

# Reciprocal longitudinal associations of defender self-efficacy with defending and passive bystandering in peer victimization

Björn Sjögren<sup>1</sup>  | Robert Thornberg<sup>1</sup>  | Tiziana Pozzoli<sup>2</sup> 

<sup>1</sup>Department of Behavioural Sciences and Learning, Linköping University, Linköping, Sweden

<sup>2</sup>Department of Developmental Psychology and Socialisation, University of Padua, Padova, Italy

## Correspondence

Björn Sjögren, Department of Behavioural Sciences and Learning, Linköping University, Linköping, Sweden.

Email: [bjorn.sjogren@liu.se](mailto:bjorn.sjogren@liu.se)

## Funding information

Vetenskapsrådet

## Abstract

Peer victimization in schools most often occurs in the presence of bystanders. When bystanders intervene on behalf of the victims, they are often successful in stopping the victimization. Defender self-efficacy (i.e., the belief in one's ability to successfully defend victims) has consistently been associated with greater defending and less passive bystandering in peer victimization. However, the lack of longitudinal research designs has resulted in a limited understanding of how these relationships develop over time. This five-wave longitudinal study involving 2507 Swedish students addressed this gap by examining longitudinal associations of defender self-efficacy with defending and passive bystandering. Participating students answered a self-report questionnaire once a year, from fourth to eighth grade. Our findings provide partial evidence for reciprocal associations among the variables. Moreover, there were more significant associations in the traditional than in the random intercept model, thus favoring between-person interpretations of the longitudinal associations. The findings highlight the importance of understanding the link between defender self-efficacy and bystander behavior of peer victimization, and that schools in their efforts in preventing school violence and bullying support students in increasing their defender self-efficacy and capacity in defending.

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 The Authors. *Psychology in the Schools* Published by Wiley Periodicals LLC.

**KEYWORDS**

bullying, defender self-efficacy, defending, passive bystanding, peer victimization

**Practitioner Points**

- Between fourth and eighth grade, students exhibited a decline in defending behavior and defender self-efficacy, while showing an increase in passive bystanding.
- There was partial support for defender self-efficacy, defending, and passive bystanding to be reciprocally associated over time.
- Efforts to encourage peers to take sides with the victims of peer victimization need to consider the role of peers' defender self-efficacy.

## 1 | INTRODUCTION

Since Salmivalli and colleagues' (1996) seminal study on participant roles in bullying, peer victimization has increasingly come to be regarded and studied as a group process in which most members of the peer group, in one way or another, are involved as bystanders (Gini et al., 2021). In fact, research has suggested that bystanders are present in a vast majority of peer victimization incidents (Atlas & Pepler, 1998; Hawkins et al., 2001; Nishina & Bellmore, 2010).

Bystanders act in different ways: some assist or reinforce those who bully (i.e., "assistants" or "reinforcers"), some stay passive and try to stay outside the bullying episode (i.e., "passive bystanders" or "outsiders"), and some defend the victim (i.e., "defenders"). A crucial finding of previous research is that the prevalence of bullying is related to bystander behaviors: bullying is more common in classroom contexts where bystanders tend to assist or join in with those who bully and less common in contexts where bystanders are more inclined to defend the victims (Denny et al., 2015; Nocentini et al., 2013; Saarento et al., 2015; Salmivalli et al., 2011; Thornberg & Wänström, 2018).

Moreover, observational research has found that when bystanders intervene on behalf of the victims, they are often successful in stopping the victimization episode (Lynn Hawkins et al., 2001). In addition, being supported and defended by peers may protect victims from adverse consequences of bullying. A few previous studies have shown that defended victims score higher on self-esteem (Sainio et al., 2011), well-being (Flaspohler et al., 2009) and feelings of belonging (Laniga-Wijnen et al., 2022), and lower on depression and anxiety (Ma & Chen, 2019) than nondefended victims, although being defended was not longitudinally associated with self-esteem and depressive symptoms in a recent study (Laniga-Wijnen et al., 2022).

Given that students generally judge bullying as wrong and sympathize with the victims (e.g., Eslea & Smith, 2000; Pouwels et al., 2017; Thornberg, Pozzoli, et al., 2017), it would be plausible to expect that students who witness peer victimization often intervene to defend the victim. Most of the time, however, bystanders refrain from defending (Pouwels et al., 2018; Sutton & Smith, 1999; Waasdorp & Bradshaw, 2018) and often stay passive (Pouwels et al., 2016; Salmivalli et al., 1996). To increase students' tendency to defend victims, it is crucial to learn about factors that might influence this bystander role. Owing to the increasing research focus on students' bystander behaviors in recent decades, there is now a large body of empirical research that has investigated correlates of peer defending at different levels, such as the individual-, peer-, and school levels (for a review, see

Lambe et al., 2019; for a meta-analysis, see Ma et al., 2019). For instance, defending victims is more common among students with higher levels of empathy and sociometric status (especially in terms of social preference) (e.g., van der Ploug et al., 2017), and in classrooms dominated by antibullying attitudes (e.g., Salmivalli & Voeten, 2004).

Among the individual-level correlates, one of the most consistent findings is the positive association between students' defending behaviors as bystanders and their self-efficacy beliefs to intervene (Lambe et al., 2019). These findings align with the final steps of the bystander intervention model for bullying proposed by Nickerson et al. (2014), based on Latané and Darley's (1970) five-stage model. According to the model, the first prerequisite for intervention is to notice the bullying event, followed by interpreting the event as an emergency that requires help, and accepting one's responsibility to intervene. Then follows the final step of knowing how to intervene and actually intervening, for which self-efficacy beliefs have been shown to be an important differentiating factor between defending and passive bystanding in peer victimization situations. For instance, in two studies conducted in Sweden, Sjögren et al. (2020, 2021a) involving fourth- to eighth-grade students found defender self-efficacy to be strongly positively associated with defending and strongly negatively associated with passive bystanding. Furthermore, in Sjögren et al. (2021), self-efficacy beliefs explained more variance than the other factors (i.e., moral disengagement, student-teacher relationship quality) included in the regression models. In a similar manner, one study conducted in the Netherlands involving 761 fifth- and sixth-grade Dutch students found that students who were inclined to intervene directly on behalf of the victims had significantly higher levels of self-efficacy compared with students who were inclined to stay passive (Pronk et al., 2013). However, these three studies, like the majority of existing research in the field, have employed cross-sectional designs. To advance our knowledge of bystanders' reactions to peer victimization, there is a need for research employing longitudinal research designs investigating how bystander behaviors and defender self-efficacy unfolds and develops over time; does defender self-efficacy predict bystander behaviors, or do bystander behaviors predict defender self-efficacy?

Peer victimization and bullying are sometimes used interchangeably in research (Noret et al., 2018). However, for the purposes of this study, we adopted a broader perspective on peer victimization which encompasses not only bullying but also other forms of victimization that may not involve repetition, intent to harm, or a power imbalance (Hunter et al., 2007; Noret et al., 2018; Turner et al., 2015). Considering bullying to be a specific type of peer victimization, the current study also drew upon relevant literature on bullying (see also Barchia & Bussey, 2011; Hawker & Boulton, 2000; Ma et al., 2019).

## 1.1 | Literature review

### 1.1.1 | Social cognitive theory

Bandura's (1997, 2016) social cognitive theory focuses on human agency and assumes that human functioning, development, and learning are produced by the so-called triadic determination. This means that they are produced by an interplay of personal factors (biological endowment and intrapsychological influences), the behaviors in which individuals engage, and the environments individuals interact within and act upon. According to this theory, self-efficacy plays an important role in individuals' agency and motivation to act. Self-efficacy refers to the belief in one's ability to successfully carry out a particular action (Bandura, 1997). Without a strong belief in one's ability to carry out a particular action, there is little incentive to act, making self-efficacy a focal mechanism of human agency. 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 is context specific (Bandura, 1997). The construct of self-efficacy has been widely adopted by researchers studying bystander reactions to peer victimization in school. More specifically, empirical investigations in this field have examined possible associations between different bystander behaviors and *defender self-efficacy*, that is, the belief in one's ability to intervene successfully to defend the victim.

### 1.1.2 | Previous research

Defending victims is difficult and complex because it requires various strategies depending upon the situation (e.g., aggressive strategies, problem-focused strategies, reporting to teachers, see Lambe & Craig, 2020; Pozzoli & Gini, 2010, 2013), which has also been reported in qualitative studies exploring children's and adolescents' own voice on this matter (Chen et al., 2016; Forsberg et al., 2018; Thornberg, Landgren, et al., 2018). Furthermore, it is potentially risky behavior because defenders might themselves become future targets of peer victimization. By siding with the victims, bystanders who take the defender role dispute and challenge perpetrators' behavior and status, and students who bully or frequently victimize peers tend to be powerful and high in perceived popularity (Pouwels et al., 2018; Pozzoli & Gini, 2021; Sijtsema et al., 2009, 2020).

Fear of becoming the next victim is a common reason reported by students for their unwillingness to intervene as a bystander (Forsberg et al., 2018; Strindberg et al., 2020; Thornberg, Landgren, et al., 2018). In their longitudinal social network study, Huitsing et al. (2014) found support for such a retaliation hypothesis in that defenders were more likely to be subsequently victimized by the same students who victimized the defended victim in an earlier situation. Huitsing and colleagues theorized that defenders constitute a threat toward the status of those who victimize, who therefore retaliate to maintain their status position. In sum, students who are present as bystanders may—even though they sympathize with the victims—remain passive bystanders rather than defend if they do not perceive a strong belief in their ability to help victims efficiently.

Accordingly, empirical investigations strongly support that students who possess greater defender self-efficacy are more likely to defend those who are being victimized (for a review, see Lambe et al., 2019). In contrast, bystanders who possess less defender self-efficacy are more likely to remain passive (Pronk et al., 2013; Sjögren et al., 2020, 2021; Thornberg & Jungert, 2013; Thornberg, Wänström, et al., 2017). However, because most studies employed cross-sectional designs, the established link between bystander behaviors and defender self-efficacy is based mainly on concurrent associations. In other words, the current empirical findings tell us little about how the variables and their associations develop over time and in which directions the associations work. Does defender self-efficacy predict bystander behaviors, or do bystander behaviors predict defender self-efficacy? Alternatively, the association may be bidirectional.

