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Ph.D. THESIS

CHARACTERISTICS OF PEER DEFENDERS IN THE CONTEXT OF SCHOOL BULLYING: AN INVESTIGATION OF EMPATHY

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Notes. _____

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CHAPTER I. THEORETICAL BACKGROUND

1.1. Introduction and Research Problem

Bullying is a complex issue occurring at varying levels across schools worldwide (Richardson & Hiu, 2018). The number of studies addressing school bullying has grown exponentially over the past half century (Horton, 2020). Past research has focused on individual factors pertaining to bullying, characteristics that place the bully under the aggressive label, and the victim under the helpless one (deLara, 2024). Given that bullying remains an active social problem (Salmivalli et al., 1998), it is crucial to examine the larger context in which bullying occurs, the social group witnessing such events, meaning bystanders (Kousholt & Fisker, 2015), and particularly defenders. How bystanders involve themselves in bullying by helping the victim, encouraging the bully, or not getting involved can mitigate victimization and aggression (Salmivalli, 2014). Understanding how to promote efficient bystander interventions is one promising way to reduce school bullying (Polanin et al., 2012), but we first must learn what makes a bystander a defender.

The main aim of the current thesis is to address the social and emotional characteristics of bystanders in general, but with greater attention to defenders. Empathy is set as the central component. Additionally, we aimed to improve and broaden the methodological aspects of evaluating empathy in the context of school bullying. This thesis is divided into four chapters. The first chapter offers a comprehensive analysis and summary of the literature pertaining to bullying, defenders, empathy, and the influence that empathy has on peer defending. The second chapter delineates the main goals and methodologies used to achieve them. In the third chapter, we present in depth the four original studies implemented during the doctoral program. The fourth and final chapter outlines the main findings and conclusions of the thesis, reviews theoretical and practical implications, addresses the limitations of the presented studies, and proposes future directions.

1.2. Relevance of the Research Problem

In most episodes of school bullying, bystanders outnumber bullies and victims, with over half of children witnessing bullying events (Midgett & Doumas, 2019). Less than half of bystanders confirm their involvement as defenders (Datta et al., 2016). Whether bystanders support the aggressor or victim can affect the bullying outcome by enabling further perpetration or stopping the event (Salmivalli, 2014). Since anti-bullying programs based on bystander involvement effectively reduce bullying victimization and perpetration, understanding factors that influence intervention decisions could improve these interventions and create safer environments for children (Ningrat & Arifandy, 2025). Being defended stops bullying and serves as a protective factor, relating to good mood, lower self-blame, and lower self-reported humiliation for victims (Laninga-Wijnen et al., 2024).

Both affective and cognitive empathy are significant positive predictors of peer defending (Deng et al., 2021). Together with resilience, empathy is a positive predictor of psychological well-being in adolescents (Vinayak, 2018). Both school-based empathy development programs (Malti et al., 2016) and empathy training programs for bullying (Sahin, 2012) were effective in producing the expected results, higher empathic skills, and reduced bullying and victimization. Defending may also impact group norms and attitudes regarding bullying and how tolerable and acceptable this type of behavior can be (Salmivalli, 2014). However, both increased empathy and peer defending can have negative costs, such as internalization problems (Jin et al., 2023; Wu et al., 2016; Yan et al., 2021) and potential risk of future victimization for defenders (Huitsing et al., 2014).

Therefore, studying bystanders' roles in bullying, particularly defenders, can be essential in understanding how bullying perpetration and victimization can be stopped and prevented (Deng et al., 2021). Empathy is a central component of both peer defending (Nickerson et al., 2015) and bystander-based anti-bullying programs (Garandeau et al., 2022) and can contribute to encouraging more children to take active roles in peer defending (Salmivalli, 2014). By focusing research on bystanders, defenders and empathy, we can facilitate future defending and thus create school environments without or with less aggression and victimization, but with kindness, friendship, respect towards one another and acceptance.

1.3. Current Status of the Field

1.3.1. Bullying: Definition and Theoretical Models

Dan Olweus (2007) coined a widely used definition of bullying in his revised Olweus Bullying Questionnaire (OBQ) (Olweus, 2007). From his perspective, bullying occurs when students repeatedly engage in harmful actions toward another student. Examples include verbal abuse, name-calling, cruel words; deliberately excluding them from social groups or activities; kicking, pushing, shoving, or locking them in a room; spreading gossip, lies, or sending unkind messages to turn other students against them. This definition distinguishes bullying from non-bullying actions like friendly teasing or conflicts between students of similar strength levels. Three important bullying characteristics must be considered. First, these actions are repeated, making it difficult for targeted students to defend themselves. Second, these actions are intentional and hurtful. Lastly, there is a power imbalance between the aggressor and bullied student, which can be subjectively perceived by the targeted student.

