Peer defending as a multidimensional behavior: Development and validation of the Defending Behaviors Scale[☆]

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ABSTRACT

Defending represents any prosocial behavior taken to assist an individual being victimized. Like other forms of prosocial behavior, defending may be best conceptualized as a multidimensional set of behaviors, including both direct and indirect forms of defending. The objective of the current research was to design and validate the Defending Behaviors Scale (DBS), a multidimensional self-report scale of defending behaviors. Data were collected from 572 early adolescents in Grades 6 to 8. Participants completed the DBS as well as established measures of bullying, victimization, empathy, aggression, social self-efficacy, social support, and prosocial behavior. Data were analyzed using an exploratory structural equation modeling framework. A four-factor model provided the best fit to the data. Direct defending included aggressive and solution-focused behaviors, whereas indirect defending included comforting and reporting to authority. Girls were more likely to defend others by offering comfort and reporting to authority, whereas aggressive defending was more common among boys. Each subscale demonstrated good internal consistency (α's 0.80–0.92) and was uniquely associated with empathy, aggression, and other types of prosocial behavior. The DBS is a new, psychometrically-valid measure that will aid in the assessment of heterogenous defending behaviors.

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1. Introduction

It is estimated that youth witness peer victimization (as bystanders) once every 7 min (Craig & Pepler, 1998). Recent Canadian estimates indicate that over the past month, over 50% of Grade 7–8 students witnessed bullying at least once in their school hallway or on school grounds (Lambe, Hudson, Craig, & Pepler, 2017). Bystanders are part of the complex social dynamics of bullying and can alter the situation in both negative and positive ways. While some bystanders assist with the bullying or remain passive, others intervene to support their victimized peers. Bystanders who intervene in bullying are known as "defenders," and defending includes any prosocial behavior intended to assist the individual being victimized (Salmivalli, 2010). Observational research indicates that peer defending is typically effective in stopping bullying (Hawkins, Pepler, & Craig, 2001). Consequently, many intervention programs aim to reduce peer victimization by increasing peer defending (Polanin, Espelage, & Pigott, 2012). While the benefits of peer defending have been established (e.g., better adjustment for victimized youth; Sainio, Veenstra, Huitsing, & Salmivalli, 2010), little is

known about the types of behaviors youth enact when they defend their peers. Previous research has almost exclusively focused on examining defending as an overarching category, rather than a multidimensional behavior. Using prosocial theories as a guide, the current study aimed to fill this gap by developing a theoretically informed and psychometrically sound instrument to assess peer defending behaviors.

1.1. Defending in the peer group

Defending was first assessed as part of the group dynamics of bullying (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Since then, defending has received a marked increase in research attention (for a review see Lambe, Della Cioppa, Hong, & Craig, 2019). The majority of the bullying literature considers defending a homogenous role – youth are categorized as defenders or are assigned to another participant role (e.g., bully, victim, outsider). For example, the *Participant Roles Scale* (Salmivalli et al., 1996) uses peer nominations to assign youth to a particular role based on their highest score. This approach has provided insight into the complex group dynamics involved in bullying, as well as an understanding of the personal characteristics that are common for youth cast in the defender role. For example, youth who are nominated as defenders tend to be girls, are popular and well-liked by their peers, are highly empathic both in terms of understanding people's emotions (cognitive empathy) and vicariously experiencing other people's emotions (affective empathy (Blair, 2005)), and have a sense of moral duty (Lambe et al., 2019). Peer nomination procedures, such as those typically used to categorize defenders, are subject to less bias (e.g., social desirability) than self-report measures. This is beneficial as youth may over-report desirable behaviors (e.g., defending) and under-report undesirable behaviors (e.g., bullying). Categorical role approaches (e.g., *Participant Roles Scale*) have provided a strong foundation for our understanding of this complex behavior; however, such approaches have measurement limitations.

The defender scale originally put forth by Salmivalli et al. (1996) consisted of 20 items. A large number of items is needed to adequately capture the diverse ways in which youth can defend, including telling an adult, comforting the person being victimized, attacking the aggressive person, and telling the others to stop bullying (Salmivalli et al., 1996). Yet, subsequent modifications of this scale (e.g., Salmivalli, Lappalainen, & Lagerspetz, 1998) have reduced this diversity in item content with little justification, with some defending scales consisting of only three of the original 20 items (e.g., Pozzoli & Gini, 2010). To our knowledge, factor analytic methods have not yet been used to determine what items best represent the underlying construct of defending, and whether or not these items represent a single underlying factor. While brief scales may be useful for differentiating between bullying roles (e.g., bully, victim, defender, reinforcer, outsider), they lack the specificity needed to fully capture defending behaviors. A comprehensive defending scale is needed to best assess the full underlying construct.

Most research that measures defending using the *Participant Roles Scale* (Salmivalli et al., 1996) assigns youth to a categorical role, which may further limit our understanding of defending. Approximately 13% of youth are not assigned to a bullying participant role because they have equivalent scores on multiple roles (Pouwels, Lansu, & Cillessen, 2016; Salmivalli et al., 1996). In other words, bullying participant roles are dynamic – youth who defend in one situation may be more likely to be victimized in another situation. Depending on the peer context, defenders may be more likely to be victimized, or to defend aggressors rather than victimized youth (Huitsing, Snijders, Van Duijn, & Veenstra, 2014). The categorical role approach can produce different proportions of defenders depending on the method used to assign participant roles (Goossens, Olthof, & Dekker, 2006; Sutton & Smith, 1999). Using participants' highest overall role score, 44% of children are assigned to the defender role; in contrast, using standardized scoring (i.e., highest scale and higher than the class mean), 27% of children are assigned to the defender role (Sutton & Smith, 1999). This discrepancy suggests that many youth who enact defending behaviors may be assigned to other roles using traditional measurement techniques. Thus, the traditional measurement of defending may not be accurately reflecting all youth who defend their peers. A continuous measure of defending that does not categorize youth may best capture all youth who engage in defending behaviors.

1.2. Defending as a multidimensional behavior

Current research that specifically focuses on defending is exploring the heterogeneity of this construct. In a qualitative study examining bystander responses to teen dating violence and bullying, youth reported 16 broad categories of possible responses; however, the authors organized these behaviors along a direct-indirect continuum of behavior (Casey, Storer, & Herrenkohl, 2018). Befriending or checking-in with the person being victimized were among the most indirect defending behaviors, whereas removing the victimized person or fighting the perpetrator were among the most direct defending behaviors (Casey et al., 2018). While there are not yet agreed upon terms to define defending behaviors, we use the term "direct defending" to refer to behaviors that involve the defender directly confronting the aggressive situation (e.g., asking the aggressor to stop, pushing the aggressor away), whereas "indirect defending" refers to defending that *does not* involve the defender confronting the aggressive situation themselves (e.g., comforting the person who was being victimized, seeking help from a parent). Similar definitions have been used in other qualitative research; direct defending behaviors are more likely when youth perceive themselves to be more socially powerful than the aggressor, whereas indirect defending behaviors are more likely when youth report low self-efficacy (Forsberg et al., 2018). In sum, the qualitative research indicates that youth use a variety of defending behaviors to intervene against bullying.

These distinctions in defending behaviors are further supported by quantitative work. Reijntjes et al. (2016) argue that there are both theoretical and empirical grounds to distinguish between types of defending behaviors – victim-oriented defending (e.g., consoling the person being victimized) and bully-oriented defending (e.g., actively intervening against the aggressor). Victim-oriented defending represents indirect defending, whereas bully-oriented defending represents direct defending. Although limited by single-item measurement, their research demonstrated significant differences between victim-oriented, bully-oriented, overall

defenders (high on both behaviors), and non-defenders. For example, overall and bully-oriented defenders scored highest on popularity, whereas overall and victim-oriented defenders scored highest on peer acceptance (Reijntjes et al., 2016). Subsequent research using a similar, single-item scale found that indirect defending is associated with altruistic concern for victimized youth, whereas direct defending is associated strategic goals and personal gain (Pronk, Olthof, Goossens, & Krabbenlam, 2019). Thus, direct and indirect defending behaviors appear to represent unique underlying constructs.

In addition to direct and indirect forms of defending, other researchers argue that aggressive defending represents another distinct form of defending (Frey, Pearson, & Cohen, 2014; Meter, Ma, & Ehrenreich, 2019). While Salmivalli et al.'s (1996) original defender scale contained both prosocial and aggressive forms of defending, subsequent modifications to this scale (e.g., Pozzoli & Gini, 2010; Salmivalli et al., 1998) have omitted these items with no justification. Observational research indicates that aggression is commonly employed by children as a means of defending their peers (Hawkins et al., 2001). In a study of defending among college students, Meter et al. (2019) demonstrated that relationally and verbally aggressive defending behaviors demonstrated unique associations with direct and indirect defending, as well as with moral disengagement. Together, these findings suggest that defending includes both prosocial and aggressive behaviors.

Examining defending as a heterogeneous behavior has provided a greater understanding of how youth defend their peers, however, previous research (Meter et al., 2019; Pronk et al., 2019; Reijntjes et al., 2016) is limited by its use of single-item measures (i.e., one item to measure each behavior). Using a single item to asses direct and indirect defending may be providing us with a biased conceptualization, as there are theoretically many different ways youth can defend using both direct and indirect behaviors. For example, boys are more likely to use physical aggression as their primary defending behavior, whereas girls are more likely to use verbal assertion (Hawkins et al., 2001). While these defending behaviors are arguably both direct in nature, they may represent different underlying constructs. It is unknown whether defending behaviors are best differentiated by direct and indirect factors, or whether more factors are needed to understand the multidimensional nature of defending. While single-item measures can successfully measure unambiguous constructs, they typically lack breadth to measure complex psychological constructs like peer defending. Scale development should be guided by theory and include enough breadth in content to successfully represent the construct (Carpenter, 2018). A theoretical approach to understanding the distinctions between direct and indirect forms of defending may help overcome these limitations to more fully understand the heterogeneity within defending behaviors.