Longitudinal studies can contribute to overcoming these shortcomings. Applying longitudinal designs allows researchers to measure changes over time. For instance, we can examine whether initial levels of defender self-efficacy predict subsequent levels of defending and passive bystanding, or vice versa. To date, there are no longitudinal studies exploring the relation between defender self-efficacy and passive bystanding, and only a few studies have investigated longitudinal associations between defending and defender self-efficacy (Barchia & Bussey, 2011; Gini et al., 2022; van der Ploeg et al., 2017). Two of these studies (Gini et al., 2022; van der Ploeg et al., 2017) found that defender self-efficacy at time 1 predicted defending at time 2 around 6 months later when controlling for defending at time 1; in other words, the higher the belief in their ability to intervene at time 1, the more likely they were to defend at time 2. In contrast, Barchia and Bussey (2011) did not find clear support for a longitudinal association. Although they found a moderate partial correlation (controlling for grade, gender, aggression, and victimization) between defender self-efficacy at time 1 and defending at time 2, this longitudinal association was shown to be nonsignificant in the regression analysis.

Two significant shortcomings can be identified in the aforementioned longitudinal studies. First, they exclusively posited and examined unidirectional associations from defender self-efficacy to defending. As mentioned above, however, social cognitive theory posits a reciprocal influence among behavior, personal factors, and the external environment (Bandura, 1997). Therefore, from a theoretical standpoint, it is anticipated that defender self-efficacy will exert an influence on bystander intervention, while it is also anticipated that bystander intervention can both enhance and diminish self-efficacy beliefs. Notably, one of the four sources of self-efficacy proposed by Bandura (1997) is performance accomplishments, grounded in personal mastery experiences. Students who successfully intervene to defend victims of peer victimization may elevate their efficacy expectations for

similar tasks in the future. Over time, as these mastery experiences accumulate, a robust sense of self-efficacy can develop. Second, the existing longitudinal studies were restricted to two time points within a short period of time (less than 1 year), and they only hypothesized and tested the unidirectional association from defender self-efficacy to defending. Longitudinal studies involving more than two time points have commonly used traditional cross-lagged panel models (T-CLPM) (Selig et al., 2012), in which the effect of a predictor variable (A) measured at time point 1 on an outcome variable (B) measured at time point 2 is estimated (i.e., the cross-lagged effect), while controlling for the rank-order stability of (A) from time point 1 to 2 (i.e., the autoregressive effect). This approach addresses between-person questions (e.g., do students who exhibit higher levels of defending behavior compared with their peers experience an increase in defender self-efficacy over time?). Such an approach assumes an absence of time-invariant individual differences, which stands in contrast to empirical findings suggesting that a student's bystander behaviors vary over time (e.g., Frey et al., 2014; Levy & Gumpel, 2018). In this regard, the random intercept cross-lagged panel model (RI-CLPM) constitutes an improved way of studying longitudinal associations as it accounts for time-invariant, trait-like stability by the inclusion of random intercepts (Hamaker et al., 2015). Consequently, RI-CLPM enables one to distinguish between-person effects and within-person effects, thus making it possible to study longitudinal associations of defender self-efficacy with defending and passive bystanding on a within-person level. In other words, this approach addresses within-person questions (e.g., do students who engage in more defending behavior than usual, relative to their typical behavior, subsequently experience higher levels of defender self-efficacy?).

While the RI-CLPM sometimes has been presented as a mere improvement over the T-CLPM in the study of longitudinal associations (Hamaker et al., 2015), the RI-CLPM also has faced criticism (e.g., Lüdtke & Robitzsch, 2021; Sorjonen et al., 2023). Moreover, researchers have suggested that these models can be viewed as complementary rather than competitive, each with its own advantages and limitations, and that the key consideration is determining which model is most suitable for the specific research inquiry (Guo et al., 2023; Orth et al., 2021). In this particular study, we utilized both the T-CLPM and RI-CLPM, as we aimed to capture different facets of these associations and, thus, offer a more comprehensive perspective that captures both how students score relative to others and in relation to their own previous scores (Guo et al., 2023).

### 1.1.3 | Hypotheses development

In accordance with the social cognitive theory and previous research, we hypothesized that defender self-efficacy is positively associated with defending and negatively associated with passive bystanding; at least concurrently. Prior studies are mainly cross-sectional, but the findings are often discussed in a unidirectional manner (i.e., the assumption that students' levels of defender self-efficacy influence whether they defend the victim or remain passive). Accordingly, two longitudinal studies have found that defender self-efficacy predicted defending (Gini et al., 2022; van der Ploeg et al., 2017). However, social cognitive theory assumes a reciprocal influence between behavior and personal factors (and the external environment, see Bandura, 1997, 2016).

Thus, with reference to social cognitive theory, any change in defender self-efficacy or bystander behavior is expected to be a gradual, reciprocal process. Students who initially engage in defending and found that they are capable of aiding victims will gradually increase in defender self-efficacy, which in turn will make them more inclined to engage in defending and less prone to remain passive as bystanders over time. In contrast, students who initially try to stay away and act as passive bystanders will gradually decrease in defender self-efficacy, which in turn will make them less inclined to engage in defending and more inclined to remain passive as bystanders over time. Therefore, deduced from the social cognitive theoretical framework (Bandura, 1997, 2016), it would be plausible to hypothesize that defender self-efficacy predicts greater defending and less passive bystanding; defending predicts greater defender self-efficacy; and passive bystanding predicts less defender self-efficacy.

## 1.2 | The present study

The lack of longitudinal studies has resulted in a limited understanding of how the relationship between bystander behaviors and defender self-efficacy unfolds and develops over time, which is crucial for comprehending the underlying mechanisms and establishing causal links. By investigating the trajectory of these variables, the current study sought to gain valuable insights into the dynamic nature of their association and identify potential points for interventions. The aim of the present study was to examine the longitudinal reciprocal associations between defender self-efficacy and two types of bystander behaviors, namely defending and passive bystanding, in peer victimization of students in early adolescence. More specifically, we examined—both at the between- and within-person level—whether greater defender self-efficacy predicted greater defending and less passive bystanding; whether greater defending and less passive bystanding predicted greater defender self-efficacy; and whether these longitudinal associations were unidirectional or bidirectional.

Although peer victimization occurs in all grades, it seems to be most prevalent among students in early adolescence (Due et al., 2005; Eslea & Rees, 2001; Friends, 2019). Therefore, this study focused on students in grades 4–8 (aged 10–15 years). The few previous longitudinal studies partly support a longitudinal association between defending and defender self-efficacy (Barchia & Bussey, 2011; Gini et al., 2022; van der Ploeg et al., 2017), but their analyses were restricted to two time points within a short period of time (less than 1 year), and they were merely interested in whether defender self-efficacy predicted defending, not vice versa. Furthermore, no previous study has examined longitudinal associations between defender self-efficacy and passive bystanding. Consequently, we were unable to come up with hypotheses from the existing empirical literature. However, social cognitive theory assumes a reciprocal influence between behavior and personal factors, which guided hypothesis development (see previous section). We formulated four hypotheses for the present study, as follows:

First, we hypothesized a positive concurrent association between defender self-efficacy and defending. Second, we hypothesized a negative concurrent association between defender self-efficacy and passive bystanding. In other words, students with higher levels of defender self-efficacy would display greater defending and less passive bystanding at the same time of measurement.

Third, we hypothesized a positive reciprocal longitudinal association between defender self-efficacy and defending. In other words, higher previous levels of defender self-efficacy would be associated with subsequent higher degrees of defending and higher previous degrees of defending would be associated with subsequent higher levels of defender self-efficacy.

Fourth, we hypothesized a negative reciprocal longitudinal association between defender self-efficacy and passive bystanding. In other words, lower previous levels of defender self-efficacy would be associated with subsequent higher degrees of passive bystanding and higher previous degrees of passive bystanding would be associated with subsequent lower levels of defender self-efficacy.

In all analyses, gender was included as a control variable to avoid potential omitted variable bias. Previous research has found girls to be more inclined to defend victims (for a meta-analysis, see Ma et al., 2019), whereas there have been mixed findings regarding defender self-efficacy and passive bystanding (e.g., Pronk et al., 2013; Sjögren et al., 2020; Thornberg & Jungert, 2013). Therefore, while we hypothesized that girls would be more likely to engage in defending than boys, no hypotheses about whether gender was linked with defender self-efficacy and passive bystanding were formulated. These possible associations were instead examined in an exploratory manner.

## 2 | METHOD

### 2.1 | Research procedure and participants

To investigate the aim of this study, we analyzed five waves of data over a time period of 4 years. Data were collected once a year, from fourth to eighth grade. Thus, the study spans from *upper elementary school* (grades

4–6) to the two first grades of *lower secondary school* (grades 7–9), according to the Swedish school system. Elementary school children generally have the same teacher in most school subjects and stay in a home classroom throughout the school day. Secondary school children, on the other hand, have different teachers and classrooms depending on the school subject. Swedish school children enter fourth grade the year they turn 10.

In the first wave, 2408 students from 74 schools were invited to participate. Out of these, 599 students did not acquire parental consent, and 183 students were absent on the day of data collection or chose not to participate. Furthermore, 82 students did not fill out all the scales (i.e., defender self-efficacy, defending, and passive bystanding) used in the study and were therefore excluded. Thus, from the first wave we analyzed data from 1544 students (mean age = 10.54, SD = 0.35, girls = 52%). In each of the following data collection waves, some students chose to withdraw from the study, were absent on the day of data collection, or had transferred to schools not involved in the project, whereas some students joined in (see Table 1 for descriptive statistics of the participants). In total, 744 students participated on all occasions (48% of the original 1544 students); 1055 students participated on four occasions; 1511 students participated on three occasions; 2098 students participated on four occasions, and 2507 students participated on at least one occasion and were thus included in the analyses. There were no item-level missing data.