Several other characteristics of bullying need to be addressed. First, bullying can be direct or indirect (Gladden et al., 2014). Direct bullying means that confrontational or aggressive behavior takes place in the presence of the targeted victim, for example, physically pushing or communicating hurtful messages verbally or in writing. Indirect bullying involves aggressive actions that are not directly transmitted to the victim, such as spreading rumors or false information. Bullying can be physical, verbal, relational (i.e., aimed to negatively impact reputation or friendships), and can include damaging property (i.e., stealing, altering, or destructing personal items) (Gladden et al., 2014). When bullying takes place using technological means, including mobile phones or the

internet, we refer to it as cyberbullying (Smith et al., 2008). There is some overlapping between cyberbullying and traditional bullying (Kowalski & Limber, 2013). Cyberbullied victims have increased odds of being relationally bullied (Waasdorp & Bradshaw, 2015). However, there are clearly different characteristics that define traditional bullying and not cyberbullying, justifying the need to study them separately (Olweus, 1994).

1.3.1.1. Social-ecological model of bullying

Multiple theoretical frameworks explain how bullying occurs and persists, falling into two categories: system-based (addressing context) and individual-level (concerning personal factors) (Thomas et al., 2018). The social-ecological model, based on Bronfenbrenner's theory (1977), suggests that bullying emerges from interactions between individual characteristics and environmental factors (Hong & Espelage, 2012). This theory enables testing both individual and contextual factors. Individual risk factors for victimization include negative affectivity, poor coping strategies, and somatic symptoms (Hansen et al., 2012), while conduct problems and school issues influence both victimization and perpetration (Kljakovic & Hunt, 2016). Protective factors against victimization include peer support (Wu et al., 2023), while personal competence and academic performance protect against both victimization and perpetration (Zych et al., 2019).

1.3.1.2. Social cognitive theory

Miller and Dollard's (1941) social learning theory was expanded by Bandura, who proposed that individuals learn through observing others and their actions' consequences (Bandura & Walters, 1977). This evolved into social cognitive theory (Bandura, 1986), which explains bullying involvement as an interaction of observational learning, reinforcement and cognitions that normalize aggression (Swearer et al., 2014). Evidence supports this: childhood exposure to intimate partner violence correlates with bullying perpetration (Lee et al., 2022), and normative beliefs about aggression predict bullying (Jiang et al., 2022). Additionally, expectations that defending victims will reduce bullying drives successful bystander intervention programs (Garandeau et al., 2023).

1.3.1.3. Social dominance theory

The social dominance framework posits that society creates hierarchies maintained through oppression and prejudice (Sidanius & Pratto, 1999). Two main strategies achieve this: prosocial and coercive (Hawley, 1999). In school bullying, children compete for control of social resources through aggressive strategies (Neal, 2010). Studies show bullying and defending positively correlate with dominance, while victimization negatively relates to dominance (Farrell & Dane, 2020).

1.3.1.4. Prevalence

Meta-analytic data show 35% of children were involved in bullying perpetration, victimization, or both (Modecki et al., 2014). Verbal violence was most frequent (80.1%), followed by physical (47.7%) and psychological violence (Esteban et al., 2020). Girls engage more in indirect/verbal bullying, while boys show more physical aggression (McClanahan et al., 2015). Bullying prevalence decreases as children enter adolescence (Fujikawa et al., 2021). Victim and bully roles show strongest stability over time, with highest variability in those who were both (Zych et al., 2020). Most children witness bullying events (Rivers & Noret, 2013), with about 60.5% reporting witnessing in recent months (Midgett & Doumas, 2019). Among bystanders, 48.1% were peer defenders, 45.4% passive observers, and 6.5% reinforced bullying (Datta et al., 2016). As aggression increased, victim defenders decreased while bully assistants increased. González-Cabrera et al. (2020) found that while some children are both victims and bystanders (15.1%) or bullies, victims and bystanders (9.8%), most are pure bystanders (30%).

