note: Gender (boys = 0, girls = 1). Defender self-efficacy was grand mean centered, collective efficacy was centered around its overall mean.

Abbreviation: AIC, Akaike information criterion.

*$p < .05$.

***$p < .001$.

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TABLE 4 Estimates and standard errors from multilevel regression analyses for passive bystanding

	Model 1		Model 2		Model 3	
	Est.	*SE*	Est.	*SE*	Est.	*SE*
Level 1—Individual						
Gender	−0.107***	0.027	−0.106***	0.027	−0.105***	0.027
Defender self-efficacy	−0.447***	0.021	−0.440***	0.021	−0.443***	0.025
Level 2—Classroom						
Class size			0.001	0.003	−0.001	0.003
Collective efficacy			−0.136*	0.061	−0.137*	0.062
Cross-level interaction						
Defender self-efficacy × Collective efficacy					−0.089	0.088
AIC	2,274.1***		2,273.1		2,272.9	

Note: Gender (boys = 0, girls = 1). Defender self-efficacy was grand mean centered, collective efficacy was centered around its overall mean.

Abbreviation: AIC, Akaike information criterion.

*$p < .05$.

***$p < .001$.

and students low in defender self-efficacy reported to be more likely to remain passive when witnessing peer victimization. These effects were still significant in Model 2, where collective efficacy, too, contributed significantly to explain variability in passive bystanding. As with defending, we found no significant interaction between defender self-efficacy and collective efficacy for passive bystanding in Model 3. AIC values indicated that the first model was to be preferred over the second and third models (see AIC values in Table 4). In line with the procedure used for defending, we reestimated the second and third model excluding class size. Now, AIC values suggested that the second model was to be preferred over Models 1 and 3. Effect size calculations for Model 2 revealed that the strongest association was the effect of defender self-efficacy (0.48), followed by gender (0.09) and collective efficacy (0.06).

4 | DISCUSSION

Although we know quite a lot about individual-level correlates of bystander behavior, we know less about correlates at the classroom level (Lambe et al., 2019). The current study drew on social cognitive theory, which emphasizes that behavior is the result of both personal characteristics and the social environment (Bandura, 1986). Our study was the first to examine simultaneously whether defending and passive bystanding in peer victimization were associated with defender self-efficacy at the individual level and collective efficacy to stop peer aggression at the classroom level.

Consistent with social cognitive theory (Bandura, 1997), our hypothesis and previous findings (e.g., Pronk et al., 2013; Thornberg & Jungert, 2013; Thornberg et al., 2017), we found defender self-efficacy to be associated with greater defending and less passive bystanding. Thus, students who perceive that they do not have the ability to stop peer victimization would refrain from helping victims and instead stay passive. These associations still held when controlling for the other variables in the multilevel models (i.e., gender, class size, collective efficacy, and the cross-level interaction). Compared with the other variables, defender self-efficacy had the strongest effect, which supports Bandura's (1997) statement that self-efficacy is a fundamental factor for explaining human behavior.

Beyond efficacy beliefs at the individual level, students' bystander behaviors may also be associated with efficacy beliefs at the classroom level. According to the social cognitive theory, members of a group do not simply

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operate as autonomous moral agents but are, at the same time, "acting together on shared beliefs" (White, Bandura, & Bero, 2009, p. 43). When facing a peer victimization episode, students might refrain from defending if their group's ability to intervene successfully is perceived as low. In line with this tenet and our hypothesis, we found collective efficacy to be associated with greater defending and less passive bystanding. These associations still held when controlling for the other variables in the multilevel models. Effect sizes were low for collective efficacy and considerably lower than for defender self-efficacy. This is not surprising, however, because collective efficacy, as a collective variable, has a smaller standard deviation compared with the individual variables (see Tables 1 and 2) and effect size is interpreted as the expected increase in the response variable (in standard deviation units) given a 1 *SD* increase in the predictor.

Regardless, our findings are the first to suggest that student bystanders tend to be a little more likely to defend victims, as well as less likely to stay passive, if their classroom collective efficacy to stop peer victimization is high. Barchia and Bussey (2011b) found similar results for individual perception of efficacy beliefs when it comes to defending, but their study did not include passive bystanding. Moreover, as opposed to Barchia and Bussey (2011b), we treated collective efficacy as a group variable, by averaging the scores of classroom members.