1.3. Defending subtypes: using prosocial theory as a guide

Previous research indicates that direct and indirect defending behaviors are likely distinct (Meter et al., 2019; Pronk et al., 2019; Reijntjes et al., 2016). However, there is not yet a strong theoretical rationale behind this distinction. Defending is a form of prosocial behavior that occurs specifically in response to witnessing peer victimization; thus, we propose that prosocial theory can be applied to understand differences in defending behaviors. Contemporary theories of prosocial behavior argue that helping is a broad category that subsumes many related, yet unique, types of behavior (Eisenberg & Spinrad, 2014). In other words, prosocial behavior is multidimensional.

While types of prosocial behaviors are related, they can be distinguished through unique antecedents, correlates, and outcomes (Eisenberg & Spinrad, 2014). Prosocial theory posits that types of helping behaviors can be differentiated by many factors, including personal resources (Padilla-Walker & Fraser, 2014), physiological and affective arousal (Hoffman, 1989; Miller, 2018), and socialization experiences (Eisenberg & Spinrad, 2014). Furthermore, prosociality is defined by the *intent* to help another, allowing for the inclusion of aggressive defending. Indeed, punishing transgressors is a common way in which bystanders intend to help victimized individuals (O'Gorman, Wilson, & Miller, 2005; Vitaglione & Barnett, 2003). Altruistic/third-party punishment can be conceptualized as a moral, helping behavior that serves to maintain social norms (Dimitroff et al., 2019). We propose that defending subtypes can be distinguished in similar ways as other forms of prosocial behavior. In other words, individual differences in personal resources (e.g., social self-efficacy), affect (e.g., reactive aggression, empathy), and socialization experiences (e.g., social support) may distinguish between those who are more likely to use direct and indirect types of defending.

1.4. Current study: testing a multidimensional model of defending

Taken together, defending may be best conceptualized as a multidimensional behavior, consisting of both direct and indirect types of defending. Conceptualizing and measuring defending as a multidimensional behavior has important implications for adults working with young people, such as school administrators. Bullying prevention and intervention programs often encourage peer defending without having a clear understanding of what defending behavior looks like or how different defending strategies may impact youth in different ways. We aimed to fill this gap by developing the *Defending Behaviors Scale* (DBS) and establishing psychometric evidence for the measure.

Our first research goal was to examine the underlying factor structure of the DBS. We hypothesized that a multifactor model with separate direct and indirect defending factors would best fit the data. Our second research goal was to establish the psychometric properties of each of these defending subtypes. Specifically, we aimed to describe the nature of each factor (e.g., prevalence and gender differences), examine reliability, and examine validity by testing relationships with existing constructs (i.e., bullying, victimization, empathy, aggression, social self-efficacy, social support, and prosocial behavior). We hypothesized that each factor would be both reliable and valid, as evidenced by high internal consistency reliability (>0.70), test-retest reliability (>0.70), and unique associations with established measures (convergent and discriminant validity; Carpenter, 2018; Morgado, Meireles, Neves, Amaral, & Ferreira, 2017). Specifically, we hypothesized that direct defending would be positively associated with social self-efficacy and reactive aggression (Pronk et al., 2019; Reijntjes et al., 2016), and would be more common among boys (Reijntjes et al., 2016). We

also hypothesized that indirect defending would be positively associated with empathy and social support (Lambe et al., 2019; van Noorden, Haselager, Cillessen, & Bukowski, 2014) and would be more common among girls (Reijntjes et al., 2016). Links with victimization and bullying (offline and online), and prosocial behavior were examined as exploratory research questions. Lastly, given the established gender differences in defending, we aimed to test measurement invariance across gender.

2. Method

2.1. Participants

A total of 572 participants in Grades 6–8 completed the DBS. Data collection occurred in two parts: a school sample ($n = 334$) and a community sample ($n = 238$). Using chi-square tests, these samples did not differ in terms of gender ($\chi^2 = 2.79$, $p = .25$) or grade ($\chi^2 = 1.98$, $p = .37$). The samples also did not differ in terms of age ($t = 1.49$, $p = .14$). Thus, sample characteristics are presented for the total sample. Overall, participants ranged in age from 11 to 14 years old, with an average age of 12.15 years ($SD = 0.95$). There was an approximately equal sample of participants from each grade, with 32.5% in Grade 6, 32.5% in Grade 7, and 35% in Grade 8. Participants identified as 49% male, 50% female, and 1% did not identify with the gender binary. All participants were recruited from a mainly Caucasian, midsize community in central Canada. The school and community samples were combined to examine the factor structure of the DBS.[1] The school sample completed additional questionnaire measures and was used to examine convergent, discriminant, and incremental validity.

2.2. Measures

2.2.1. Defending behaviors

Items for the DBS were drawn from the literature on defending and bullying participant roles (Barchia & Bussey, 2011; Coyne et al., 2017; Demaray, Summers, Jenkins, & Becker, 2016; Pozzoli & Gini, 2010; Reijntjes et al., 2016; Salmivalli et al., 1996; Sutton & Smith, 1999), resulting in an initial pool of 48 items. Items that were exact duplicates ($n = 2$) and items that described defending in specific situations ($n = 16$) were removed from this pool. The remaining 30 items were then reviewed by a panel of experts (i.e., professors and graduate students with expertise in bullying) for clarity, redundancy, and content validity. The item-generation process for the DBS aimed to include content that reflected *specific* defending behaviors. That is, item content reflected defending oriented towards both the victimized youth (e.g., "*I tried to cheer up the person who was being victimized*") and the perpetrator (e.g., "*I sent a message to the person doing the bullying asking them to stop*"), as well as items that had a prosocial valence (e.g., "*I told a teacher about the bullying*") and an aggressive valence (e.g., "*I took revenge on the person doing the bullying*"). Based on feedback from this panel, five items were dropped for redundancy, and five items were dropped due to vague content (e.g., "*sticks up for the victim*"). For example, in addition to reporting to a teacher, five items vaguely referenced telling an adult about the bullying. In order to reflect a variety of *specific* possible behaviors, these items were modified to "*reported the situation to the people in charge*" and "*I told a parent about the bullying*". Lastly, the feedback from the panel was used to improve item clarity and language appropriateness for youth populations. Overall, this resulted in a final item pool of 20 items.

2.2.2. Bullying and victimization

Bullying and victimization were assessed using a modified version of the Olweus Bullying Questionnaire (Solberg & Olweus, 2003), with 6 items assessing each behavior. The Olweus Bullying Questionnaire is reliable and valid in samples of youth (Hamburger, Basile, & Vivolo, 2011), with similar modifications used in previous research (Craig et al., 2009). Participants were provided with the following definition of bullying:

> "*The questions that follow are about bullying. We say a student is BEING BULLIED when another student or group of students say or do nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like or when he or she is deliberately left out of things. But it is NOT BULLYING when two students of about the same strength or power argue or fight. It is also not bullying when the teasing is done in a friendly and playful way.*"

Participants reported on the frequency with which they engaged in bullying others (e.g., "*I made fun of another student(s) because of their body weight*") and were victimized (e.g., "*Other students made fun of me because of my body weight*") in the past couple of months on a 5-point scale (0 = *I have not bullied others/been bullied in this way in the past couple of months*, 4 = *several times a week*). Both scales demonstrated good internal consistency: victimization $\alpha = 0.83$ and bullying $\alpha = 0.81$. In addition, separate 12-item measures of cyberbullying and cybervictimization were used (Shapka & Maghsoudi, 2017). Participants reported on the frequency with which they engaged in each behavior using a 0 (*has never happened*) to 4 (*happens every day*) scale. Responses were averaged to compute scale totals, with higher scores reflecting greater involvement in cyberbullying and cybervictimization. Each scale demonstrated excellent internal consistency (cyberbullying $\alpha = 0.93$, cybervictimization $\alpha = 0.90$).

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[1] Independent samples *t*-tests were used to compare data from the two samples. Bootstrapping was used with 5000 samples and bias-corrected 95% confidence intervals. Across DBS items, significant differences were found for item 1, 95%CI (-0.57, -0.03) and item 10, 95%CI (0.05, 0.45). The Cohen's *d* value for both items was 0.24, indicating a small difference between the two samples. No other items differed significantly across the two samples.

2.2.3. Empathy

The Interpersonal Reactivity Index (IRI; Davis, 1983) is a multidimensional self-report measure of empathy. The 7-item per-spective taking subscale (e.g., "*When I'm upset at someone, I usually try to "put myself in his shoes" for a while*") was used as an index of cognitive empathy, and the 7-item empathetic concern subscale (e.g., "*I often have tender, concerned feelings for people less fortunate than me*") was used as an index of affective empathy. Participants reported the extent to which each item describes them on a 5-point scale (0 = *doesn't describe me at all*, 4 = *describes me very well*) scale. Previous research demonstrates that the IRI is reliable and valid in early adolescents (Hawk et al., 2012). Items were averaged to compute a total score for each subscale. Both scales demonstrated acceptable internal consistency: empathetic concern α = 0.69, perspective taking α = 0.74.