1.3.2. Bullying Roles: Defenders

Salmivalli et al. (1996) was one of the first proponents of the social group perspective on bullying, testing six bullying roles specifically: victim, bully, reinforcer of the bully, assistant of the bully, defender of the victim and outsider, with the most frequent roles being the outsider, reinforcer and defender (Salmivalli et al., 1996). In accordance with modern studies (Rivers et al., 2009), bystanders were the most common group related to bullying. These bystanding children could have three types of answers when witnessing bullying: encouraging the bully directly by joining in or indirectly by laughing or cheering up the bully; defending the victim by stepping in, stopping the bully, talking to an adult or comforting the victim, and lastly not getting involved or watching passively (Salmivalli et al., 1996). In this broader context of bullying, bystanders play a crucial role, as their actions or inaction can determine whether bullies achieve their goals (Salmivalli, 2010).

Bystanders reported that bullies act aggressively for social status, while victims were perceived as having lower status (Thornberg & Delby, 2019). Children tend to defend peers they like and who are liked by close classmates (Rambaran et al., 2022). Defending by alerting others, caring for victims or opposing aggressors were considered sound social norms, unlike outsider behavior (Kubiszewski et al., 2019). Though defending is seen as appropriate, not all bystanders choose to get involved (Datta et al., 2016). Bystanders fall into different categories: defending supporters, defending opposers, bully supporters, those with conflicting attitudes, and inconsistent bystanders who have prerequisites for defending but remain passive (Mauduy et al., 2024).

Defending rates increased with bullying severity (Macaulay et al., 2019). Gini et al. (2008) found bystanders more likely defended same-sex peers and blamed victims more when others didn't intervene. High self-reported empathy and perceived popularity increased defending behavior (Yun & Graham, 2018). Being a defender predicted social likeability, though popularity didn't predict future defending (Pozzoli & Gini, 2021). However, likeability and popularity positively correlated with both victim-oriented and bully-oriented defending (Garandeau et al., 2022). Popularity predicted defending and better social status for girls than boys (Laninga-Wijnen et al., 2023). The empathy-defending relationship was stronger for socially liked boys (Caravita et al., 2009),

highlighting social acceptance's importance. Another potential explanation for why some children defend peers while others remain passive is the bystander effect (Hortensius & de Gelder, 2018). The bystander effect, described by Darley and Latane (1968), occurs when someone witnessing an emergency with others present feels less responsible to intervene. While bystander distribution across behaviors showed no significant differences when witnessing bullying with or without others present, the interaction between bystander presence and factors like past victimization, empathy, and perceived control related to defending (Song & Oh, 2017).

Starting from the bystander effect (Darley & Latane, 1968), Latane & Darley (1969) proposed a five-step process for witnesses. These steps include noticing the event, evaluating it as emergency, assuming responsibility, knowing how to intervene, and intervening (Latane & Darley, 1969). Steps like attitudes toward victims, responsibility, and deciding how to help were confirmed in bullying studies of children and adolescents (Pozzoli & Gini, 2013). Nickerson et al. (2014) confirmed all steps and showed each step is influenced by preceding ones, as predicted by the original theory (Latane & Darley, 1969).

1.3.2.1. Consequences of bullying involvement

Bullying has negative consequences across physical and mental health, social dynamics, and academic performance (Rivara & Le Menestrel, 2016). Research on bullying consequences has primarily focused on victims (e.g., Graham, 2016; Rigby, 2003). However, evidence shows that all children involved in bullying can experience negative consequences, regardless of their involvement type (Rivara & Le Menestrel, 2016). These consequences can impact psychological well-being long-term, leading to eating disorders, body image problems, and social and trust issues into adulthood (deLara, 2019).

For victims, a meta-analysis showed that peer victimization was significantly related to internalizing symptoms like depression and anxiety, low health, suicidal ideation, and substance abuse (Moore et al., 2017). Children who bully show externalizing problems (Eyuboglu et al., 2021), risk for antisocial personality disorder in adulthood (Copeland et al., 2013), inclination towards theft, violence and drinking (Hemphill et al., 2011), and face peer rejection (Wiertsema et al., 2022). Defenders face risks when intervening (Keashly, 2024), potentially becoming targets for victimization (Huitsing et al., 2014; Malamut et al., 2023). Boys who defended reported higher psychosocial difficulties than passive bystanders (Lambe et al., 2017). Malamut et al. (2021) confirmed a positive association between defending and social anxiety in children who were also victims.