For attrition analyses, we used *t* tests to analyze differences in the three focal study variables—defender self-efficacy, defending, and passive bystanding—between those who continued to each subsequent data collection wave and those who dropped out (e.g., mean levels of defender self-efficacy in fourth grade among students who participated in both fourth and fifth grades vs. those who participated only in fourth grade). We found no significant differences except for defender self-efficacy ( $t = 2.44$ ,  $p = .014$ ,  $M_{\text{continuers}} = 5.00$ ,  $M_{\text{dropouts}} = 4.74$ ) and passive bystanding ( $t = 2.10$ ,  $p = .036$ ,  $M_{\text{continuers}} = 2.52$ ,  $M_{\text{dropouts}} = 2.71$ ) in fifth grade. These significant differences were, however, small ( $d_{\text{defender self-efficacy}} = 0.17$ ,  $d_{\text{passive bystanding}} = 0.14$ , see Cohen, 1988).

Participating schools were not selected randomly but were selected strategically to provide a heterogeneous sample in terms of socioeconomic background and geographic location. Participating schools were located in 10 municipalities in middle and southern Sweden. The number of inhabitants in the municipalities ranged from approximately 10,000 to 160,000. Five of the municipalities had 10,000–50,000 inhabitants, two had 50,000–100,000 inhabitants, and three had more than 100,000 inhabitants. One of the municipalities belonged to a metropolitan area. Across the five waves, 19%–21% of participants had an immigrant background, defined as not being born in Sweden or having two foreign-born parents (compared with the national average of 23%–26% during the school years of data collection) (Swedish National Agency for Education, 2022). On average, 53%–55% of the students in the participating schools had at least one parent with a postsecondary education. This is fairly representative of Swedish schools (56%–58%) during the school years 2015/16 to 2019/20. There was a large between-school variation in the educational level of the students' parents. The proportion of students with at least one parent with a postsecondary education ranged from 22%–91%, indicating heterogeneity in the sample.

**TABLE 1** Descriptive statistics of participants.

Measure	N	$M_{\text{age}}$	$SD_{\text{age}}$	% girls
Time point 1/Grade 4	1544	10.54	0.35	52
Time point 2/Grade 5	1650	11.55	0.33	53
Time point 3/Grade 6	1480	12.58	0.35	53
Time point 4/Grade 7	1725	13.65	0.36	53
Time point 5/Grade 8	1585	14.57	0.34	53

Ethical approval before conducting the study was obtained from the Regional Ethical Review Board. School principals and teachers were informed about the study and gave researchers access to classrooms. Both written informed parental consent and student assent were obtained from all participants. Participating students answered a web-based questionnaire on tablets with 1-year intervals. The first data collection took place in the school year of 2015/16 and the last data collection took place in the school year of 2019/20. On average, the questionnaire took about 30 min to complete. During the data collection sessions, either a member of the research team or a trained teacher was present to explain the study procedure and to provide support to participants in need of assistance.

## 2.2 | Measures

### 2.2.1 | Defender self-efficacy

A six-item 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) that had previously been shown to display good psychometric properties among Swedish students (Sjögren et al., 2020, 2021a) measured students' defender self-efficacy, that is, the extent to which they believed in their ability to intervene successfully in peer victimization situations. The scale started with "I feel that I'm very good at..." followed by six items (e.g., "...telling off/standing up to students who are mean toward another student" and "...stopping students from hurting others"). Students' responses to these six items were averaged at each data collection wave and used as composite scales for defender self-efficacy. Five separate confirmatory factor analysis, one for each wave, were run and provided support for the one-dimensionality of the scale (see Table 2). The scales were internally consistent, with Cronbach's  $\alpha$  ranging from .91 to .94 across waves.

### 2.2.2 | Bystander behaviors

Students' defending and passive bystanding behavior were measured by a 10-item 7-point scale (1 = *strongly disagree* to 7 = *strongly agree*) that had previously been shown to display good psychometric properties among

**TABLE 2** Fit indices for confirmatory factor analysis (CFA) models.

CFA	$\chi^2$	df	CFI	RMSEA [90% CI]	SRMR
Defender self-efficacy					
Wave 1	64.98	9	0.985	0.063 [0.05, 0.08]	0.021
Wave 2	56.92	9	0.986	0.057 [0.05, 0.07]	0.020
Wave 3	52.50	9	0.988	0.057 [0.05, 0.07]	0.019
Wave 4	100.42	9	0.978	0.077 [0.07, 0.09]	0.023
Wave 5	119.29	9	0.973	0.088 [0.08, 0.10]	0.027
Defending and passive bystanding					
Wave 1	118.99	26	0.969	0.047 [0.04, 0.05]	0.034
Wave 2	163.43	26	0.966	0.057 [0.05, 0.06]	0.039
Wave 3	136.76	26	0.973	0.054 [0.05, 0.06]	0.037
Wave 4	207.30	26	0.967	0.064 [0.06, 0.07]	0.041
Wave 5	205.86	26	0.964	0.066 [0.06, 0.07]	0.045



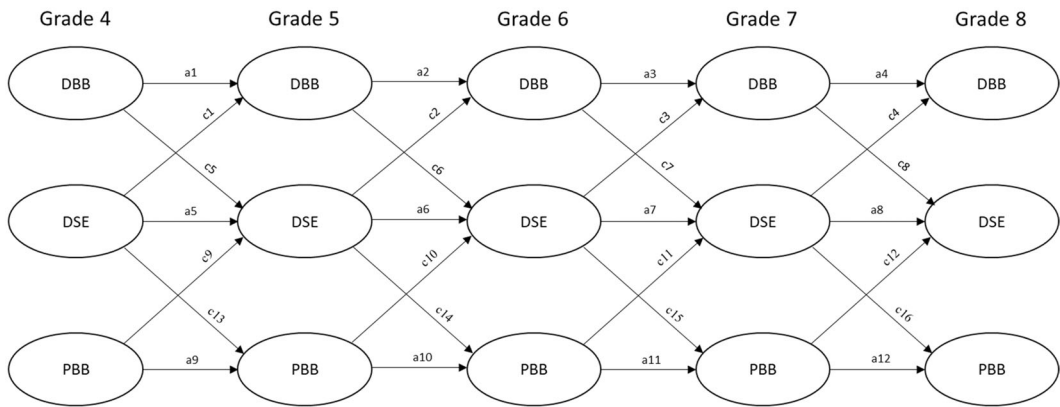
Swedish students (Sjögren et al., 2020, 2021b). The scale asked, "Try to remember situations in which you have seen one or more students victimizing another student (e.g., teasing, mocking, threatening, physically assaulting, or freezing out). What do you usually do?" Out of the 10 items, five portrayed defending behavior (e.g., "I help the victimized student"), and five portrayed passive bystanding (e.g., "I just walk away"). Students' responses to the items concerning these two types of bystander behaviors were averaged at each data collection wave and used as composite scales for defending and passive bystanding. Five separate confirmatory factor analysis, one for each wave, were run and provided support for the two-dimensionality of the scale (see Table 2). Both scales were internally consistent, with Cronbach's  $\alpha$  ranging from .80 to .85 across waves for defending and from .75 to .84 for passive bystanding.

## 2.3 | Statistical analyses

All analyses were carried out in R Studio using R version 4.3.0 (R Core Team, 2023). Before the main analyses, we tested for longitudinal measurement invariance to ensure that potential associations between the constructs could be interpreted reliably (Vandenberg & Lance, 2000). First, a CFA with unconstrained factor loadings and intercept across time points was conducted for each construct. In the next step, the unconstrained CFA was compared with a CFA in which the factor loadings were constrained to be equal over time. If CFI and RMSEA did not decrease by more than 0.010 and 0.015, respectively, weak/metric invariance was supported (Chen, 2007; Cheung & Rensvold, 2002). Finally, the CFA with constrained factor loadings was compared with a CFA in which both factor loadings and item intercepts were constrained to be equal over time. If CFI did not decrease by more than 0.010 and RMSEA did not increase by more than 0.015, strong/scalar invariance was supported (Chen, 2007; Cheung & Rensvold, 2002).

Reciprocal longitudinal associations of defender self-efficacy with defending and passive bystanding in peer victimization were tested through both a traditional and random-intercept cross-lagged panel model using the R lavaan package, version 0.6-5 (Rosseel, 2012). In the T-CLPM, a significant positive cross-lagged effect of defender self-efficacy on defending between time point 1 and 2 would indicate that students with higher levels of defender self-efficacy in fourth grade are more inclined to defend victims in fifth grade. To estimate *reciprocal* longitudinal associations, one simultaneously tests whether (A) at time point 1 predicts (B) at time point 2 *and* whether (B) at time point 1 predicts (A) at time point 2, while controlling for their autoregressive effects. In contrast, RI-CLPM enables one to distinguish between-person effects and within-person effects, thus making it possible to study longitudinal associations of defender self-efficacy with defending and passive bystanding on a within-person level. Significant autoregressive effects then do not represent the rank-order stability of individuals across occasions. Rather, such effects indicate that within-person deviations from the expected scores (based on the random intercepts/stable trait levels) of one variable (e.g., passive bystanding) also predict deviations from the expected scores of the same variable in the next wave. Similarly, significant cross-lagged effects suggest that within-person deviations from the expected scores of one variable (e.g., passive bystanding) predict deviations from the expected scores of another variable (e.g., defender self-efficacy) in the next wave.