2.2.4. Aggression

The Reactive-Proactive Questionnaire (RPQ; Raine et al., 2006) is a 23-item self-report questionnaire that assesses both reactive aggression (12 items; e.g., "*yelled at others when they have annoyed you*") and proactive aggression (11 items; e.g., "*hurt others to win a game*"). Participants reported the frequency with which they engage in each behavior using a 3-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*). Previous research demonstrates that the RPQ is reliable and valid in early adolescents (Burton, Florell, & Gore, 2013). Items were summed to create a total score for each subscale. Both scales demonstrated good internal consistency, proactive ag-gression α = 0.78 and reactive aggression α = 0.83.

2.2.5. Social support

Social support was assessed using the Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, Elliott, & Nolten, 2000). The CASSS consists of multiple, 12-item scales that assess perceived social support from various significant others; the close friend, parent, and teacher subscales were used in the current study. Participants reported the frequency with which their close friend, teacher(s), and parents(s) provide them with social support in a variety of ways (e.g., "*my parents listen to me when I need to talk*") using a 6-point scale (1 = *never*, 6 = *always*). The CASSS is reliable and valid in samples of early adolescents (Demaray & Malecki, 2003; Malecki et al., 2000). Items were averaged to compute a scale total for each subscale, with each subscale demon-strating excellent internal consistency (α's ≥ 0.95).

2.2.6. Social self-efficacy

The Adolescent Social Self-Efficacy Scale (S-EFF; Connolly, 1989) is a 25-item scale that assesses perceived effectiveness in a variety of social situations relevant to adolescents (e.g., "*work on a project with a student you don't know very well*"). Participants rated each item using a 7-point scale (1 = *impossible to do, 7 = extremely easy to do*). The S-EFF is reliable and valid in samples of early adolescents (Connolly, 1989; Puckett, Aikins, & Cillessen, 2008). Items were averaged to compute a total score (α = 0.89) and demonstrated excellent internal consistency.

2.2.7. Prosocial behavior

The Prosocial Tendencies Measure, Revised (PTM-R; Carlo, Hausmann, Christiansen, & Randall, 2003) is a 21-item scale that assesses six different types of prosocial behaviors: altruistic (e.g., "*I feel that if I help someone, they should help me in the future*", reversed), compliant (e.g., "*when people ask me to help them, I don't hesitate*"), emotional (e.g., "*I tend to help others especially when they are really emotional*"), dire (e.g., "*I tend to help people who are in a real crisis or need*"), public (e.g., "*I can help others best when people are watching me*") and anonymous (e.g., "*most of the time, I help others when they do not know who helped them*"). The PTM-R is reliable and valid in samples of early and middle adolescents (Carlo et al., 2003; Carlo, Knight, McGinley, Zamboanga, & Hernandez Jarvis, 2010). Participants reported the extent to which each item describes them using a 5-point scale (1 = *does not describe me*, 5 = *describes me greatly*). Items were averaged to compute a total score for each subscale and demonstrated acceptable internal consistency (α's 0.72–0.89).

2.3. Procedure

Data collection occurred in two parts. After obtaining approval from the school board and school principals, students in Grades 6–8 from four public schools were invited to participate in the research study (the school sample). Students were required to return parental consent forms in order to participate in the study. Overall, 70% of students (*n* = 334) returned signed consent forms with permission to participate in the study. 23% of students did not return a form, and 7% return a signed form and elected not to participate in the study. Eligible students completed the study questionnaires during one, 30- to 40-minute classroom period using a tablet. Follow-up data was collected from the school sample 8–10 weeks later. The remaining participants (*n* = 238) were recruited from a local recruitment database and completed the DBS online from home as part of a larger study. Informed consent from parents and youth assent was required for participation in both groups.

2.4. Data analysis

The factor structure of the DBS was tested using several steps. First, we examined inter-item correlations, the Kaiser-Meyer-Olkin (KMO) test, Bartlett's test of sphericity, and descriptive statistics at the item-level to assess the factorability of the data. The KMO test is a measure of the proportion of shared variance among variables, with values closer to 1 indicating adequate sampling. Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix (i.e., variables are unrelated). Thus, a significant

Bartlett's test indicates that the data are related and are appropriate for factor analysis (Carpenter, 2018).

As per best practices in factor analysis (Fabrigar & Wegener, 2011), several methods were then used to determine the number of factors to extract from the data, including a scree plot, parallel analysis, and model fit from an Exploratory Factor Analysis (EFA). Once the number of factors was determined, exploratory structural equation modeling (ESEM)[2] (Asparouhov & Muthén, 2009; Marsh, Morin, Parker, & Kaur, 2014) was used in Mplus 8.0 to examine the factor structure of the DBS and to perform invariance testing. While we had a priori hypotheses about a multi-factor structure, we did not have specific hypotheses regarding where each item would load. Thus, factor loadings from the EFA were used to specify the ESEM. ESEM is a flexible methodology that enables researchers to combine the features of both exploratory factor analysis (EFA; allows cross-loadings) and confirmatory factor analysis (CFA; allows multigroup models) into a single model. Compared to CFA, ESEM is particularly beneficial when examining correlated factors as it does not constrain cross-loadings to be zero. Such cross-loadings often are justified due to theory, shared method variance, or similar item content (Marsh et al., 2014). Thus, CFA models can be highly restrictive, and the ESEM counterpart tends to yield superior fit indices when items are correlated. In ESEM, the model is specified by allowing the items to freely load onto their main factor. All other items are permitted to cross-load onto that factor using Target rotation, which targets the cross-loadings to be as close to zero as possible. By default, Target rotation is an oblique rotation (i.e., allows factors to be correlated). MLR estimator was used to account for non-normality in the data. A minimum factor loading cut-off of 0.34 has been suggested to indicate a salient loading (Worthington & Whittaker, 2006). In addition, the following guidelines have been suggested for interpreting the magnitude of factor loadings: >0.71 excellent, >0.63 very good, >0.55 good, >0.45 fair (Comrey & Lee, 2013). When interpreting model fit, the following guidelines have been suggested to indicate good fit: a root-mean-square error of approximation (RMSEA) < 0.08, <0.05, and <0.01 reflects adequate, good, and excellent fit, respectively (MacCallum, Browne, & Sugawara, 1996), a standardized root mean square residual (SRMR) < 0.08 (Hu & Bentler, 1999), and a comparative fit index (CFI) around 0.95 (Kline, 2011).

After establishing the factor structure of the data, we reported the descriptives and gender differences for each factor and assessed the psychometric properties for each factor. Internal consistency reliability was assessed using Cronbach's alpha, and test-retest reliability was assessed using bivariate correlations over the 8- to 10-week interval period. Convergent and discriminant validity were examined by investigating the associations between the DBS factors and existing measures (i.e., bullying, victimization, empathy, aggression, social self-efficacy, social support, and prosocial behavior) using bivariate correlations and hierarchical regressions in SPSS 24.0.

Lastly, measurement invariance was tested to determine if the same factor structure held across gender to verify the replicability of the final model (Putnick & Bornstein, 2016). Measurement invariance involves testing a series of nested models to examine stronger forms of invariance. The first level is configural invariance, which assesses whether the same items measure the construct across groups. The second level is metric (weak) invariance, which assesses whether the factor loadings are the same across groups. The third level is scalar (strong) invariance, which assesses whether the item intercepts are the same across groups. Recommendations by Putnick and Bornstein (2016) were followed for reporting measurement invariance.

3. Results

3.1. Inter-item correlations and descriptives

Item correlations and descriptive statistics for the initial 20-items are shown in Table 1. Item correlations ranged from 0.13 to 0.77, with the majority being moderate in range. In general, items reflecting aggressive defending (2, 6, 10, 14, 18) demonstrated the weakest correlations with the other defending items; however, these items were all moderately correlated with each other. At the item level, item 4 ("*I was friendly to the person being picked on*") was the most frequently endorsed defending behavior, whereas item 6 ("*I pushed or hit the person doing the bullying to make it stop*") was the least frequent. Both the KMO Index (0.93) and Bartlett's Test of Sphericity (χ^2(190, $N = 572$) = 5886.86, $p < .001$) indicated the data were appropriate for factor analysis.

3.2. Determining the number of factors

Examination of the scree plot and eigenvalues suggested either a 3- or 4-factor model, with the first three eigenvalues being greater than one (6.80, 2.04, 1.63) and the fourth being very close (0.97). The eigenvalues from the sample correlation matrix were then compared to those extracted from a parallel analysis. The parallel analysis indicated a 3-factor model, as the first three eigenvalues from the sample correlation matrix were larger than those from the parallel analysis. Next, the 3- and 4-factor models were compared using EFA for interpretability and parsimony (see Table 2 for fit initial fit indices). Taken together, a 4-factor model was determined to be the best fit to the data, with the following types of defending: reporting to authority, comforting, aggressive, and solution-focused.

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[2] As indicated by expert review, ESEM and EFA are very similar procedures and tend to report identical results, including in this research. While it can be seen as duplicative to conduct both procedures on the same data, we elected to present results from the ESEM because it has the added benefit of allowing invariance testing. Given the established gender difference in defending (Lambe et al., 2019), we felt examining invariance of the DBS across gender was an important psychometric property to report.