Being a witness to bullying was associated with increased anxiety and depressive symptoms, even after controlling for involvement as victim or perpetrator (Midgett & Doumas, 2019). Children with both witness and victim statuses reported the highest depressive symptomatology. Children who observed bullying showed more interpersonal sensitivity, helplessness and suicidal thoughts (Rivers & Noret, 2013). Girls who witness bullying reported depressive symptoms and social anxiety, while boys reported only depression (Midgett et al., 2021). Consequences of witnessing bullying include somatic pain, obsessive-compulsive tendencies, phobic anxiety, hostility, paranoid ideation, and substance use (Rivers et al., 2009). These effects were related to observing bullying regardless of victim status, suggesting exposure to violence causes personal distress (Rivers et al., 2009).

1.3.2.2. The importance of defenders: Bystander-based interventions, efficacy and mechanisms

Salmivalli proposed bullying as a group process where bystanders have significant importance (Salmivalli et al., 1998). Research showed that victim defending reduced bullying frequency, while reinforcing bullies increased perpetration (Salmivalli et al., 2011). Multiple programs have been developed to reduce bullying and increase bystander intervention (Bezerra et al., 2023). The KiVa anti-bullying program is widely researched (Salmivalli et al., 2010) and includes universal approaches addressing all children's social development and bullying awareness, plus indicated actions for bullies and victims (Herkama et al., 2017). This whole-school approach involves teachers, students and parents, showing effectiveness that varies across countries due to implementation differences (Herkama et al., 2017).

Prevention and intervention programs reducing bullying and increasing prosocial actions show positive effects (González Moreno & Molero Jurado, 2024). The KiVa program showed lower rates of anxiety, depression and negative peer perspectives (Salmivalli et al., 2013). Bystander involvement has improved outcomes for victimization victims (Hamby et al., 2016). Victims with defenders reported higher school belonging than undefended victims, but lower than non-victimized children (Laninga-Wijnen et al., 2023). Defending from teachers and peers was linked to greater school connectedness and academic efficacy (Meter et al., 2023). Being defended was associated with better emotional adjustment than not being defended (Ma & Chen, 2019).

The KiVa anti-bullying program was associated with higher empathy levels (Bowes et al., 2024; Nocentini & Menesini, 2016), particularly affective empathy, regardless of gender, social status and previous empathy levels (Garandeau et al., 2022). While not a significant mediator at the individual level (Garandeau et al., 2023), empathy might require more time to be evaluated as a change mechanism. As empathy is relevant to bullying intervention programs (Polanin et al., 2012), we will explore its associations with bullying behaviors.

1.3.3. Empathy: Definition and Theoretical Models

Empathy has been defined in numerous ways, but a consensus among scholars is missing (Cuff et al., 2016; Hall & Schwartz, 2019). With a rapidly increasing number of studies using the term *empathy* as a keyword, there is also great variability in perspectives and fields addressing empathy (Zurek & Scheithauer, 2017). Eklund and Meranius (2021) aimed to synthesize data on empathy conceptualizations. Similar to Cuff et al. (2016) they identified multiple themes in empath's definitions which they later reduced to only four: understanding, feeling, sharing and differentiating between the self and the other (Eklund & Meranius, 2021). These four themes are not independent from one another but are closely related and interact to produce the subjective experience of

empathy, encompassing both cognitive and affective components (Eklund & Meranius, 2021). Therefore, based on the themes presented previously, in this thesis we define empathy as understanding, feeling and sharing the affective experiences of another person, with a clear distinction between the self and the other (Eklund & Meranius, 2021).

Decety and Jackson (2004) proposed a multi-componential model of empathy, comprising affective empathy, cognitive empathy and self-regulatory mechanisms. They describe three interacting components that produce empathy. The first component, affective sharing, reflects affective empathy and includes emotional contagion between affective states. Based on the Perception-Action-Model (Preston & de Waal, 2002), perceiving another's behavior activates shared representations and understanding. The second and third components, self-other differentiation and mental flexibility with emotional regulation, enable complete empathy (Decety & Jackson, 2004). Empathy results from both automatic responses triggered by perceiving others' emotions and slower cognitive processes that regulate distress when witnessing stressful situations (Decety & Lamm, 2006). These emotion-regulation strategies are crucial for maintaining empathy without overwhelm (Decety & Lamm, 2006), as different strategies yield various outcomes (Thompson et al., 2019). Both affective and cognitive empathy showed positive associations with cognitive reappraisal and negative associations with expressive suppression (Laghi et al., 2018).