In the hypothesized T-CLPM and RI-CLPM models, we examined the autoregressive (see paths a1–a12 in Figure 1) and cross-lagged (see paths c1–c16 in Figure 1) effects. At time point 1, defending, passive bystanding, and defender self-efficacy were allowed to covary; and at time points 2–5, their residuals were allowed to covary. Moreover, the residual variances among the corresponding indicators were allowed to covary over time. Because  $\chi^2$  is sensitive to the sample size, CFI > 0.95, an RMSEA < 0.06, and an SRMR < 0.08 can be used to indicate a good fit of the models (Hu & Bentler, 1999). We used FIML (Full Information Maximum Likelihood) estimation to handle the



**FIGURE 1** The autoregressive and cross-lagged effects of the traditional and random intercept cross-lagged panel models. Paths a1–a12 denote the 12 autoregressive effects, and paths c1–c16 denote the 16 cross-lagged effects. DBB, defending bystander behavior; DSE, defender self-efficacy; PBB, passive bystander behavior.

missing data which allowed us to include all 2507 students who participated on at least one occasion so that all available information from the observed data to estimate the model parameters could be utilized.

### 3 | RESULTS

#### 3.1 | Descriptive statistics, correlations, and measurement invariance

Table 3 presents descriptive statistics for the composite scales of defender self-efficacy, defending, and passive bystanding at grades four to eight. Overall declines can be observed over time for defender self-efficacy and defending, whereas passive bystanding increases. Table 4 presents pairwise correlations within and between grades. All correlations were significant at the  $p < .001$  level. All scales displayed moderate stability over time, with correlations of 0.21–0.53 for defender self-efficacy, 0.16–0.52 for passive bystanding, and 0.27–0.54 for defending. Furthermore, defender self-efficacy and defending were consistently positively associated, whereas passive bystanding was consistently negatively associated with these variables. The strongest correlations were the within-grade correlations between defender self-efficacy and defending (0.59–0.70). In addition, associations between adjacent time points were generally stronger compared with more distant time points.

As a final step before estimating the traditional and RI-CLPMs, we tested and found support for measurement invariance across time for each construct (see Supporting Information: Appendix A–C). The configural invariance, unconstrained, model showed adequate fit. In the subsequent steps (i.e., constrained factor loadings and constrained intercepts), CFA decreased less than 0.010 and RMSEA increased less than 0.015. Consequently, strong/scalar invariance was achieved.

#### 3.2 | Longitudinal associations

To examine the longitudinal associations of defender self-efficacy with defending and passive bystanding in peer victimization, we conducted both a traditional (T-CLPM) and a random-intercept cross-lagged panel model (RI-CLPM). Both the T-CLPM ( $\chi^2(2981) = 6560$ ,  $p = .001$ , CFI = 0.953, RMSEA = 0.022, 90% CI [0.021, 0.023], SRMR = 0.054) and the RI-CLPM ( $\chi^2(3204) = 9063$ ,  $p = .001$ , CFI = 0.924, RMSEA = 0.029, 90% CI [0.029, 0.030],

**TABLE 3** Means (M), standard deviations (SD), minimum and maximum observations for the composite scales at each data collection wave.

Measure	M	SD	Cronbach's $\alpha$
Defender self-efficacy T1	5.09	1.56	0.91
Defender self-efficacy T2	4.95	1.56	0.91
Defender self-efficacy T3	4.76	1.55	0.92
Defender self-efficacy T4	4.14	1.60	0.92
Defender self-efficacy T5	3.76	1.65	0.94
Passive bystanding T1	2.38	1.24	0.75
Passive bystanding T2	2.55	1.29	0.80
Passive bystanding T3	2.59	1.25	0.80
Passive bystanding T4	3.05	1.38	0.83
Passive bystanding T5	3.26	1.45	0.84
Defending T1	5.66	1.26	0.80
Defending T2	5.40	1.29	0.81
Defending T3	5.22	1.33	0.83
Defending T4	4.66	1.45	0.85
Defending T5	4.23	1.48	0.85

Note: T1–T5 designate the three time points, T1 = grade 4, T2 = grade 5, T3 = grade 6, T4 = grade 7, T5 = grade 8.

SRMR = 0.046) showed adequate fit to the data. The explained variance of the focal variables across the waves were as follows: between 0.10 and 0.18 for defender self-efficacy, 0.15 and 0.25 for defending, and 0.18 and 0.32 for passive bystanding. Next, we went on to examine the autoregressive and cross-lagged effects of the models.

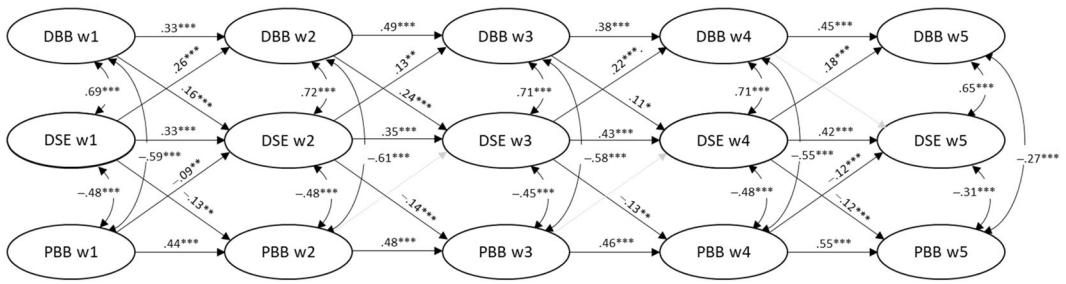
### 3.2.1 | T-CLPM

In the T-CLPM (for an overview of the standardized coefficients, see Figure 2), all autoregressive effects were positive and significant, with standardized coefficients ranging from 0.32 to 0.55. This implies that students' tendencies to defend and stay passive, as well as their levels of defender self-efficacy, were moderately stable over time or, more specifically, that the relative ordering of students on each of these constructs was moderately maintained from fourth to eighth grade. Furthermore, all cross-lagged effects in the T-CLPM from defender self-efficacy to defending ( $\beta$ s ranging from .13 to .27) and passive bystanding ( $\beta$ s ranging from  $-.12$  to  $-.15$ ) were significant, suggesting that higher levels of defender self-efficacy consistently predicted more defending and less passive bystanding at the subsequent time points. Moreover, some cross-lagged effects from the bystander behaviors to defender self-efficacy were significant. There were significant positive associations from defending in fourth to sixth grade to defender self-efficacy in fifth to seventh grade ( $\beta$ s ranging from .12 to .24), and significant negative associations from passive bystanding in fourth and seventh grade to defender self-efficacy in fifth ( $\beta = -.09$ ) and eighth grade ( $\beta = -.12$ ), respectively. Thus, our findings suggest that defending and passive bystanding predict defender self-efficacy, but not consistently across all waves. The T-CLPM, however, does not separate within- from between-person variation. RI-CLPM was therefore used to gain a more detailed understanding of the associations.

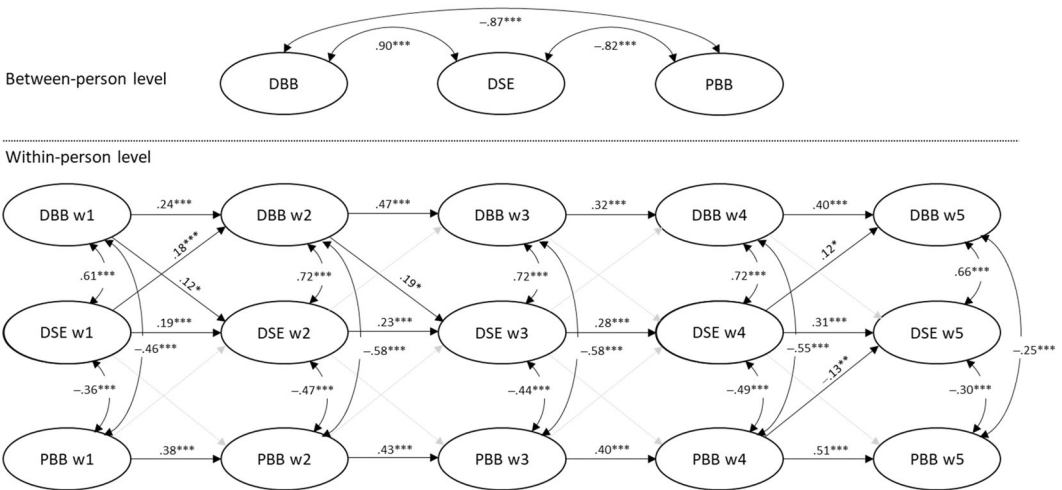
TABLE 4 Correlations of the composite scales.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. DSE T1	-														
2. DSE T2	0.44	-													
3. DSE T3	0.34	0.53	-												
4. DSE T4	0.29	0.39	0.49	-											
5. DSE T5	0.21	0.31	0.40	0.52	-										
6. Passive T1	-0.38	-0.28	-0.22	-0.16	-0.22	-									
7. Passive T2	-0.27	-0.44	-0.33	-0.23	-0.23	0.41	-								
8. Passive T3	-0.27	-0.30	-0.44	-0.26	-0.27	0.33	0.45	-							
9. Passive T4	-0.19	-0.28	-0.30	-0.43	-0.38	0.25	0.33	0.45	-						
10. Passive T5	-0.20	-0.24	-0.29	-0.34	-0.43	0.16	0.28	0.39	0.52	-					
11. Defending T1	0.59	0.40	0.30	0.25	0.22	-0.39	-0.30	-0.24	-0.20	-0.18	-				
12. Defending T2	0.41	0.69	0.47	0.36	0.28	-0.24	-0.45	-0.29	-0.28	-0.24	0.46	-			
13. Defending T3	0.34	0.45	0.70	0.41	0.32	-0.23	-0.32	-0.45	-0.30	-0.30	0.35	0.53	-		
14. Defending T4	0.28	0.40	0.48	0.69	0.43	-0.19	-0.30	-0.34	-0.45	-0.37	0.30	0.45	0.51	-	
15. Defending T5	0.20	0.29	0.39	0.47	0.67	-0.23	-0.26	-0.30	-0.36	-0.36	0.27	0.35	0.37	0.54	-

Note: T1–T5 designate the three time points, T1 = grade 4, T2 = grade 5, T3 = grade 6, T4 = grade 7, T5 = grade 8. All correlations were significant at the 0.001 level.  
Abbreviation: DSE, defender self-efficacy.