Table 1

DBS item correlations and descriptive statistics for the initial 20 items.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
1.	–																			
2.	0.18	–																		
3.	0.39	0.14	–																	
4.	0.53	0.25	0.47	–																
5.	0.57	0.21	0.50	0.56	–															
6.	0.20	0.57	0.19	0.28	0.31	–														
7.	0.35	0.13	0.74	0.48	0.55	0.24	–													
8.	0.47	0.14	0.37	0.52	0.51	0.20	0.41	–												
9.	0.33	0.24	0.30	0.33	0.45	0.29	0.37	0.64	–											
10.	0.15	0.45	0.15	0.23	0.28	0.50	0.13	0.23	0.24	–										
11.	0.43	0.23	0.43	0.43	0.51	0.26	0.44	0.57	0.46	0.32	–									
12.	0.54	0.20	0.40	0.64	0.55	0.23	0.44	0.64	0.41	0.30	0.55	–								
13.	0.38	0.19	0.41	0.39	0.44	0.31	0.41	0.45	0.43	0.22	0.52	0.48	–							
14.	0.27	0.41	0.17	0.27	0.34	0.36	0.23	0.27	0.25	0.53	0.46	0.42	0.43	–						
15.	0.49	0.15	0.56	0.54	0.59	0.22	0.60	0.50	0.39	0.19	0.55	0.60	0.49	0.37	–					
16.	0.59	0.23	0.44	0.69	0.59	0.28	0.46	0.55	0.35	0.32	0.55	0.77	0.46	0.35	0.63	–				
17.	0.42	0.20	0.40	0.42	0.55	0.23	0.48	0.43	0.44	0.24	0.53	0.57	0.49	0.42	0.52	0.56	–			
18.	0.19	0.47	0.13	0.25	0.28	0.47	0.13	0.24	0.30	0.62	0.36	0.31	0.25	0.47	0.20	0.31	0.29	–		
19.	0.38	0.21	0.58	0.42	0.45	0.28	0.53	0.37	0.33	0.14	0.49	0.42	0.42	0.22	0.53	0.51	0.43	0.21	–	
20.	0.52	0.20	0.46	0.63	0.53	0.22	0.43	0.53	0.39	0.21	0.46	0.66	0.36	0.31	0.61	0.68	0.47	0.29	0.42	–
Mean	1.57	0.37	0.88	2.10	1.57	0.32	0.95	0.92	0.53	0.47	0.85	1.48	0.69	0.66	1.27	1.70	0.94	0.42	0.86	1.69
SD	1.33	0.79	1.14	1.52	1.46	0.82	1.24	1.27	0.98	0.99	1.20	1.40	1.17	1.16	1.40	1.43	1.27	0.92	1.22	1.45

Note: Item correlations are all significant at $p < .01$. Item scores range from 0 to 4.

Table 2

Model fit comparisons for determining the number of factors to extract and invariance testing.

Model	χ^2 (df)	RMSEA [90% CI]	CFI	SRMR	Model Comparison	Satorra-Bentler χ^2 (df)	ΔRMSEA	ΔCFI	ΔSRMR
Initial fit									
1-Factor	772.58 (170)	0.092, [0.086–0.099]	0.769	0.092					
2-Factor	500.72 (151)	0.074, [0.067–0.082]	0.866	0.051	1- vs. 2-factor	−215.99 (19)	−0.018	0.097	−0.041
3-Factor	323.28 (133)	0.059, [0.050–0.067]	0.927	0.039	2- vs. 3-factor	−151.51 (18)	−0.015	0.061	−0.012
4-Factor	233.36 (116)	0.049, [0.040–0.058]	0.955	0.029	3- vs. 4-factor	−72.66 (17)	−0.01	0.028	−0.01
Invariance models									
Configural	273.23 (174)	0.053 [0.040–0.064]	0.957	0.031					
Metric	335.27 (230)	0.047 [0.036–0.058]	0.955	0.051	Configural vs. Metric	67.91 (56)	−0.006	−0.002	0.02
Scalar	354.16 (244)	0.047 [0.036–0.057]	0.953	0.051	Metric vs. Scalar	18.51 (14)	0.000	−0.002	0.000

Note: The Satorra-Bentler chi-square difference test was used in order to account for MLR estimation. Invariance models examine invariance across gender.

3.3. Model fit using ESEM

The 4-factor model with all 20 original DBS items was then examined using ESEM. Examination of the factor loadings indicated several problematic items from the original item pool (see Table 3). Item 5 did not have a salient (>0.34) factor loading and was removed. Unexpectedly, item 8 loaded onto solution-focused defending. This item was dropped as this was inconsistent with theory. A subsequent 18-item model was then conducted. This model fit the data well, χ^2 (87) = 132.52, $p < .001$, CFI = 0.98, TLI = 0.96, SRMR = 0.02, RMSEA = 0.04 (90% CI 0.02, 0.05). As shown in Table 3, all factor loadings were significant ($p < .001$) and salient (>0.34) (Worthington & Whittaker, 2006). Item 15, however, demonstrated significant cross-loadings. As the main factor loading was salient and loaded consistently with theory, we elected to maintain this item in the model.

Latent correlations for both samples are shown in Table 4. The latent correlations between the factors ranged from small to moderate, with the largest correlation being between comforting and solution-focused defending. In general, aggressive defending demonstrated the smallest correlations with the other types of defending. All factors demonstrated appropriate levels of internal consistency reliability.

3.4. Factor descriptive statistics

Of the early adolescents who had witnessed peer victimization during the past couple of months, 90% endorsed at least one defending behavior. Specifically, 7% only used one type of defending, 16% used two types, 29% used three types, and 38% used all four types. Comforting was the most common form of defending (88% at least once), followed by reporting to authority (73%), solution-focused (68%), and aggressive defending (49%).

As shown in Fig. 1, significant gender differences were observed. Females were significantly more likely than males to use both

Table 3
DBS factor loadings.

Item	Factor 1 – reporting to authority	Factor 2 – comforting	Factor 3 – aggressive	Factor 4 – solution-focused
3. I told a teacher about the bullying.	**0.84*****	−0.01	0.003	0.02
7. I reported the situation to the people in charge.	**0.86*****	−0.05	0.02	0.12
19. I told a parent about the bullying.	**0.52*****	0.13	0.09	0.07
15. I encouraged the person being victimized to report the bullying.	**0.34*****	0.26***	−0.06	0.27**
4. I was friendly to the person being picked on.	0.13*	**0.80*****	0.06	−0.20**
16. I tried to cheer up the person who was being victimized.	−0.05	**0.89*****	0.03	0.02
20. I tried to include someone if they were being purposefully left out.	0.07	**0.75*****	0.01	−0.02
1. I tried to change the subject to something more positive.	0.05	**0.61*****	−0.02	0.05
12. I comforted the person being victimized afterwards.	−0.10*	**0.78*****	−0.01	0.21***
10. I made fun of the person doing the bullying to try to stand up for the person being victimized.	−0.10	0.01	**0.76*****	0.04
18. I called the person doing the bullying names.	−0.12*	0.04	**0.72*****	0.08
2. I took revenge on the person doing the bullying.	0.03	0.02	**0.73*****	−0.18
6. I pushed or hit the person doing the bullying to make it stop.	0.14*	−0.02	**0.74*****	−0.15
14. I tried to turn my social group against the person doing the bullying.	−0.08	−0.05	**0.49*****	0.34***
17. I tried to sort out the problem by talking to the people involved in the bullying.	0.14	0.20*	0.05	**0.48*****
9. I sent a message to the person doing the bullying asking them to stop.	0.19	0.05	0.19*	**0.32*****
11. I asked a friend to help stop the bullying.	0.15	0.14	0.15*	**0.50*****
13. I told the people watching that bullying is stupid.	0.22*	0.03	0.11	**0.48*****
Deleted items and initial loadings				
5. I told the person doing the bullying to stop.	0.29***	0.34***	0.11*	0.19**
8. I sent the person being victimized a supportive message afterwards.	−0.08	0.42***	0.09	**0.63*****

Note: Standardized, target-rotated factor loadings of the final 18-item model, with deleted items and initial loadings shown in the bottom portion of the table.
Bold text indicates salient (>.34) factor loadings.

  *** $p < .001$.
  ** $p < .01$.
  * $p < .05$.

Table 4
Latent factor correlations.

	Factor 1 – reporting to authority	Factor 2 – comforting	Factor 3 – aggressive	Factor 4 – solution-focused
1.	–			
2.	0.58***	–		
3.	0.25***	0.44***	–	
4.	0.40**	0.61***	0.41***	–
Scale mean (SD)	0.86 (1.04)	1.46 (1.26)	0.41 (0.72)	0.66 (0.89)
Cronbach's alpha	0.86	0.92	0.82	0.80

  ** $p < .01$.
  *** $p < .001$.

types of indirect defending: comforting $t(510) = −2.42, p < .01$, and reporting to authority $t(504) = −2.09, p < .05$. In contrast, males used aggressive defending significantly more often than females $t(505) = 2.82, p < .01$. No gender differences were observed for solution-focused defending.