1.3.3.1. Empathy's development across childhood

Empathy develops gradually across childhood and adolescence through brain network maturation and neural patterns shaped by self-environment interactions (Decety & Holvoet, 2021). Evidence of empathic concern appeared in infants' first year when witnessing distressed unfamiliar infants, increasing as they approached their second year (Roth-Hanania et al., 2011). Preschoolers showed distinct electrophysiological responses for perspective taking and empathic concern, suggesting neural differences (Decety et al., 2018). In children aged 3-6 years, affective and cognitive empathy predicted their respective types one year later (Simon & Nader-Grosbois, 2023). School-aged children showed different brain activation patterns when viewing pain compared to adults (Decety & Michalska, 2010). Empathy increases during adolescence, predicting social competence in adulthood (Allemand et al., 2015).

1.3.3.2. Empathy assessment

Evaluating empathy in children and adolescents involves self-reported instruments (e.g., Davis, 1983), other-reported instruments (e.g., Deschamps et al., 2014; Sánchez-Pérez et al., 2014), and behavioral measures (see Neumann et al., 2015). A systematic review of validated questionnaires (Sesso et al., 2021) showed variable internal consistency ratings and recommended multiple assessment procedures. Neary (2023) addressed limitations of current empathy evaluation questionnaires for youth, emphasizing clear empathy definitions to better match study objectives with measurement methods.

The Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006a) addresses some of the limitations by assessing both affective and cognitive empathy and by being created for use in settings concerning aggression or offending behavior. The BES has been used in different countries around the globe and in multiple settings (e.g., Čavojová et al., 2012; Lopes Loureto et al., 2022; Pechorro et al., 2015; Salas-Wright et al., 2013; Villadangos et al., 2016). The results of a systematic review and reliability generalization meta-analysis revealed good internal consistency values for both subscales, although with high levels of heterogeneity (Cabedo-Peris et al., 2021). Given that empathy is influenced by cultural factors (Jami et al., 2024), measurement invariance, meaning testing for the psychometric equivalence of a construct across diverse groups, becomes essential (Putnick & Bornstein, 2016). Likewise, empathy has been shown to be higher in adolescents with a rural background in comparison to those from an urban background (Kaushik et al., 2020). So far, measurement invariance of the BES has mainly been tested for age and gender (Anastácio et al., 2016; Herrera-López et al., 2017; McLaren et al., 2019; Salas-Wright et al., 2013; You et al., 2018) and has yet to be tested for time, and urban versus rural settings.

1.3.3.3. Empathy in bullying

Affective and cognitive empathy levels appear similar in bullies and victims, though victims score higher on empathic concern, a facet of affective empathy (Salavera et al., 2021). Systematic reviews show variability in results. One review found bullying negatively related to both cognitive and affective empathy, while victimization was only negatively associated with cognitive empathy (van Noorden et al., 2015). In a meta-analytic study, only bullying was negatively related to both types of empathy (Mitsopoulou & Giovazolias, 2015). In another meta-analysis, bullying perpetration was negatively associated with cognitive and affective empathy (Zych et al., 2019). Overall, bullying shows negative associations with empathy and victimization's relationship to empathy remains inconclusive (Imuta et al., 2022).

Bystanders are the largest group exposed to bullying (Midgett & Doumas, 2019) and show high heterogeneity, including children who assist the bully, defend the victim, or remain passive during bullying episodes (Salmivalli et al., 1998). Pro-bully roles were negatively associated with affective empathy (Raboteg-Šarić & Bartaković, 2019), though another study found no significant association between empathy and bullying reinforcement (Machackova & Pfetsch, 2016). Being an outsider was negatively related to cognitive, affective and total empathy scores (Álvarez-García et al., 2021; Belacchi & Farina, 2012), while other studies showed positive associations (Gini et al., 2008; Rieffe & Camodeca, 2016). Conflicting results were noted in systematic reviews (van Noorden et al., 2015).

Involvement as a defender was positively associated with empathy (Álvarez-García et al., 2021), both affective and cognitive (e.g., Gini et al., 2008; Rieffe & Camodeca, 2016; Yun & Graham, 2018). These findings were supported by systematic

review (van Noorden et al., 2015) and meta-analytic data (Imuta et al., 2022; Nickerson et al., 2015; Zych et al., 2019). Deng et al. (2021) found that affective empathy had a stronger association with peer defending than cognitive empathy, particularly for self-reported behaviors. Empathy positively predicts defending victimized peers and enhances intrinsic motivation through autonomous motivation (Longobardi et al., 2020). A supportive family environment predicted defending behavior, mediated by cognitive empathy (Tang et al., 2025). Popular children who defended peers showed high affective empathy (Laninga-Wijnen et al., 2023). However, with popular bullies, children high in cognitive but low in affective empathy were less likely to defend peers (Choi & Park, 2021).