**FIGURE 2** Standardized coefficients of the traditional cross-lagged panel model. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . w1 = grade 4, w2 = grade 5, w3 = grade 6, w4 = grade 7, w5 = grade 8. Nonsignificant cross-lagged paths are indicated by dashed arrows. Within-time coefficients in grade 4 refer to correlations between defending, defender self-efficacy and passive bystanding, whereas within-time coefficients in grades 5–8 refers to their residual correlations. DBB, defending bystander behavior; DSE, defender self-efficacy; PBB, passive bystanding behavior.



**FIGURE 3** Standardized coefficients of the random intercept cross-lagged panel model. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . w1 = grade 4, w2 = grade 5, w3 = grade 6, w4 = grade 7, w5 = grade 8. Nonsignificant cross-lagged paths are indicated by dashed arrows. Within-time coefficients in grade 4 refer to correlations between defending, defender self-efficacy and passive bystanding, whereas within-time coefficients in grades 5–8 refers to their residual correlations. DBB, defending bystander behavior; DSE, defender self-efficacy; PBB, passive bystanding behavior.

### 3.2.2 | RI-CLPM

All autoregressive effects were also positive and significant in the RI-CLPM as well (for an overview of the standardized coefficients, see Figure 3), with standardized coefficients ranging from 0.19 to 0.51. As the RI-CLPM partials out between-person variance through its random intercept, the autoregressive and cross-lagged effects pertain to within-person variance. Consequently, the significant autoregressive effects of the RI-CLPM imply that occasions in which a student scored above his or her expected scores on defending, passive bystanding, and defender self-efficacy, respectively, were likely to be followed by occasions on which he or she still scored above the expected score on each construct.

As for the cross-lagged effects of the RI-CLPM, five (compared with 13 in the T-CLPM) out of the 16 effects were significant. Defender self-efficacy in fourth and seventh grades were significantly positively associated with defending in fifth ( $\beta = .18$ ) and eighth grade ( $\beta = .12$ ), respectively, whereas no significant associations were found from defender self-efficacy to passive bystanding. Moreover, there were significant positive associations from defending in fourth and fifth grade to the subsequent time points of defender self-efficacy ( $\beta$ s =  $.12$  and  $.19$ ), in addition to a negative association from passive bystanding in seventh grade to defender self-efficacy in eighth grade ( $\beta = -.13$ ). The five significant cross-lagged effects of the RI-CLPM suggest that these associations are accounted for, at least in part, by within-person variance or, more specifically, that within-person deviations from the expected scores of one variable (e.g., defender self-efficacy in fourth grade) predicted deviations from the expected scores of another variable (e.g., defending in fifth grade) in the next wave. In contrast, the cross-lagged associations that were significant only in the T-CLPM, which was predominantly the case between defender self-efficacy and passive bystanding, seem to reflect stable, trait-like differences between persons. For instance, the significant negative cross-lagged effect from  $DSE_{T1}$  to  $PASS_{T2}$  suggests that two students who differed by one standard deviation in their fourth-grade level of defender self-efficacy (and reported the same degree of passive bystanding in fourth grade) are expected to differ in their degree of passive bystanding in fifth grade by 0.14 standard deviations. Given that this association was nonsignificant in the RI-CLPM, the originally-possible within-person interpretation, that an increase in a student's fourth grade defender self-efficacy is associated with a decrease in the student's passive bystanding from fourth to fifth grade, seems less likely (see also Grimm et al., 2021).

Furthermore, beyond the within-person effects (i.e., the autoregressive and cross-lagged effects) of the RI-CLPM, there was also a significant between-person effect in that the random intercepts of defending, defender self-efficacy, and passive bystanding were significantly intercorrelated (see Figure 3). These correlations imply that students with higher levels of defender self-efficacy during any of the five waves were more likely to defend victims and less likely to act passively across the waves as well, and that students who were more likely to defend victims during any of the five waves were less likely to act passively across the waves. Finally, in both the T-CLPM and RI-CLPM, there was a gender effect for defending in fifth, sixth, and seventh grade, indicating that girls were more likely to engage in defending. Furthermore, there was a similar effect for defender self-efficacy in sixth and seventh grade in the T-CLPM and in seventh and eighth grade in the RI-CLPM, indicating that girls had higher levels of defender self-efficacy. No significant gender effects were found for passive bystanding.

## 4 | DISCUSSION

Peer victimization in school usually takes place in front of peers (e.g., Lynn Hawkins et al., 2001; Nishina & Bellmore, 2010) who have a potential to influence its prevalence. Bullying tends to be less common in school contexts where defending is a more typical bystander response (e.g., Saarento et al., 2015; Salmivalli et al., 2011). Unfortunately, when students are witnessing peer victimization in school, they are more inclined to remain passive and try to stay outside rather than intervene on behalf of the victim (e.g., Pouwels et al., 2018; Waasdorp & Bradshaw, 2018). Qualitative studies have found that students themselves report that having a lower social status than the perpetrator(s), fear of being attacked or the next victim, and low beliefs in one's capacity to intervene and help the victim are obstacles that demotivate defending (Forsberg et al., 2018; Strindberg et al., 2020; Thornberg, Landgren, et al., 2018). Drawing on social cognitive theory (Bandura, 1997), people are more motivated, inclined, and persistent to execute a certain action if they have a high perceived self-efficacy to efficiently execute the action.

### 4.1 | Discussion of key findings

In accordance with cross-sectional studies (Lambe et al., 2019) and few longitudinal studies (Gini et al., 2022; van der Ploeg et al., 2017), we found that defender self-efficacy was positively related to defending. We also found a

negative association between defender self-efficacy and passive bystanding, which supports previous cross-sectional studies (e.g., Pronk et al., 2013; Sjögren et al., 2020, 2021). While a few studies have examined the longitudinal link between defender self-efficacy and defending, the current study is, as far as we know, the first study to examine additionally the longitudinal association between defender self-efficacy and passive bystanding. Moreover, we adopted a novel approach by analyzing the longitudinal associations using both traditional and RI-CLPMs to capture different facets of these associations and, thus, offer a more comprehensive perspective that captures both how students score relative to others and in relation to their own previous scores (Guo et al., 2023).

The results from the T-CLPM showed that defender self-efficacy consistently predicted more defending and less passive bystanding in the subsequent year from fourth grade in elementary school to eighth grade in secondary school. Furthermore, defending predicted higher defender self-efficacy in the subsequent year in fourth to seventh grade, which suggests bidirectional longitudinal associations between these two constructs across these grades, while the link between them was unidirectional from defender self-efficacy to defending between seventh grade and eighth grade. Passive bystanding, in turn, predicted less defender self-efficacy from fourth grade to fifth grade, and from seventh grade to eighth grade, but not across fifth to seventh grade. Altogether, the findings from the T-CLPM propose that defender self-efficacy more consistently predicts students' bystander behaviors—whether to defend the victim or remain passive—in peer victimization over time, while bystander behaviors (passive bystanding, in particular) less consistently predict defender self-efficacy over time.

In contrast to T-CLPM and previous longitudinal studies, RI-CLPM was included and used in the current study to examine whether defender self-efficacy was linked to defending and passive bystanding, while partialling out between-person associations to replicate the findings at the within-person level and, thus, to disentangle the effect of the developmental changes. Before discussing the within-person results, note that defender self-efficacy was associated with greater defending and less passive bystanding at the between-person level. Thus, students who reported stronger beliefs in their capability to efficiently defend victims were also more inclined to defend victims and less inclined to remain passive when they became a bystander to peer victimization. The between-person effects clearly confirmed social cognitive theory regarding self-efficacy in the context of witnessing peer victimization in school.

At the within-person level, defender self-efficacy at fourth grade predicted defending at fifth grade, which, in turn, predicted defender self-efficacy at sixth grade. Defending at fourth grade predicted defender self-efficacy at fifth grade, and defender self-efficacy at seventh grade predicted defending at eighth grade. In addition, passive bystanding at seventh grade predicted less defender self-efficacy at eighth grade, while defender self-efficacy did not predict passive bystanding in any subsequent time point. Thus, there were some significant predictions between defender self-efficacy and the two bystander behaviors, whereas in many cases, no significant prediction was found. However, the RI-CLPM showed that all three measured constructs were stable over time. In other words, students who scored high in defender self-efficacy tended to continue scoring high in defender self-efficacy. Students who were more inclined to defend victims were prone to continue defending victims as bystanders, and those who more often remained passive when witnessing peer victimization tended to act as such at the subsequent time points. In tandem, within each time point, students who displayed high defender self-efficacy were more inclined to defend victims and less inclined to remain passive when witnessing peer victimization.

The current findings shed some light on the longitudinal associations between defender self-efficacy and the two bystander behaviors through separating between-person from within-person effects. The discrepancy between T-CLPM and RI-CLPM results in our study demonstrates the need to rule out between-person confounders to achieve a more trustworthy estimate of whether intra-psychological change in defender self-efficacy is related to within-person change in behavioral patterns of defending and passive bystanding over time (see also Hamaker et al., 2015). Developmental processes might be a possible explanation to our results. According to social cognitive theory (Bandura, 1997), younger children than those involved in the current study have a more sketchy and limited knowledge of their cognitive and behavioral capabilities. Their self-appraisals are, therefore, more unstable and dependent on immediate and salient outcomes. "As children become more proficient with age in their self-appraisal skills, reliance on immediate performance attainments declines in importance in judging what they can do"

(Bandura, 1997, p. 171). Thus, their self-appraisals and social behaviors become more stable. This might, in general, contribute to explaining the stability of the three study constructs.

In the context of peer group and relationships, children witness peer aggression and victimization already in preschool and lower elementary school (Saracho, 2016). As a result, they begin to develop their perceived defender self-efficacy and bystander behavioral patterns through their early transactions in these situations, and it is possible that these within-person beliefs about their own capacity to defend victims and their tendency to defend versus remain passive become more stable as they enter upper elementary school. Thus, certain patterns of self-concepts and behaviors might be more fixed in the studied age group compared with younger children.