3.5. Factor reliability

Using the full sample, all factors demonstrated good levels of internal consistency reliability (α's 0.80–0.92; see Table 4). Internal consistency reliability was also above the acceptable range at both timepoints using the school sample (Table 5). Bivariate correlations were used to examine test-retest reliability among the DBS factors over an 8- to 10-week period using the school sample. Pearson correlations were as follows: comforting $r = 0.66$, aggressive $r = 0.41$, reporting to authority $r = 0.42$, solution-focused $r = 0.50$, all $p < .01$.
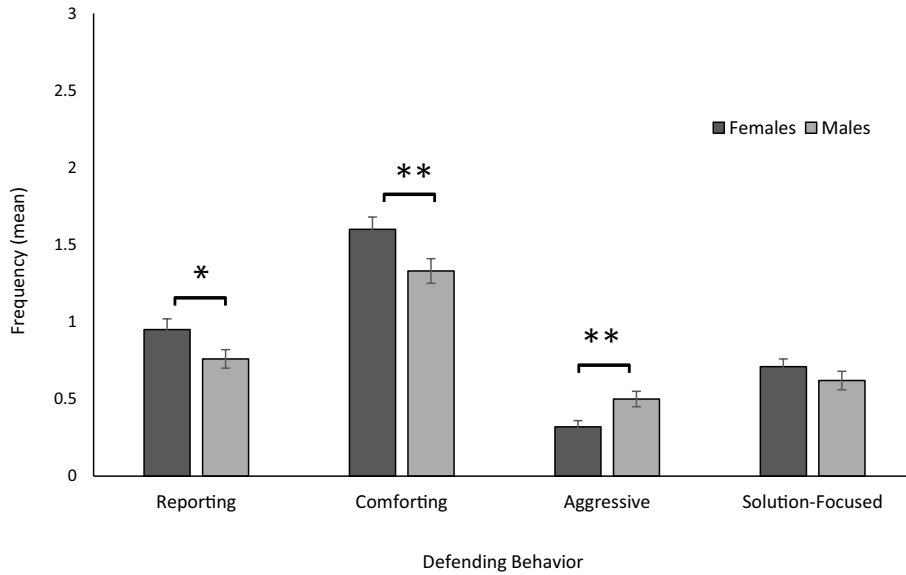
Fig. 1. The average frequency of each type of defending behavior among female and male adolescents.
Note. *$p < .05$, **$p < .01$.

Table 5
Bivariate correlations between DBS factors and existing measures in early adolescents.

	1.	2.	3.	4.
1. DBS reporting to authority	–			
2. DBS comforting	0.67** (0.68**)	–		
3. DBS aggressive	0.22** (0.29**)	0.40** (0.31**)	–	
4. DBS solution-focused	0.68** (0.69**)	0.67** (0.70**)	0.39** (0.44**)	–
5. Bullying	−0.05 (−0.02)	−0.09 (−0.02)	0.20** (0.36**)	0.03 (0.10)
6. Victimization	0.13 (0.29*)	0.16* (0.33**)	0.07 (0.36*)	0.13 (0.36**)
7. Cyberbullying	0.06 (−0.03)	0.03 (0.05)	0.17** (0.37**)	0.03 (0.02)
8. Cybervictimization	0.02 (0.11)	0.11 (0.22**)	0.22** (0.34**)	0.13 (0.22**)
9. Affective empathy	0.19**	0.23**	−0.04	0.10
10. Cognitive empathy	0.22**	0.35**	0.003	0.24**
11. Proactive aggression	0.01	−0.12	0.24**	0.01
12. Reactive aggression	−0.10	−0.10	0.16*	0.04
13. Social self-efficacy	−0.02	0.06	−0.04	−0.07
14. Social support friend	0.08	0.13	−0.06	0.12
15. Social support parent	0.05	0.01	−0.07	−0.02
16. Social support teacher	0.08	0.12	−0.18*	0.03
17. PTM public	0.07	−0.02	0.09	0.05
18. PTM emotional	0.36**	0.43**	0.05	0.36**
19. PTM altruism	−0.001	0.03	−0.17**	0.01
20. PTM dire	0.32**	0.38**	0.01	0.30**
21. PTM compliant	0.22*	0.30**	0.06	0.26**
22. PTM anonymous	0.22**	0.27**	0.14*	0.24**
T1				
Scale mean (SD)	0.96 (1.07)	1.69 (1.18)	0.49 (0.82)	0.83 (0.92)
Cronbach's alpha	0.87	0.90	0.85	0.81
T2				
Scale mean (SD)	0.92 (1.10)	1.74 (1.17)	0.43 (0.70)	0.76 (0.91)
Cronbach's alpha	0.82	0.89	0.78	0.81

Note: $N = 334$. The first 8 measures were collected at both timepoints, thus, T1 correlations are shown first followed by T2 correlations in brackets.
Items 9–16 were measured at T1 only, and items 17–22 were measured at T2 only.
** $p < .01$.
* $p < .05$.

3.6. Factor validity

Bivariate correlations between the DBS factors and existing measures of bullying, victimization, empathy, aggression, social self-efficacy, social support, and various forms of prosocial behavior are presented in Table 5. Consistent with previous research, all forms

Table 6
Hierarchical regressions with DBS factor predicting affective empathy, cognitive empathy, public prosociality, and reactive aggression.

Outcome	Affective empathy B [95% CI]	SE	Beta	Cognitive empathy B [95% CI]	SE	Beta	Public prosociality B [95% CI]	SE	Beta	Reactive aggression B [95% CI]	SE	Beta
Step 1.												
Age	−0.06 [−0.13, 0.01]	0.04	−0.08.	0.07 [−0.01, 0.15]	0.04	0.10	0.04 [−0.08, 0.16]	0.06	0.04	−0.15 [−0.73, 0.42]	0.29	−0.04
Gender	0.20* [0.07, 0.33]	0.07	0.16	−0.07 [−0.22, 0.08]	0.07	−0.05	−0.16 [−0.38, 0.05]	0.11	−0.10	−2.00* [−3.07, −0.92]	0.55	−0.26
Empathy	0.62* [0.52, 0.72]	0.05	0.66	0.74* [0.62, 0.86]	0.06	0.69						
R²	0.47			0.40			0.04			0.01		
Step 2.												
Age	−0.05 [−0.13, 0.02]	0.04	−0.08	0.06 [−0.01, 0.14]	0.04	0.09	0.07 [−0.05, 0.19]	0.06	0.07	−0.01 [−0.59, 0.57]	0.29	−0.003
Gender	0.19* [0.06, 0.33]	0.07	0.16	−0.07 [−0.22, 0.07]	0.07	−0.06	−0.11 [−0.33, 0.10]	0.11	−0.07	−1.75* [−2.83, −0.67]	0.55	−0.23
Empathy	0.63* [0.52, 0.73]	0.05	0.67	0.69* [0.57, 0.81]	0.06	0.64						
DBS reporting	0.08 [−0.01, 0.16]	0.04	0.14	**−0.09* [−0.19, −0.002]**	0.05	−0.16	**0.17* [0.01, 0.34]**	0.08	0.20	0.52 [−0.18, 1.23]	0.39	0.15
DBS comforting	0.01 [−0.08, 0.10]	0.05	0.02	**0.14* [0.04, 0.23]**	0.05	0.23	**−0.18* [−0.34, −0.03]**	0.08	−0.22	**−1.09* [−1.79, −0.38]**	0.39	−0.32
DBS aggressive	−0.02 [−0.11, 0.08]	0.05	−0.02	−0.07 [−0.17, 0.04]	0.05	−0.08	**0.25* [0.06, 0.43]**	0.09	0.18	**0.89* [0.08, 1.69]**	0.41	0.18
DBS solution-focused	**−0.12* [−0.23, −0.01]**	0.06	−0.16	**0.13* [0.01, 0.25]**	0.06	0.17	−0.02 [−0.22, 0.18]	0.10	−0.02	0.32 [−0.61, 1.25]	0.47	0.07
R²	0.49			0.46			0.10			0.07		
R² change	0.02			0.06			0.06			0.06		

Note: Significant DBS findings are shown in bold. *p < .05. For the regression models with either affective empathy or cognitive empathy as the outcome, the other type of empathy is controlled for. Without this control variable, comforting is a significant predictor of affective empathy (β = 0.31).

of defending were positively correlated with victimization ($rs = 0.29$–0.36, $p > .01$ at T2). These associations were stronger at T2 than T1, when the frequency of victimization (Time 1 $M = 2.95$, $SD = 4.44$, T2 $M = 3.36$, $SD = 4.56$), became more prevalent in the sample, $t(300) = -1.92$, $p = .05$. As hypothesized, aggressive defending (a form of direct defending) demonstrated the strongest correlations with other proactive ($r = 0.24$, $p < .01$) and reactive aggression ($r = 0.16$, $p < .06$). Unexpectedly, defending was generally not associated with social self-efficacy or social support. The one exception being that aggressive defending was negatively associated with teacher social support ($r = -0.18$, $p < .05$).

Empathy was differentially associated with defending subtypes. As hypothesized, both forms of indirect defending (comforting and reporting authority) were positively associated with both affective ($rs = 0.19$–0.23, $ps < 0.01$) and cognitive empathy ($rs = 0.22$–0.35, $ps < 0.01$). In contrast, solution-focused defending was associated with only cognitive empathy ($r = 0.24$, $p < .01$). Aggressive defending was not significantly associated with empathy.

Types of prosocial behavior were also differentially associated with defending subtypes. Reporting to authority, comforting, and solution-focused defending demonstrated positive associations with most types of prosocial behavior (rs 0.22–0.43, $ps < 0.05$). As expected, these correlations were strongest for emotionally evocative and dire situations. In contrast, aggressive defending was negatively associated with altruistic behaviors ($r = -0.17$, $p < .01$).

Given the strong correlations between defending subtypes, hierarchical regression was also used to examine the *unique* associations between defending subtypes and theoretically related constructs (Table 6). Affective empathy, cognitive empathy, public prosociality, and reactive aggression were examined as outcomes in separate models. Age and gender were entered in Step 1 of all models, with defending subtypes entered in Step 2. In addition, affective empathy was controlled for in the model for cognitive empathy (and vice versa).