Although the social cognitive theory assumes an interplay or a reciprocal influence between behavior, personal factors, and external environment (the so-called triadic codetermination process; Bandura, 1986, 1997, 2016), we did not find any significant cross-level interactions between individual- and classroom-level efficacy beliefs. On the contrary, defender self-efficacy and collective efficacy to stop peer aggression in the current study were both unique correlates of defending and passive bystanding, independently of each other. This may be due, among other reasons, to power issues, because cross-level effects are usually very small and difficult to detect. More research is needed to increase our understanding and to further test these variables and their possible associations with each other and with various bystander behaviors. For example, it would be interesting to explore whether collective efficacy to stop peer aggression predicts defender self-efficacy over time, and if their links to bystander behaviors are affected by different confounders, such as classroom climate, displacement and diffusion of responsibility, sociometric and perceived popularity, and friendship networks.

Regarding gender, we found some support for our hypotheses that girls are more inclined than boys to defend victims and that boys would be more inclined than girls to stay passive when witnessing peer victimization (Pozzoli & Gini, 2013; Thornberg et al., 2017), although the effect sizes were low. These effects remained significant when controlling for the other study variables. Class size, however, did not contribute in explaining variance in defending and passive bystanding.

4.1 | Limitations and implications

Some limitations of this study should be noted. The most serious shortcoming is probably the cross-sectional nature of our data, which prevents us from drawing causal inferences. For instance, does high defender self-efficacy increase defending or do students who often defend victims heighten their defender self-efficacy beliefs? Longitudinal and experimental designs could help test such causal research questions. Furthermore, our data consist of self-reported data. This may have resulted in shared method variance bias. Future research could benefit from using other complementary methods as well, such as peer nominations and observer reports (Volk, Veenstra, & Espelage, 2017). Another limitation is that participants were restricted to fourth-grade Swedish students. Only future studies can determine to what extent our findings are generalizable to other age groups and cultural contexts.

Notwithstanding these limitations, the current study adds important insights to the literature of how efficacy beliefs relate to students' bystander behaviors. Taken together, our findings suggest that perceived efficacy to stop peer victimization, both at the individual level and at the classroom level, contribute to explaining variability in students' defending and passive bystanding. Although our results did not discern what caused what, previous

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research suggests that collective efficacy beliefs influence students' behavior, including peer aggression (Barchia & Bussey, 2011a; Thornberg et al., 2019; Williams & Guerra, 2011) and bystander behavior (Barchia & Bussey, 2011b). This is also in line with the social cognitive theory, which posits that human agency operates through a triadic codetermination process of causation (Bandura, 1986). Furthermore, there is meta-analytic support for that consideration of group dynamics can enhance the impact of school-based anti-bullying interventions (Lee, Kim, & Kim, 2015).

Bystander intervention is a promising element in peer victimization prevention programs (Salmivalli, 2014). Programs aimed at increasing bystander intervention have been proven effective, but with small effect sizes for K–8 children (Polanin, Espelage, & Pigott, 2012). There is therefore a need to find out how these interventions can be improved. For instance, the Finnish KiVa anti-bullying program includes enhancing defender self-efficacy as one of its central components. The KiVa program has been successful in partly reducing the prevalence of bullying (e.g., Kärnä et al., 2011). However, because our results suggest that efficacy beliefs operate also at the classroom level, it would be interesting to study whether such programs would be more effective if they also encompassed the concept of collective efficacy. Students might refrain from defending even if they have strong defender self-efficacy beliefs, especially those having a low social status (Pöyhönen et al., 2010), as it could result in an increased risk of becoming future targets of peer victimization (Gini et al., 2008; Huitsing et al., 2014). Promoting and maintaining a high level of collective efficacy to stop peer victimization could foster the development of a positive and supporting classroom atmosphere (Thornberg et al., 2019), in which students are encouraged to stand up for victims of peer victimization. For example, collective efficacy could be nurtured by teaching different helping behavior and training both students and teachers in effective ways to deal with peer victimization. Moreover, promoting regular group discussions about collective responsibility in tackling peer victimization and about the positive role each one can have within the group of classmates may also contribute to raise collective efficacy beliefs.

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CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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