In addition, peers are an important source for children's various self-efficacies due to similarities in age and experiences (Bandura, 1997). In the school context, peer groups and relationships have a key impact on students' learning and behavior through everyday social transactions, group membership, and peer influence (Wentzel & Muenks, 2016). In Sweden, students in elementary and lower secondary school spend most of their school day in a single formal group of 20–30 age-mates. This formal group of students, termed “school class” and organized by the school, produces a long-term group structure, a social hierarchy, and a set of social roles and expectations. This may further affect and press students to think about themselves and behave in accordance with their social status, reputation, and role within their school class. For example, research has found that students who defend victims tend to have a higher social status than those who remain passive and try to stay outside when witnessing bullying in school (Pouwels et al., 2018).

The group structure of the school class and the social status, roles, and behavioral patterns that it maintains among the classmates might, in turn, contribute to additionally explaining why the within-person levels of defender self-efficacy, defending, and passive bystanding tended to be stable over time and predict themselves from year to year. Thus, our findings support a social role stability at the within-person level where defender self-efficacy seems to be more trait-like than state-like. A stable intrapsychological pattern of reciprocal influence between the three constructs appears to have been developed, because the present RI-CLPM results showed that defender self-efficacy was linked with greater defending and less passive bystanding within each measurement point.

We did, however, find a significant bidirectional longitudinal association between defender self-efficacy and defending in the RI-CLPM results, but only between fourth and fifth grade. This finding might, in addition to developmental processes, be a result of the transition from lower to upper elementary school where students change teachers and many of them become part of a new school class as they leave grade 3 and enter grade 4. Similarly, the significant paths between defender self-efficacy in grade 7 and defending in grade 8 (positively), and between passive bystanding in grade 7 and defender self-efficacy in grade 8 (negatively), may reflect the transition from upper elementary to lower secondary school where they leave grade 6 and begin grade 7. When students change school class, they enter a new group where norms, expectations, roles, and statuses need to be established. Becoming part of a new class and participating in its group development may contribute to explaining the bidirectional associations between grades 4 and 5 and the significant paths between grades 7 and 8.

Another explanation for the stability of variables and the few significant predictions between the variables, according to the RI-CLPM results, might be that the time lag of the present study is relatively long—approximately 1 year between the measurement points—while the relevant changes and predictions between the constructs might occur in shorter intervals. In other words, the more situated, fluent, and shifting nature of the everyday school class and peer group dynamics is out of reach in a study design with yearly time lags like ours. Future longitudinal studies using intervals of days, weeks, or one or a few months are, therefore, needed to further estimate whether defender self-efficacy predicts the two bystander behaviors, and vice versa, over shorter time horizons.

## 4.2 | Theoretical implications

While prior cross-sectional studies have explored the association between defender self-efficacy and both defending and passive bystanding (Sjögren et al., 2020, 2021; Thornberg, Wänström, et al., 2017), as well as a few



longitudinal studies on this topic (Barchia & Bussey, 2011; Gini et al., 2022; van der Ploeg et al., 2017), the present study represents the first attempt to examine the longitudinal relationship between defender self-efficacy, defending, and passive bystanding over an extended period of time, employing both T-CLPM and the RI-CLPM statistical approaches.

By utilizing both statistical approaches in the same study, this study contributes to and expands the existing literature on self-efficacy and bystanders' behavior in bullying. First, findings align with Bandura's (1997) social cognitive theory on self-efficacy, providing empirical evidence for a positive correlation between defender self-efficacy and defending, as well as a negative correlation between defender self-efficacy and passive bystanding. Moreover, we extend previous research on defender self-efficacy by demonstrating the stability of these associations across multiple measurement points, as students progressed from grade four in upper secondary school to grade eight in lower secondary school. These stable patterns of positive correlation with defending, and negative correlation with passive bystanding, suggests that defender self-efficacy and bystander behaviors may develop into enduring traits during middle childhood.

Additionally, our study reveals a certain level of stability in all three variables examined (defender self-efficacy, defending, and passive bystanding). This finding contributes valuable insights into the developmental trajectory of defender self-efficacy and bystander behaviors, indicating that these characteristics may already exhibit trait-like qualities during middle childhood. However, the coefficients observed in the models also indicate some variability between measurement waves. This variability can be partially explained by the interplay between defender self-efficacy and defending, as well as between defender self-efficacy and passive bystanding, when considering both between-individual and within-individual effects.

### 4.3 | Practical implications

Despite the mixed results concerning longitudinal reciprocal associations between self-efficacy and bystander behavior, it is undeniable that students' defender self-efficacy represents a core correlate of their proneness to defend victims or to remain passive during peer victimization episodes. Therefore, considering self-efficacy in antibullying programs is paramount, as demonstrated by the reduction in the prevalence of bullying when defender self-efficacy is included as one of the central components of the program (e.g., Finnish KiVa antibullying program; Kärnä et al., 2011).

To increase students' beliefs in their capacity to defend victims, equipping them with efficient strategies to intervene through specific training and activities is essential. To this end, both role modeling and roleplaying could represent effective options; students could be engaged, for example, in watching videos, discussing hypothetical scenarios, or analyzing curricular material (e.g., literary text, historical events) focused on prevarications, different bystander behaviors and self-efficacy for intervention.

Moreover, the inclusion of peer-support programs like befriending and peer counseling can be highly effective in combating bullying and creating a supportive environment within schools. By involving students themselves in providing assistance and support to their peers, these programs empower students and promote a sense of responsibility and self-efficacy. Training peer helpers in effective communication and problem-solving equips them with the tools they need to intervene and support classmates who are facing bullying (Gini et al., 2022). To achieve this goal, it is essential to enhance both understanding of different defending strategies and training in their implementation, thereby increasing individuals' self-confidence in utilizing them when necessary. Hence, within the school setting, alongside offering knowledge of appropriate defense strategies for different situations, it would be beneficial to integrate training activities into antibullying intervention programs to bolster students' belief in their ability to defend (Bussey et al., 2020).

Finally, given the stability over time of both behaviors and defender self-efficacy, and given that this stability is likely to be, at least partially, due to contextual factors (i.e., group norms and expectations, the link between

students' behavior and their status in the group), interventions should consider group dynamics and work on collective responsibility in tackling peer victimization. For example, to increase defender behavior and decrease passive bystander behavior over time, the school should also establish behavioral norms providing rewards for positive and helping behavior directed at victimized peers, so that they are perceived as desired and desirable within the school context.

#### 4.4 | Limitations and future research recommendations

Several limitations of this study should be acknowledged. Because the findings are based on self-reported data, they are vulnerable to social desirability, perception and recall biases, including careless and exaggerated responding, but also to shared method variance problems. Future studies designed to replicate the present findings may use peer nominations to assess defending and passive bystanding to overcome these limitations. Nevertheless, it is not necessarily true that students are reliable informants of other peer's bystander behaviors in peer victimization, considering that peer nominations are vulnerable to social reputation and blinded to unnoticed behaviors. Multiple data sources, including both self-reports and peer nominations, are therefore warranted in further studies. Additionally, attrition occurred during various waves of the survey, potentially introducing bias into the results. The attrition analyses showed, however, that there were just a few significant differences between those who continued to each subsequent data collection wave and those who dropped out and that the significant differences were small in magnitude. Moreover, it's important to note that the associations between defender self-efficacy, defending behavior, and passive bystander actions may vary depending on whether schools have implemented evidence-based bullying prevention interventions. However, in the present study we did not specifically select schools based on the implementation of bullying prevention programs, nor did we collect data on interventions implemented by the schools.

As previously noted, the time lag in our longitudinal study might be too long to detect possible short-term changes and predictions between the study constructs. Although the adoption of a 4-year longitudinal design with five measurement points is a strength of the present study, it is unable to capture momentary group dynamics. In addition to further longitudinal studies with shorter measurement intervals, ethnographic studies might be considered to examine the three study constructs and their interrelationships as they are manifested in the real-life school class setting over time. Ethnographic studies are, however, time-consuming and do not gather data that can be statistically analyzed to estimate possible longitudinal relationships and predictions. Still, they may be adopted to study students in their everyday school context and to achieve an interpretative, close and in-depth portrayal of the school class culture and peer group dynamics of defender self-efficacy, defending, and passive bystanding.

Moreover, previous studies suggest that fear of becoming the next victim made bystanders less confident in their ability to defend and, thus, inhibited them from intervening (e.g., Forsberg et al., 2018; Strindberg et al., 2020). While this fear can be considered a component of defender self-efficacy, it has not been measured in existing measurements. Constructing a defender self-efficacy scale where fear is addressed may, therefore, be a further path. Future studies may also investigate the link between defender self-efficacy measured by existing scales and fear of becoming the next victim. Another limitation is that the current analyses did not include any individual-level control variables except for gender (e.g., victimization) or contextual variables such as school climate, classroom climate, class norms, and teacher approaches and classroom management, nor did we include individual or contextual variables on perceived and sociometric popularity (i.e., social status and peer preference). Students are nested within peer groups nested within school classes nested within schools, and future studies need to study whether longitudinal associations across the constructs interact with various contextual variables. Considering the possible impact of peer pressure (Evans & Smokowski, 2017; Pozzoli & Gini, 2010; Zhang et al., 2022) and

popularity (Pouwels et al., 2018; Zhang et al., 2022), future studies should also examine how peer pressure and the need for popularity might affect both defender self-efficacy and bystander behaviors but also mediate or moderate the links between them.

Finally, one limitation of this study is the challenge of addressing the nested data structure, given that the sample includes 74 schools. Although the focal variables did not vary greatly between classes (ICCs for defending ranged from 3% to 7%, for passive bystanding from 2% to 10%, and for defender self-efficacy from 2% to 7% across the waves), it is still important to account for the hierarchical nature of the data in statistical analyses. However, due to the study design, where virtually all students changed schools between the sixth and seventh grades, there were no stable school memberships throughout the study. As a result, it was not feasible to adequately incorporate a hierarchical structure into the analyses. This limitation highlights the need for future research to explore methods that can appropriately account for nested data structure in similar longitudinal studies involving school transitions.