As hypothesized, the addition of the DBS factors significantly contributed to the prediction of affective empathy, $F(7, 248) = 26.20$, $p < .001$, and cognitive empathy $F(7, 248) = 28.34$, $p < .001$. Comforting and solution-focused defending demonstrated unique associations with affective and cognitive empathy. Comforting was positively associated with both forms of empathy, whereas solution-focused defending was positively associated with cognitive empathy and negatively associated with affective empathy.

The addition of the DBS factors significantly contributed to the prediction of public prosociality, $F(6, 249) = 2.71$, $p < .01$. Reporting to authority and aggressive defending were positively associated with public prosociality. In contrast, comforting was negatively associated with public prosociality.

Lastly, the addition of the DBS factors significantly contributed to the prediction of reactive aggression, $F(6, 249) = 4.27$, $p < .001$. As expected, aggressive defending was positively associated with reactive aggression. In addition, comforting was negatively associated with reactive aggression.

3.7. Measurement invariance

Measurement invariance was examined between females and males. As shown in Table 2, adequate fit was found across invariance models. Using Satorra-Bentler scaled chi-square tests, the chi-square difference tests were non-significant ($ps > 0.13$) suggesting invariance. In addition, ΔRMSEA, ΔCFI, and ΔSRMR were examined across the configural, metric and scalar models. As shown in Table 2, all indices did not exceed the suggested criteria of 0.01 (Putnick & Bornstein, 2016), suggesting measurement invariance.

4. Discussion

Defending represents any prosocial action intended to help a victimized peer. While previous research supports a distinction between direct and indirect forms of defending, the current study was the first to rigorously examine the psychometric properties of a multi-item scale of defending – the Defending Behaviors Scale (DBS). While results supported a multidimensional model of defending behaviors, the factors were more distinct than direct and indirect behaviors. A four-factor model of defending provided the best fit to the data, including solution-focused, aggressive, comforting, and reporting to authority types of defending behaviors. Direct defending included both solution-focused defending and aggressive defending. While both behaviors involve directly confronting the bullying situation, solution-focused defending captures assertive, problem-focused behaviors and aggressive defending is characterized by reactive aggression. Indirect forms of defending included comforting and reporting to authority. Comforting represents an emotion-focused method of defending by offering support to the person being victimized, whereas reporting to authority reflects defending by seeking support from those in charge of the situation. Each factor demonstrated good internal consistency and explained unique variance within existing measures of empathy, aggression, and prosocial behavior. These results indicate that defending may be best conceptualized as a superordinate category that contains unique subtypes of behavior.

Consistent with previous research (Pronk et al., 2019; Reijntjes et al., 2016), we found differences between direct and indirect forms of defending behavior. Both forms of direct defending (solution-focused and aggressive) reflect behaviors that are active and likely require greater personal resources and skills (e.g., social status) relative to indirect defending. While both direct in nature, the method by with direct confrontation is achieved – either aggressively or assertively – distinguishes these defending behaviors. Solution-focused defending was positively associated with the ability to understand the emotional experiences of another person (cognitive empathy) and with a variety of prosocial behaviors. In contrast, aggressive defending was positively associated with proactive and reactive aggression, and was negatively associated with perceived teacher support and altruism. These unique associations highlight the multidimensional nature of direct defending behaviors.

In addition to direct defending behaviors, we also found support for two forms of indirect defending – comforting and reporting to authority. These behaviors represent unique ways that youth can defend *without* requiring them to come forward in front of their peer group. As expected, comforting was characterized by high affective empathy, and was more common among girls. While reporting to authority emerged as a unique factor, the correlates of this behavior were less straightforward. Nonetheless, it was a unique predictor of helping in public situations, suggesting that youth who defend using reporting may be especially likely to take personal responsibility for helping. Indeed, reporting to authority enables youth to defend without direct confrontation or becoming highly emotionally involved in the situation. This form of defending may allow one to behave in accordance with one's moral values independent of situational factors (e.g., perceived costs and resources available to directly intervene in the situation) and is an important future direction for research. Adults working with youth should emphasize that there are many different ways to defend and offer support to victimized peers, as defending does not always require direct confrontation.

Defending behaviors were also related to one's gender. Girls reported more frequent indirect defending behaviors, whereas boys reported more frequent aggressive defending. This gender difference may reflect the gendered ways in which boys and girls are socialized to help others. Masculine prosocial behavior may be more focused on strength, whereas feminine prosocial behavior may be more focused on kindness and tending to the needs of another (Eagly & Crowley, 1986; Nielson, Padilla-Walker, & Holmes, 2017). More research is needed to understand the risks and benefits of each type of defending behavior, particularly for boys. Aggressive defending is arguably the riskiest defending behavior. It is a form of direct intervention that can involve physically dangerous behaviors (e.g., pushing or hitting the aggressor). Reactive aggression serves to lengthen and increase the severity of conflicts (Frey et al., 2014), suggesting that aggressive defending may also escalate bullying dynamics. Such escalation may explain why defending is associated with psychosocial risks for boys (Lambe et al., 2017), as boys may be engaging in aggressive defending behavior more frequently than girls. Future longitudinal research should examine whether the outcomes of defending behaviors vary by gender so we can better understand how to enable girls and boys to defend in adaptive ways.

Furthermore, the existing literature on defending typically reports that girls are more likely to defend than boys (Lambe et al., 2019); however, this may be an artefact of the way in which defending is measured. Research on prosocial behavior finds the gender difference in prosocial behavior to be much less pronounced when item content is diverse and also include more masculine types of helping (Nielson et al., 2017). Similarly, scales that measure defending using only a small number of items may be overlooking the heterogeneity within defending, particularly for boys. The role of aggressive defending has been both inconsistently defined (e.g., revenge, altruistic punishment, third-party punishment, retaliation) and largely neglected in the bullying literature (Frey et al., 2014). Given that aggressive defending was the most distinct from the other defending behaviors, it can be argued that it may in fact represent a separate construct. Our results, however, indicate that aggressive defending is positively associated with other defending behaviors and build upon previous research (Frey et al., 2014; Hawkins et al., 2001; Meter et al., 2019) demonstrating that aggression is used as a form of defending behavior. Although the behavioral manifestation of this defending behavior is aggressive, the underlying intent is prosocial – to help a victimized peer. For boys especially, aggressive defending may represent a socially acceptable way of showing care and concern for those who are victimized. We argue that aggressive defending should be included in future studies examining peer defending in order to gain a more comprehensive picture of the ways in which youth defend their peers.

While individual differences may create a tendency to engage in one type of defending more often than another, it is likely that youth vary their defending behaviors depending on situational factors (Lambe et al., 2019). The majority of youth reported that they engaged in multiple types of defending behaviors, suggesting the decision to use aggression, assertion, offer comfort, or report to authority is a dynamic process. There are many possible situational factors that may influence whether or not a bystander chooses to intervene, as well as the defending behavior they choose to enact. Relationships with others present represent one such situational factor. Youth are more likely to defend their family members and friends than strangers (Li & Craig, 2015; Meter & Card, 2015), and are more likely to report direct behaviors to defend friends compared to neutral peers (Bellmore, Ma, You, & Hughes, 2012). For some youth, defending a friend may be more important than the potential costs of direct defending. In addition, the type of bullying witnessed may influence one's defending behavior. Research with young children notes that physical bullying is associated with telling the teacher, whereas verbal bullying is associated with comforting (Rock & Baird, 2012). Thus, it is possible that severe or physically dangerous situations are more likely to elicit indirect defending behaviors. Future research may wish to examine the person-in-context factors that lead to different defending behaviors. Such research may be able to capture the complex social dynamics that influence one's decision to intervene, and how to best intervene, in a given situation. The strategy-situation-fit hypothesis, typically used to study emotion regulation (Aldao, Sheppes, & Gross, 2015), may help to understand the goodness of fit between a given defending behavior and the particular situation in which it is used. Like emotion regulation strategies (Haines et al., 2016), it is likely that there is not one type of defending that is "better" than others. Rather, it is likely the fit among the defending strategy, the defender's own skills and resources, and the context that determines the likelihood of positive outcomes. In other words, a "one-size fits all" approach to encourage defending is unlikely to be successful. Youth should be encouraged to defend in the way that is safest and most effective for them in the moment.

4.1. Limitations and future research

This study has several limitations. First, we examined the factor structure of the DBS using only one sample. Additional research should confirm the factor structure of the DBS to provide further psychometric evidence for this scale. It is unknown whether the factor structure of the DBS holds in other developmental stages or more culturally diverse samples. Research on defending has focused heavily on the period of early adolescence, however, there is evidence that peer defending occurs during the preschool years and into emerging adulthood (Lambe et al., 2019). Future research should examine the trajectory of defending behaviors across

development. It is possible that younger children rely more on reporting or aggressive defending strategies, with the use of comforting and solution-focused defending increasing as social-emotional skills develop.

Unexpectedly, social self-efficacy did not help to differentiate between direct and indirect defending behaviors. The measure of social self-efficacy used in the current study captured one's confidence in social skills across a variety of situations (Connolly, 1989), and may have been too general to find associations with specific defending behaviors. Future research may wish to adapt a measure of defending self-efficacy (Thornberg & Jungert, 2013) or willingness to intervene (Espelage, Green, & Polanin, 2012) to examine distinctions between direct and indirect defending behaviors. It is possible that defending self-efficacy is specific, such that believing one can defend using a specific behavior is different than believing one can defend using a different type of behavior. It is also possible that defending self-efficacy develops as a skill once one has successfully defended (Pöyhönen, Juvonen, & Salmivalli, 2010). Future research should consider the perceived successfulness (e.g., the bullying stopped, the target became less upset) of defending behaviors and how this influences the development of defending over time.