1.4. Limitations in the Current Literature

Bullying has been an everlasting and highly prevalent issue across schools worldwide (Biswas et al., 2020), affecting children and adolescents both physically (Jennings et al., 2019) and psychologically (Montes et al., 2022). As bullying is a group process (Salmivalli et al., 1998), it includes bystanders, namely supporters of the bully, defenders of the victim, and outsiders. Bystanders are important for bullying prevention as their actions toward helping the victim or stopping the aggressor can put an end to bullying episodes (Salmivalli, 2014) and can help protect victims against further negative consequences (Ma & Chen, 2019). Although intensely studied in previous years (Hymel & Swearer, 2015), the investigation of the current literature revealed several limitations, which we will examine in more detail.

While empathy is a potentially relevant component of bystander-based anti-bullying programs (Bowes et al., 2024), its association with multiple bystander roles, pro-bully, defender and outsider, remains unclear. Research has primarily focused on the defender role (Deng et al., 2021; Nickerson et al., 2015), examining willingness to intervene or general empathy combining both facets (Nickerson et al., 2015). Other meta-analyses included variables like Theory of Mind and roles of bully, victim and bully-victim (Imuta et al., 2022), and characteristics like callous-unemotional traits (Zych et al., 2019). Since bystander interventions aim to promote defending behaviors in outsiders and increase empathy in bully supporters, understanding empathy levels across defenders, outsiders and passive bystanders is crucial.

With great variability in empathy's definition (Cuff et al., 2016) comes variability in its operationalization and measurement (Neary, 2023; Sesso et al., 2021). The Basic Empathy Scale (BES) was created to better measure empathy in youth aggression contexts (Jolliffe & Farrington, 2006a). The BES has been validated across multiple countries, showing good internal consistency for affective and cognitive empathy (Cabedo-Peris et al., 2021). Empathy's development is influenced by cultural and social factors (Jami et al., 2024). Despite its wide application, the BES has not been evaluated for psychometric properties and measurement invariance in Eastern European adolescents.

Regarding peer defenders' social and emotional profiles, defenders are typically viewed as empathetic and socially competent (Deng et al., 2021; Imuta et al., 2022). However, studies show mixed results on defenders' resilience versus vulnerability to mental health problems (Malamut et al., 2023). While some research suggests peer defending increases self-esteem and wellbeing (Correia et al., 2009; Evans et al., 2018), others show associations with internalizing symptoms (Callaghan et al., 2019; Evans et al., 2018). A person-centered approach could help identify patterns of resilience and vulnerability in peer defenders.

Although defending is positively associated with affective and cognitive empathy (Deng et al., 2021), we lack extensive knowledge about mechanisms underlying this relationship. Examples of tested intermediate factors between empathy and defending are peer acceptance (Kim & Park, 2021; Zhou et al., 2024) or autonomous motivation to defend (Longobardi et al., 2020), suggesting that empathy alone does not determine peer defending. Social and emotional skills are another promising mechanism, as they relate to both empathy (Ferreira et al., 2024) and prosocial actions, such as helping or consoling (Schonert-Reichl et al., 2012). Testing the mediation effect of social and emotional competencies in the relationship between affective, cognitive empathy and defending in a half-longitudinal model could clarify this association and offer direction for future interventions.

CHAPTER II. RESEARCH OBJECTIVES AND OVERALL METHODOLOGY

1.1. General aim

The goal of this thesis was to advance knowledge about social and emotional characteristics of bystanders in school bullying. We aimed to clarify the relationship between affective and cognitive empathy and bystander roles, which are less investigated in bullying research. We also sought to contribute to robust instruments for evaluating empathy by assessing the psychometric properties of the Basic Empathy Scale (Jolliffe & Farrington, 2006a). Additionally, we aimed to understand mechanisms of defending behavior by exploring social-emotional profiles of peer defenders and longitudinal pathways between empathy and defending. Four studies were conducted to achieve these goals, as shown in Figure 2.1.