## 5 | CONCLUSION

Our findings revealed that students' levels of defender self-efficacy are positively related to defending and negatively related to passive bystanding across upper elementary school and lower secondary school. The results propose that efforts to encourage students to side with and intervene on behalf of the victim when witnessing peer victimization need to consider the role of students' defender self-efficacy, and use and develop educational interventions designed to increase students' defender self-efficacy.

## ACKNOWLEDGMENTS

This work was supported by grants from the Swedish Research Council (2013-7753).

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ORCID

Björn Sjögren  <http://orcid.org/0000-0001-9466-9829>

Robert Thornberg  <http://orcid.org/0000-0001-9233-3862>

Tiziana Pozzoli  <https://orcid.org/0000-0001-7474-553X>

## REFERENCES

- Atlas, R. S., & Pepler, D. J. (1998). Observations of bullying in the classroom. *The Journal of Educational Research*, 92(2), 86–99. <https://doi.org/10.1080/00220679809597580>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman and Company.
- Bandura, A. (2016). *Moral disengagement: How people do harm and live with themselves*. Worth.
- Barchia, K., & Bussey, K. (2011). Predictors of student defenders of peer aggression victims: Empathy and social cognitive factors. *International Journal of Behavioral Development*, 35(4), 289–297. <https://doi.org/10.1177/0165025410396746>
- Bussey, K., Luo, A., Fitzpatrick, S., & Allison, K. (2020). Defending victims of cyberbullying: The role of self-efficacy and moral disengagement. *Journal of School Psychology*, 78, 1–12. <https://doi.org/10.1016/j.jsp.2019.11.006>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>

- Chen, L.-M., Chang, L. Y. C., & Cheng, Y.-Y. (2016). Choosing to be a defender or an outsider in a school bullying incident: Determining factors and the defending process. *School Psychology International*, 37(3), 289–302. <https://doi.org/10.1177/0143034316632282>
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. [https://doi.org/10.1207/S15328007SEM0902\\_5](https://doi.org/10.1207/S15328007SEM0902_5)
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203771587>
- Denny, S., Peterson, E. R., Stuart, J., Utter, J., Bullen, P., Fleming, T., Ameratunga, S., Clark, T., & Milfont, T. (2015). Bystander intervention, bullying, and victimization: A multilevel analysis of New Zealand high schools. *Journal of School Violence*, 14(3), 245–272. <https://doi.org/10.1080/15388220.2014.910470>
- Due, P., Holstein, B. E., Lynch, J., Diderichsen, F., Gabhain, S. N., Scheidt, P., & Currie, C. (2005). Bullying and symptoms among school-aged children: International comparative cross sectional study in 28 countries. *European Journal of Public Health*, 15, 128–132. <https://doi.org/10.1093/eurpub/cki105>
- Eslea, M., & Rees, J. (2001). At what age are children most likely to be bullied at school? *Aggressive Behavior*, 27(6), 419–429. <https://doi.org/10.1002/ab.1027>
- Eslea, M., & Smith, P. K. (2000). Pupil and parent attitudes towards bullying in primary schools. *European Journal of Psychology of Education*, 15(2), 207–219. <https://doi.org/10.1007/BF03173175>
- Evans, C. B., & Smokowski, P. R. (2017). Negative bystander behavior in bullying dynamics: Assessing the impact of social capital deprivation and anti-social capital. *Child Psychiatry and Human Development*, 48(1), 120–135. <https://doi.org/10.1007/s10578-016-0657-0>
- Flaspohler, P. D., Elfstrom, J. L., Vanderzee, K. L., Sink, H. E., & Birchmeier, Z. (2009). Stand by me: The effects of peer and teacher support in mitigating the impact of bullying on quality of life. *Psychology in the Schools*, 46(7), 636–649. <https://doi.org/10.1002/pits.20404>
- Forsberg, C., Wood, L., Smith, J., Varjas, K., Meyers, J., Jungert, T., & Thornberg, R. (2018). Students' views of factors affecting their bystander behaviors in response to school bullying: A cross-collaborative conceptual qualitative analysis. *Research Papers in Education*, 33(1), 127–142. <https://doi.org/10.1080/02671522.2016.1271001>
- Frey, K. S., Newman, J. B., & Onyewuenyi, A. C. (2014). Aggressive forms and functions on school playgrounds: Profile variations in interaction styles, bystander actions, and victimization. *The Journal of Early Adolescence*, 34(3), 285–310. <https://doi.org/10.1177/0272431613496638>
- Friends. (2019). Friendsrapporten 2019 [The 2019 Friends report]. <https://friends.se/friendsrapporten2019/>
- Gini, G., Pozzoli, T., Angelini, F., Thornberg, R., & Demaray, M. K. (2022). Longitudinal associations of social-cognitive and moral correlates with defending in bullying. *Journal of School Psychology*, 91, 146–159. <https://doi.org/10.1016/j.jsp.2022.01.005>
- Gini, G., Pozzoli, T., Jenkins, L., & Demaray, M. (2021). Participant roles in bullying. In P. K. Smith, J. O'Higgins Norman (Eds.) *The Wiley Blackwell handbook of bullying: A comprehensive and international review of research and intervention*, (pp. 76–95). Wiley-Blackwell.
- Grimm, K. J., Helm, J., Rodgers, D., & O'Rourke, H. (2021). Analyzing cross-lag effects: A comparison of different cross-lag modeling approaches. *New Directions for Child and Adolescent Development*, 2021(175), 11–33. <https://doi.org/10.1002/cad.20401>
- Guo, Z., Yang, Y., Li, W., Yao, X., & Kou, Y. (2023). Longitudinal relations among honesty-humility, moral disengagement, and unethical behavior in adolescents: A between-and within-person analysis. *Journal of Research in Personality*, 106, 104401. <https://doi.org/10.1016/j.jrp.2023.104401>
- Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. P. P. (2015). A critique of the cross-lagged panel model. *Psychological Methods*, 20(1), 102–116. <https://doi.org/10.1037/a0038889>
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41(4), 441–455. <https://doi.org/10.1017/s0021963099005545>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huitsing, G., Snijders, T. A. B., Van Duijn, M. A. J., & Veenstra, R. (2014). Victims, bullies, and their defenders: A longitudinal study of the coevolution of positive and negative networks. *Development and Psychopathology*, 26(3), 645–659. <https://doi.org/10.1017/s0954579414000297>
- Hunter, S. C., Boyle, J. M. E., & Warden, D. (2007). Perceptions and correlates of peer-victimization and bullying. *British Journal of Educational Psychology*, 77(4), 797–810. Portico <https://doi.org/10.1348/000709906x171046>

- Kärnä, A., Voeten, M., Little, T. D., Poskiparta, E., Kaljonen, A., & Salmivalli, C. (2011). A large-scale evaluation of the KiVa antibullying program: Grades 4–6. *Child Development, 82*(1), 311–330. <https://doi.org/10.1111/j.1467-8624.2010.01557.x>
- Lambe, L. J., & Craig, W. M. (2020). Peer defending as a multidimensional behavior: Development and validation of the Defending Behaviors Scale. *Journal of School Psychology, 78*, 38–53. <https://doi.org/10.1016/j.jsp.2019.12.001>
- Lambe, L. J., Cioppa, V. D., Hong, I. K., & Craig, W. M. (2019). Standing up to bullying: A social ecological review of peer defending in offline and online contexts. *Aggression and Violent Behavior, 45*, 51–74. <https://doi.org/10.1016/j.avb.2018.05.007>
- Laniga-Wijnen, L., van den Berg, Y. H. M., Garandeau, C. F., Mulder, S., & de Castro, B. O. (2022). Does being defended relate to decreases in victimization and improved psychosocial adjustment among victims? *Journal of Educational Psychology, 115*, 363. <https://doi.org/10.1037/edu0000712>
- Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* Appleton Century Crofts.
- Levy, M., & Gumpel, T. P. (2018). The interplay between bystanders' intervention styles: An examination of the “bullying circle” approach. *Journal of School Violence, 17*(3), 339–353. <https://doi.org/10.1080/15388220.2017.1368396>
- Lüdtke, O., & Robitzsch, A. (2021). A critique of the random intercept cross-lagged panel model [Preprint]. PsyArXiv. <https://doi.org/10.31234/osf.io/6f85c>
- Lynn Hawkins, D., Pepler, D. J., & Craig, W. M. (2001). Naturalistic observations of peer interventions in bullying. *Social Development, 10*(4), 512–527. <https://doi.org/10.1111/1467-9507.00178>
- Ma, T. L., & Chen, W. T. (2019). The benefits of being defended: Perceived bystander participant roles and victims' emotional and psychosocial adjustment. *Journal of School Violence, 18*(1), 77–91. <https://doi.org/10.1080/15388220.2017.1387132>
- Ma, T. L., Meter, D. J., Chen, W. T., & Lee, Y. (2019). Defending behavior of peer victimization in school and cyber context during childhood and adolescence: A meta-analytic review of individual and peer-relational characteristics. *Psychological Bulletin, 145*(9), 891–928. <https://doi.org/10.1037/bul0000205>
- Nickerson, A. B., Aloe, A. M., Livingston, J. A., & Feeley, T. H. (2014). Measurement of the bystander intervention model for bullying and sexual harassment. *Journal of Adolescence, 37*(4), 391–400. <https://doi.org/10.1016/j.adolescence.2014.03.003>
- Nishina, A., & Bellmore, A. (2010). When might peer aggression, victimization, and conflict have its largest impact? Microcontextual considerations. *The Journal of Early Adolescence, 30*(1), 5–26. <https://doi.org/10.1177/0272431609350928>
- Nocentini, A., Menesini, E., & Salmivalli, C. (2013). Level and change of bullying behavior during high school: A multilevel growth curve analysis. *Journal of Adolescence, 36*, 495–505. <https://doi.org/10.1016/j.adolescence.2013.02.004>
- Noret, N., Hunter, S. C., & Rasmussen, S. (2018). The relationship between peer victimization, cognitive appraisals, and adjustment: A systematic review. *Journal of School Violence, 17*(4), 451–471. <https://doi.org/10.1080/15388220.2017.1423492>
- Orth, U., Clark, D. A., Donnellan, M. B., & Robins, R. W. (2021). Testing prospective effects in longitudinal research: Comparing seven competing cross-lagged models. *Journal of Personality and Social Psychology, 120*(4), 1013–1034. <https://doi.org/10.1037/pspp0000358>
- van der Ploeg, R., Kretschmer, T., Salmivalli, C., & Veenstra, R. (2017). Defending victims: What does it take to intervene in bullying and how is it rewarded by peers? *Journal of School Psychology, 65*, 1–10. <https://doi.org/10.1016/j.jsp.2017.06.002>
- Pouwels, J. L., Lansu, T. A. M., & Cillessen, A. H. N. (2016). Participant roles of bullying in adolescence: Status characteristics, social behavior, and assignment criteria. *Aggressive Behavior, 42*(3), 239–253. <https://doi.org/10.1002/ab.21614>
- Pouwels, J. L., Lansu, T. A. M., & Cillessen, A. H. N. (2017). Adolescents' explicit and implicit evaluations of hypothetical and actual peers with different bullying participant roles. *Journal of Experimental Child Psychology, 159*, 219–241. <https://doi.org/10.1016/j.jecp.2017.02.008>
- Pouwels, J. L., Lansu, T. A. M., & Cillessen, A. H. N. (2018). A developmental perspective on popularity and the group process of bullying. *Aggression and Violent Behavior, 43*, 64–70. <https://doi.org/10.1016/j.avb.2018.10.003>
- Pozzoli, T., & Gini, G. (2010). Active defending and passive bystanding behavior in bullying: The role of personal characteristics and perceived peer pressure. *Journal of Abnormal Child Psychology, 38*, 815–827. <https://doi.org/10.1007/s10802-010-9399-9>
- Pozzoli, T., & Gini, G. (2013). Why do bystanders of bullying help or not? A multidimensional model. *The Journal of Early Adolescence, 33*(3), 315–340. <https://doi.org/10.1177/0272431612440172>
- Pozzoli, T., & Gini, G. (2021). Longitudinal relations between students' social status and their roles in bullying: The mediating role of self-perceived social status. *Journal of School Violence, 20*(1), 76–88. <https://doi.org/10.1080/15388220.2020.1850462>