Our research is limited by a cross-sectional, self-report design. Future research may wish to explore how the self-report data from the DBS is related to peer- or teacher-reported defending behaviors. In addition, we found that the DBS factors demonstrated relatively low test-retest reliability over an 8- to 10-week follow-up period (rs 0.41–0.66). There are several possible reasons for low test-retest reliability, included systematic measurement error and differences attributable to the retest interval (Polit, 2014). Future research should examine the test-retest reliability of the DBS using a shorter time interval, as test-retest reliability decreases as time intervals between measurements increase. Given the dynamic nature of bullying, it is likely that youth use different defending strategies depending on the bullying situations they witness. Indeed, the DBS could potentially be used to study defending as it unfolds in youths' daily lives using ecological momentary assessments. Such research designs may be useful for examining the specific situational and contextual variables that are likely to elicit certain types of defending behaviors, while helping to overcome the methodological limitations of retrospective, self-report data (Shiffman, Stone, & Hufford, 2008).

4.2. Applications of the DBS

The DBS is an easily administered, self-report scale used to assess peer defending in school bullying. In addition to research interests, this scale has potential applications for those in education and school psychology. Administrators can use the DBS to assess both the frequency and types of defending behaviors that students enact in their schools. Information gathered from the DBS can be used to inform bullying intervention and prevention programming that encourages youth to defend when they witness peer victimization. Many bullying prevention programs encourage peer defending but lack a clear surveillance tool to monitor the behaviors that youth are using to defend. Given that defending includes both prosocial and aggressive behaviors, it is crucial to assess not only the frequency of defending at schools, but also types of defending behaviors. Students may require additional training and support to increase their use of adaptive defending behaviors (e.g., reporting to authority) and decrease their use of maladaptive defending behaviors (e.g., aggressive defending). The DBS fills a significant gap in school behavior monitoring by describing the specific types of behaviors that students use to defend their peers.

4.3. Conclusion

Defending reflects any prosocial action taken to intervene in peer victimization. The results of the current research indicate that defending is a multidimensional construct that is best understood through four unique, but related, types of behavior. Using prosocial theory as a guide, we found that solution-focused and aggressive defending are ways in which youth defend by directly confronting the victimiziation situation. Reporting to authority and comforting are ways in which youth defend by indirectly supporting the person being victimized. Together, these four behaviors reflect the diverse ways in which youth can defend their peers from victimization. The DBS is a reliable and valid measure that can be used to further understand the heterogeneity within defending behaviors among youth.

Appendix A. Defending Behaviors Scale

Prescreening item (used to determine who has witnessed peer victimization)

The following questions ask about your experiences with witnessing peer victimization during the **past couple of months**. Peer victimization can be physical (hitting or kicking), verbal (saying mean things), or relational (excluding someone or spreading rumors about them). Some people call this "bullying", "harassment", or "drama".

1. How many times have you witnessed peer victimization in the past couple of months?
0 = I have not witnessed peer victimization in the past couple of months
1 = Once or twice in the past couple of months
2 = 2 or 3 times a month
3 = About once a week
4 = Several times a week
Note: Scores of 0 do not complete the DBS.

DBS items

The following items ask about your experiences with witnessing peer victimization during the past couple of months These questions ask about **what you actually did**, not what you *would* do. Circle the number that best matches how often you experienced each of these events in the past couple of months.
0 = I have not defended others in this way in the past couple of months
1 = Once or twice in the past couple of months
2 = 2 or 3 times a month
3 = About once a week
4 = Several times a week
When I saw peer victimization happen in the past couple of months…

1. I tried to change the subject to something more positive.
2. I took revenge on the person doing the bullying.
3. I told a teacher about the bullying.
4. I was friendly to the person being picked on.
5. I pushed or hit the person doing the bullying to make it stop.
6. I reported the situation to the people in charge.
7. I sent a message to the person doing the bullying asking them to stop.
8. I made fun of the person doing the bullying to try to stand up for the person being victimized.
9. I asked a friend to help stop the bullying.
10. I comforted the person being victimized afterwards.
11. I told the people watching that bullying is stupid.
12. I tried to turn my social group against the person doing the bullying.
13. I encouraged the person being victimized to report the bullying.
14. I tried to cheer up the person who was being victimized.
15. I tried to sort out the problem by talking to the people involved in the bullying.
16. I called the person doing the bullying names.
17. I tried to include someone if they were being purposefully left out.
18. I told a parent about the bullying.

Reporting to authority: items 3, 6, 13, 18
Comforting: items 1, 4, 10, 14, 17
Aggressive: items 2, 5, 8, 12, 16
Solution-focused: items 7, 9, 11, 15

References

Aldao, A., Sheppes, G., & Gross, J. J. (2015). Emotion regulation flexibility. *Cognitive Therapy and Research, 39*(3), 263–278. https://doi.org/10.1007/s10608-014-9662-4.

Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling, 16*(3), 397–438. https://doi.org/10.1080/10705510903008204.

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.

Bellmore, A., Ma, T. L., You, J. I., & Hughes, M. (2012). A two-method investigation of early adolescents' responses upon witnessing peer victimization in school. *Journal of Adolescence, 35*(5), 1265–1276. https://doi.org/10.1016/j.adolescence.2012.04.012.

Blair, R. J. R. (2005). Responding to the emotions of others: Dissociating forms of empathy through the study of typical and psychiatric populations. *Consciousness and Cognition, 14*(4), 698–718. https://doi.org/10.1016/j.concog.2005.06.004.

Burton, K. A., Florell, D., & Gore, J. S. (2013). Differences in proactive and reactive aggression in traditional bullies and cyberbullies. *Journal of Aggression, Maltreatment & Trauma, 22*(3), 316–328. https://doi.org/10.1080/10926771.2013.743938.

Carlo, G., Hausmann, A., Christiansen, S., & Randall, B. A. (2003). Sociocognitive and behavioral correlates of a measure of prosocial tendencies for adolescents. *Journal of Early Adolescence, 23*(1), 107–134. https://doi.org/10.1177/0272431602239132.

Carlo, G., Knight, G. P., McGinley, M., Zamboanga, B. L., & Hernandez Jarvis, L. (2010). The multidimensionality of prosocial behaviors and evidence of measurement equivalence in Mexican American and European American early adolescents. *Journal of Research on Adolescence, 20*(2), 334–358. https://doi.org/10.1111/j.1532-7795.2010.00637.x.

Carpenter, S. (2018). Ten steps in scale development and reporting: A guide for researchers. *Communication Methods and Measures, 12*(1), 25–44. https://doi.org/10.1080/19312458.2017.1396583.

Casey, E. A., Storer, H. L., & Herrenkohl, T. I. (2018). Mapping a continuum of adolescent helping and bystander behavior within the context of dating violence and bullying. *American Journal of Orthopsychiatry, 88*(3), 335–345. https://doi.org/10.1037/ort0000245.

Comrey, A. L., & Lee, H. B. (2013). *A first course in factor analysis.* Psychology Press.

Connolly, J. (1989). Social self-efficacy in adolescence: Relations with self-concept, social adjustment, and mental health. *Canadian Journal of Behavioural Science, 21*(3), 258–269. https://doi.org/10.1037/h0079809.

Coyne, S. M., Stockdale, L., Linder, J. R., Nelson, D. A., Collier, K. M., & Essig, L. W. (2017). Pow! Boom! Kablam! Effects of viewing superhero programs on aggressive, prosocial, and defending behaviors in preschool children. *Journal of Abnormal Child Psychology*. https://doi.org/10.1007/s10802-016-0253-6.

Craig, W. M., Harel-Fisch, Y., Fogel-Grinvald, H., Dostaler, S., Hetland, J., Simons-Morton, B., ... Nansel, T. (2009). A cross-national profile of bullying and victimization among adolescents in 40 countries. *International Journal of Public Health, 54*, 216–224. https://doi.org/10.1007/s00038-009-5413-9.

Craig, W. M., & Pepler, D. J. (1998). Observations of bullying and victimization in the school yard. *Canadian Journal of School Psychology, 13*(2), 41–59. https://doi.org/10.1177/082957359801300205.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113.

Demaray, M. K., & Malecki, C. K. (2003). Perceptions of the frequency and importance of social support by students classified as victims, bullies, and bully/victims in an urban middle school. *School Psychology Review, 32*(3), 471–490.

Demaray, M. K., Summers, K. H., Jenkins, L. N., & Becker, L. D. (2016). Bullying Participant Behaviors Questionnaire (BPBQ): Establishing a reliable and valid measure. *Journal of School Violence, 15*(2), 158–188. https://doi.org/10.1080/15388220.2014.964801.

Dimitroff, S. J., Harrod, E. G., Smith, K. E., Faig, K. E., Decety, J., & Norman, G. J. (2019). Third-party punishment following observed social rejection. *Emotion*. https://doi.org/10.1037/emo0000607.

Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin, 100*(3), 283–308.

Eisenberg, N., & Spinrad, T. L. (2014). Multidimensionality of prosocial behavior. In L. M. Padilla-Walker, & G. Carlo (Eds.). *Prosocial development: A multidimensional approach* Oxford University Press https://doi.org/10.1093/acprof:oso/9780199964772.001.0001.