2.2. Specific objectives

The first specific objective was to test the magnitude of the association between both affective and cognitive empathy and three frequent bystander roles, specifically: defender of the victim, outsider and pro-bully. As most studies showed interest mostly in victims, bullies and defenders, the other bystander roles were less investigated. Therefore, we aimed to close this gap in the literature by conducting a comprehensive meta-analysis and systematic review, representing Study 1. We first assessed the magnitude of the relationship between each type of empathy and each bullying role. Further, we also conducted sensitivity analysis and explored potential moderators of this relationship.

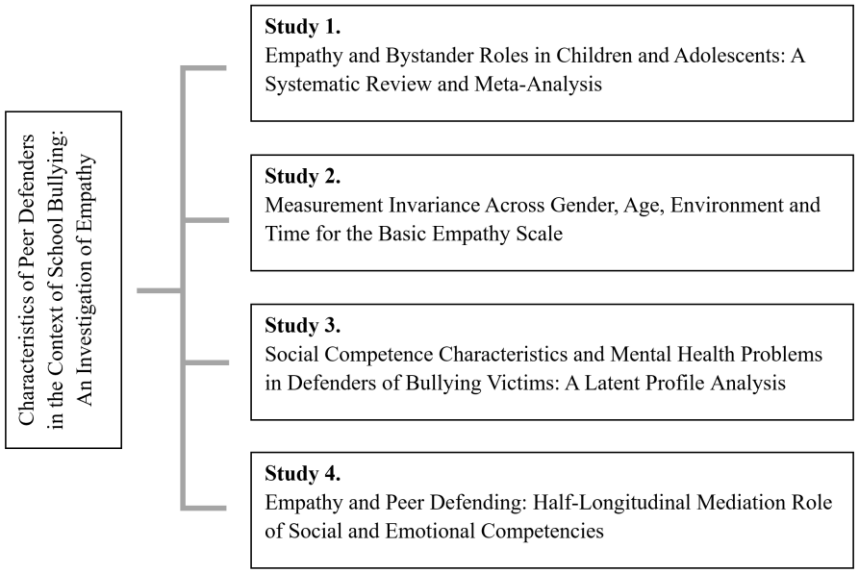
The second specific objective of the current thesis was to adapt and validate an empathy measuring instrument, the Basic Empathy Scale (Jolliffe & Farrington, 2006a), in a sample of Romanian adolescents (Study 2). This methodological objective was fulfilled by evaluating the psychometric properties of the instrument, including tests of the factorial structure of the scale. We confirmed the two-factor solution of the BES, particularly affective and cognitive empathy. Then, we evaluated the measurement invariance of the instrument across gender, age, environment and time. Lastly, we investigated the reliability, particularly the internal consistency values and the convergent, respectively the discriminant validity of the instrument.

The third specific objective was to assess the social and emotional profiles of adolescents who are frequent defenders of their peers. In order to achieve this, we employed a person-centered approach and conducted a latent profile analysis including the following characteristics: affective empathy, cognitive empathy, internalizing symptoms, externalizing symptoms and prosocial behavior. The four profiles that emerged from the latent profile analysis revealed unique patterns and are presented in Study 3.

The fourth and last specific objective was to investigate the mechanisms of the association between empathy and peer defending in the context of school bullying. Particularly, we tested whether social and emotional competencies (SEC) were a significant mediator of the relationship between cognitive empathy and defending behavior and between affective empathy and defending behavior. For this objective, we used a cross-lagged panel model for a half-longitudinal design, including measurements at two time points (Study 4).

Figure 2.1

General overview of the thesis



CHAPTER III. ORIGINAL RESEARCH

3.1. Study 1: Empathy and Bystander Roles in Children and Adolescents: a Systematic Review and Meta-Analysis[1]

3.1.1. Introduction

School bullying involves repeated aggressive behaviors intended to harm others, with an imbalance of power between the victim and aggressor (Olweus, 2013). Bystander roles involve children who witness bullying episodes and choose to intervene or not (Mazzone, 2020). One bystander conceptualization includes defenders, assistants of the bully, reinforcers of the bully, and passive bystanders or outsiders (Salmivalli et al., 1996). Defenders protect victims by stopping bullies, calling for help, or talking to victims. Reinforcers and assistants encourage bullies by laughing or joining in. Passive bystanders choose not to involve themselves, indirectly enabling bullying. Evidence shows 55% of adolescents reported passive bystanding, 38% defending victims and 7% supporting aggressors (Eijigu & Teketel, 2021). In primary and secondary school samples, between 44% and 45% reported involvement as defenders or outsiders (Pouwels et al., 2018).