- Pronk, J., Goossens, F. A., Olthof, T., De Mey, L., & Willems, A. M. (2013). Children's intervention strategies in situations of victimization by bullying: Social cognitions of outsiders versus defenders. *Journal of School Psychology, 51*(6), 669–682. <https://doi.org/10.1016/j.jsp.2013.09.002>
- R Core Team. (2023). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). *Journal of Statistical Software, 48*, 1–36. <https://doi.org/10.18637/jss.v048.i02>
- Saarento, S., Boulton, A. J., & Salmivalli, C. (2015). Reducing bullying and victimization: Student- and classroom-level mechanisms of change. *Journal of Abnormal Child Psychology, 43*(1), 61–76. <https://doi.org/10.1007/s10802-013-9841-x>
- Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2011). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development, 35*(2), 144–151. <https://doi.org/10.1177/0165025410378068>
- Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior, 22*, 1–15. [https://doi.org/10.1002/\(SICI\)1098-2337\(1996\)22:1%3C1::AID-AB1%3E3.0.CO;2-T](https://doi.org/10.1002/(SICI)1098-2337(1996)22:1%3C1::AID-AB1%3E3.0.CO;2-T)
- Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *International Journal of Behavioral Development, 28*(3), 246–258. <https://doi.org/10.1080/01650250344000488>
- Salmivalli, C., Voeten, M., & Poskiparta, E. (2011). Bystanders matter: Associations between reinforcing, defending, and the frequency of bullying behavior in classrooms. *Journal of Clinical Child and Adolescent Psychology, 40*(5), 668–676. <https://doi.org/10.1080/15374416.2011.597090>
- Saracho, O. N. (Ed.). (2016). *Contemporary perspectives on research on bullying and victimization in early childhood education*. Information Age Publishing.
- Selig, J. P., Little, T. D. (2012). Autoregressive and cross-lagged panel analysis for longitudinal data. In Laursen, B., Little, T. D., & Card, N. A. (Eds.), *Handbook of Developmental Research Methods* (pp. 265–278). The Guilford Press.
- Sijtsema, J. J., Lindenberg, S. M., Ojanen, T. J., & Salmivalli, C. (2020). Direct aggression and the balance between status and affection goals in adolescence. *Journal of Youth and Adolescence, 49*(7), 1481–1491. <https://doi.org/10.1007/s10964-019-01166-0>
- Sijtsema, J. J., Veenstra, R., Lindenberg, S., & Salmivalli, C. (2009). Empirical test of bullies' status goals: Assessing direct goals, aggression, and prestige. *Aggressive Behavior, 35*, 57–67. <https://doi.org/10.1002/ab.20282>
- Sjögren, B., Thornberg, R., Wänström, L., & Gini, G. (2020). Associations between individual and collective efficacy beliefs and students' bystander behavior. *Psychology in the Schools, 57*(11), 1710–1723. <https://doi.org/10.1002/pits.22412>
- Sjögren, B., Thornberg, R., Wänström, L., & Gini, G. (2021a). Bystander behaviour in peer victimization: Moral disengagement, defender self-efficacy and student-teacher relationship quality. *Research Papers in Education, 36*(5), 588–610. <https://doi.org/10.1080/02671522.2020.1723679>
- Sjögren, B., Thornberg, R., Wänström, L., & Gini, G. (2021b). Associations between students' bystander behavior and individual and classroom collective moral disengagement. *Educational Psychology, 41*(3), 264–281. <https://doi.org/10.1080/01443410.2020.1828832>
- Sorjonen, K., Nilsson, G., Melin, B., & Ingre, M. (2023). Uncertain inference in random intercept cross-lagged panel models: An example involving need for cognition and anxiety and depression symptoms. *Personality and Individual Differences, 201*:Article 111925. <https://doi.org/10.1016/j.paid.2022.111925>
- Strindberg, J., Horton, P., & Thornberg, R. (2020). The fear of being singled out: Pupils' perspectives on victimisation and bystandering in bullying situations. *British Journal of Sociology of Education, 41*(7), 942–957. <https://doi.org/10.1080/01425692.2020.1789846>
- Sutton, J., & Smith, P. K. (1999). Bullying as a group process: Adaptation of the participant role approach. *Aggressive Behavior, 25*, 97–111. [https://doi.org/10.1002/\(SICI\)1098-2337\(1999\)25:2%3C97::AID-AB3%3E3.0.CO;2-7](https://doi.org/10.1002/(SICI)1098-2337(1999)25:2%3C97::AID-AB3%3E3.0.CO;2-7)
- Swedish National Agency for Education. (2022). Sök statistik [Search statistics]. <https://www.skolverket.se/skolutveckling/statistik/sok-statistik-om-forskola-skola-och-vuxenutbildning?sok=Soka>
- Thornberg, R., & Jungert, T. (2013). Bystander behavior in bullying situations: Basic moral sensitivity, moral disengagement and defender self-efficacy. *Journal of Adolescence, 36*, 475–483. <https://doi.org/10.1016/j.adolescence.2013.02.003>
- Thornberg, R., Landgren, L., & Wiman, E. (2018). It depends!: A qualitative study on how adolescent students explain bystander intervention and non-intervention in bullying situations. *School Psychology International, 39*(4), 400–415. <https://doi.org/10.1177/0143034318779225>
- Thornberg, R., Pozzoli, T., Gini, G., & Hong, J. S. (2017). Bullying and repeated conventional transgressions in Swedish schools: How do gender and bullying roles affect students' conceptions? *Psychology in the Schools, 54*(9), 1189–1201. <https://doi.org/10.1002/pits.22054>

- Thornberg, R., & Wänström, L. (2018). Bullying and its association with altruism toward victims, blaming the victims, and classroom prevalence of bystander behaviors: A multilevel analysis. *Social Psychology of Education, 21*, 1133–1151. <https://doi.org/10.1007/s11218-018-9457-7>
- Thornberg, R., Wänström, L., Hong, J. S., & Espelage, D. L. (2017). Classroom relationship qualities and social-cognitive correlates of defending and passive bystanding in school bullying in Sweden: A multilevel analysis. *Journal of School Psychology, 63*, 49–62. <https://doi.org/10.1016/j.jsp.2017.03.002>
- Turner, H. A., Finkelhor, D., Shattuck, A., Hamby, S., & Mitchell, K. (2015). Beyond bullying: Aggravating elements of peer victimization episodes. *School Psychology Quarterly, 30*(3), 366–384. <https://doi.org/10.1037/spq0000058>
- Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*(1), 4–70. <https://doi.org/10.1177/109442810031002>
- Waasdorp, T. E., & Bradshaw, C. P. (2018). Examining variation in adolescent bystanders' responses to bullying. *School Psychology Review, 47*(1), 18–33. <https://doi.org/10.17105/SPR-2017-0081.V47-1>
- Wentzel, K. R., & Muenks, K. (2016). Peer influence on students' motivation, academic achievement, and social behavior. In K. R. Wentzel & G. B. Ramani, (Eds.), *Handbook of social influences in school contexts* (pp. 13–30). Routledge.
- Zhang, Y., Tang, Y., Li, P., & Jia, X. (2022). Popularity matters: Moderating role of popularity on the relation between perceived peer pressure for intervention and Chinese adolescents' bystander behaviours in bullying. *European Journal of Developmental Psychology, 19*(4), 511–527. <https://doi.org/10.1080/17405629.2021.1926231>

## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

**How to cite this article:** Sjögren, B., Thornberg, R., & Pozzoli, T. (2024). Reciprocal longitudinal associations of defender self-efficacy with defending and passive bystanding in peer victimization. *Psychology in the Schools, 1*–23. <https://doi.org/10.1002/pits.23134>