Espelage, D., Green, H., & Polanin, J. (2012). Willingness to intervene in bullying episodes among middle school students. *The Journal of Early Adolescence, 32*(6), 776–801. https://doi.org/10.1177/0272431611423017.

Fabrigar, L. R., & Wegener, D. T. (2011). *Exploratory factor analysis.* Oxford University Press.

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., Pearson, C. R., & Cohen, D. (2014). Revenge is seductive, if not sweet: Why friends matter for prevention efforts. *Journal of Applied Developmental Psychology, 37*, 25–35. https://doi.org/10.1016/j.appdev.2014.08.002.

Goossens, F. A., Olthof, T., & Dekker, P. H. (2006). New Participant Role Scales: Comparison between various criteria for assigning roles and indications for their validity. *Aggressive Behavior, 32*(4), 343–357. https://doi.org/10.1002/ab.20133.

Haines, S. J., Gleeson, J., Kuppens, P., Hollenstein, T., Ciarrochi, J., Labuschagne, I., ... Koval, P. (2016). The wisdom to know the difference: Strategy-situation fit in emotion regulation in daily life is associated with well-being. *Psychological Science, 27*(12), 1651–1659. https://doi.org/10.1177/0956797616669086.

Hamburger, M. E., Basile, K. C., & Vivolo, A. M. (2011). *Measuring bullying victimization, perpetration, and bystander experiences; a compendium of assessment tools.* Atlanta, GA: Center for Disease Control and Prevention, National Center for Injury Prevention and Control.

Hawkins, D. L., 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.

Hawk, S. T., Keijsers, L., Branje, S. J., Graaff, J. V. D., Wied, M. D., & Meeus, W. (2013). Examining the interpersonal reactivity index (IRI) among early and late adolescents and their mothers. *Journal of personality assessment, 95*(1), 96–106.

Hoffman, M. L. (1989). Empathy and moral activism. *Social and moral values: Individual and societal perspectives* (pp. 65–85). .

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 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,* 1–15. https://doi.org/10.1017/S0954579414000297.

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford.

Lambe, L. J., Della Cioppa, V., 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.

Lambe, L. J., Hudson, C. C., Craig, W. M., & Pepler, D. J. (2017). Does defending come with a cost? Examining the psychosocial correlates of defending behaviour among bystanders of bullying in a Canadian sample. *Child Abuse & Neglect, 65*, 112–123. https://doi.org/10.1016/j.chiabu.2017.01.012.

Li, J., & Craig, W. (2015). Young Canadians' experiences with electronic bullying. Report available online at http://impact.mediasmarts.ca/data/reports/young-canadians-electronic-bullying.pdf.

MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*(2), 130–149. https://doi.org/10.1037//1082-989X.1.2.130.

Malecki, C. K., Demaray, M. K., Elliott, S. N., & Nolten, P. W. (2000). *The child and adolescent social support scale.* DeKalb, IL: Northern Illinois University.

Marsh, H. W., Morin, A. J. S., Parker, P., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology, 10*, 85–110. https://doi.org/10.1146/annurev-clinpsy-032813-153700.

Meter, D. J., & Card, N. A. (2015). Defenders of victims of peer aggression: Interdependence theory and an exploration of individual, interpersonal, and contextual effects on the defender participant role. *Developmental Review, 38*, 222–240. https://doi.org/10.1016/j.dr.2015.08.001.

Meter, D. J., Ma, T.-L., & Ehrenreich, S. E. (2019). *Telling, comforting, and retaliating: The roles of moral disengagement and perception of harm in defending college-aged victims of peer victimization.* https://doi.org/10.1007/s42380-018-0006-x.

Miller, J. G. (2018). Physiological mechanisms of prosociality. *Current Opinion in Psychology, 20*, 50–54. https://doi.org/10.1016/j.copsyc.2017.08.018.

Morgado, F. F. R., Meireles, J. F. F., Neves, C. M., Amaral, A. C. S., & Ferreira, M. E. C. (2017). Scale development: Ten main limitations and recommendations to improve future research practices. *Psicologia: Reflexão e Crítica, 30*(1), 1–20. https://doi.org/10.1186/s41155-016-0057-1.

Nielson, M. G., Padilla-Walker, L., & Holmes, E. K. (2017). How do men and women help? Validation of a multidimensional measure of prosocial behavior. *Journal of Adolescence, 56*, 91–106. https://doi.org/10.1016/j.adolescence.2017.02.006.

van Noorden, T. H. J., Haselager, G. J. T., Cillessen, A. H. N., & Bukowski, W. M. (2014). Empathy and involvement in bullying in children and adolescents: A systematic review. *Journal of Youth and Adolescence, 44*(3), 637–657. https://doi.org/10.1007/s10964-014-0135-6.

O'Gorman, R., Wilson, D. S., & Miller, R. R. (2005). Altruistic punishing and helping differ in sensitivity to relatedness, friendship, and future interactions. *Evolution and Human Behavior, 26*(5), 375–387. https://doi.org/10.1016/j.evolhumbehav.2004.12.006.

Padilla-Walker, L. M., & Fraser, A. M. (2014). How much is it going to cost me? Bidirectional relations between adolescents' moral personality and prosocial behavior. *Journal of Adolescence, 37*(7), 993–1001. https://doi.org/10.1016/j.adolescence.2014.07.008.

Polanin, J. R., Espelage, D. L., & Pigott, T. D. (2012). A meta-analysis of school-based bullying prevention programs' effects on bystander intervention behavior. *School Psychology Review,* (1), 41.

Polit, D. F. (2014). Getting serious about test-retest reliability: A critique of retest research and some recommendations. *Quality of Life Research, 23*(6), 1713–1720. https://doi.org/10.1007/sl 1136-014-0632-9.

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.

Pöyhönen, V., Juvonen, J., & Salmivalli, C. (2010). What does it take to stand up for the victim of bullying?: The interplay between personal and social factors. *Merrill-Palmer Quarterly, 56*(2), 143–163. https://doi.org/10.1353/mpq.0.0046.

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*(6), 815–827. https://doi.org/10.1007/s10802-010-9399-9.

Pronk, J., Olthof, T., Goossens, F. A., & Krabbendam, L. (2019). Differences in adolescents' motivations for indirect, direct, and hybrid peer defending. *Social*

Development, 28(2), 414–429. https://doi.org/10.1111/sode.12348.

Puckett, M. B., Aikins, J. W., & Cillessen, A. H. N. (2008). Moderators of the association between relational aggression and perceived popularity. *Aggressive Behavior, 34*(6), 563–576. https://doi.org/10.1002/ab.20280.

Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review, 41*, 71–90. https://doi.org/10.1016/j.dr.2016.06.004.

Raine, A., Dodge, K., Loeber, R., Gatzke-kopp, L., Lynam, D., Stouthamer-loeber, M., & Liu, J. (2006). The Reactive-Proactive Aggression Questionaire: Diferential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior, 32*(2), 159–171.

Reijntjes, A., Vermande, M., Olthof, T., Goossens, F. A., Aleva, L., & van der Meulen, M. (2016). Defending victimized peers: Opposing the bully, supporting the victim, or both? *Aggressive Behavior, 42*(6), 585–597. https://doi.org/10.1002/ab.21653.

Rock, P. F., & Baird, J. (2012). Tell the teacher or tell the bully off: Children's strategy production for bystanders to bullying. *Social Development, 21*(2), 414–424. https://doi.org/10.1111/j.1467-9507.2011.00627.x.

Sainio, M., Veenstra, R., Huitsing, G., & Salmivalli, C. (2010). Victims and their defenders: A dyadic approach. *International Journal of Behavioral Development, 35*(2), 144–151. https://doi.org/10.1177/0165025410378068.

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior, 15*(2), 112–120. https://doi.org/10.1016/j.avb.2009.08.007.

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), 1–15. https://doi.org/10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T.

Salmivalli, C., Lappalainen, M., & Lagerspetz, K. M. J. (1998). Stability and change of behavior in connection with bullying in schools: A two-year follow-up. *Aggressive Behavior, 24*(3), 205–218. https://doi.org/10.1002/(SICI)1098-2337(1998)24:3<205::AID-AB5>3.0.CO;2-J.

Shapka, J. D., & Maghsoudi, R. (2017). Examining the validity and reliability of the cyber-aggression and cyber-victimization scale. *Computers in Human Behavior, 69*, 10–17. https://doi.org/10.1016/j.chb.2016.12.015.

Shiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology, 4*, 1–32. https://doi.org/10.1146/annurev.clinpsy.3.022806.091415.

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus bully/victim questionnaire. *Aggressive Behavior, 29*(3), 239–268. https://doi.org/10.1002/ab.10047.

Sutton, J., & Smith, P. K. (1999). Bullying as a group process: An adaptation of the participant role approach. *Aggressive Behavior, 25*(2), 97–111. https://doi.org/10.1002/(SICI)1098-2337(1999)25:2<97::AID-AB3>3.0.CO;2-7.

Thornberg, R., & Jungert, T. (2013). Bystander behavior in bullying situations: Basic moral sensitivity, moral disengagement and defender self-efficacy. *Journal of Adolescence, 36*(3), 475–483. https://doi.org/10.1016/j.adolescence.2013.02.003.

Vitaglione, G. D., & Barnett, M. A. (2003). Assessing a new dimension of empathy: Empathic anger as a predictor of helping and punishing desires. *Motivation and Emotion, 27*(4), 301–325. https://doi.org/10.1023/A:1026231622102.

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist, 34*(6), 806–838. https://doi.org/10.1177/0011000006288127.