While victims and aggressors have been the focus of research, bystanders play an important role in bullying episodes (Salmivalli, 2014). The involvement of bystanders as defenders was negatively associated with classroom bullying frequency, whereas reinforcing the bully was positively associated with bullying perpetration (Salmivalli et al., 2011). Meta-analytic data indicate that school-based prevention programs based on bystander intervention are effective in increasing peer defending (Polanin et al., 2012). Understanding factors behind bystanders' choices to engage or remain passive in bullying events can help develop future interventions.

General empathy was positively associated with prosocial behavior in youth samples (Qiu et al., 2024). Experimental evidence suggests empathic actions stem from altruistic motives to alleviate victims' suffering, not egoistic ones for distress avoidance (Stocks et al., 2009). In bullying, adolescents with greater empathy were more prone to defend victimized peers (Yun & Graham, 2018). Highly empathic children showed more distress and higher physiological activation when watching bullying-depicting videos than low-empathy children (Barhight et al., 2013). Emotion regulation and cognitive flexibility are necessary for prosocial actions (Laghi et al., 2018). High empathic distress and inadequate emotion regulation strategies could hinder prosocial behaviors (Eisenberg et al., 2010). Therefore, it remains unclear if high empathy levels automatically lead to prosocial actions like peer defending.

The relationship between empathy and bystander behavior remains unclear, particularly regarding cognitive and affective empathy types. For defenders, some studies show affective empathy is more strongly associated with peer defending (e.g., Belacchi & Farina, 2012; Caravita et al., 2009; Fredrick et al., 2020; Gini et al., 2007, 2008; Harrison et al., 2025). Other studies reported stronger associations between cognitive empathy and defending (Machackova & Pfetsch, 2016; Tang et al., 2025; Wang et al., 2023; Yun & Graham, 2018). For outsiders, results are contradictory. Some indicate stronger negative associations with affective empathy and weaker negative associations with cognitive empathy (Belacchi & Farina, 2012; Pozzoli et al., 2017), while others found negative associations with cognitive empathy and positive associations with affective empathy (Belacchi & Benelli, 2020). Gini et al. (2008) revealed stronger associations with cognitive empathy for outsider behaviors. Involvement in reinforcer and assistant roles, called pro-bullies, is negatively associated with both affective (Álvarez-García et al., 2021; Troop-Gordon et al., 2019; Xie & Ngai, 2020) and cognitive empathy (Machackova & Pfetsch, 2016). However, cognitive and affective empathy show different patterns of association with multiple forms of aggression (Yeo et al., 2011). When controlling for cognitive empathy, affective empathy was related to physical aggression, and when controlling for affective empathy, cognitive empathy was associated with indirect aggression.

Examining the relationship between empathy and bystander behavior, several factors influence how this relationship varies across research. Studies indicate that girls generally obtain higher cognitive and affective empathy scores than boys (Benenson et al., 2021; Geng et al., 2012; Trentini et al., 2022). However, in a study of children aged seven to seventeen, gender influenced only cognitive empathy (Schwenck et al., 2014). The authors proposed distinct maturation processes for cognitive and affective empathy. Stronger development of empathic concern was observed in girls, while for boys, this development was partially similar but later decreased for some boys (Olweus & Endresen, 1998). From the first sign of distress at hearing another newborn cry to the stability of empathy in late adolescence and early adulthood, empathy develops gradually (McDonald & Messinger, 2010). The informant of empathy measurement, whether self-reported or reported by others, influences the relationship between empathy and bystander roles (Sesso et al., 2021). While most empathy instruments are self-reported (Sesso et al., 2021), children might not be truthful and their answers can reflect social desirability, overestimation or lack of confidence in their empathic skills (Neary, 2023). Therefore, gender, age, and type of report will be accounted for in the current analysis.

Previous systematic reviews and meta-analyses have investigated the relationship between empathy and different bullying roles, including defending and bystander behaviors (Deng et al., 2021; Imuta et al., 2022; Ma et al., 2019; Nickerson et al., 2015; van Noorden et al., 2015; Zych et al., 2019). One study was a systematic review (van Noorden et al., 2015). Two included multiple bullying roles besides empathy such as theory of mind (Imuta et al., 2022) or examined defending in cyberbullying contexts (Ma et

[1] This study is published as such: Sabou A. M., Georgescu R.D., & Dobrean A. (2025). Empathy and Bystander Roles in Children and Adolescents: a Systematic Review and Meta-Analysis. *Educatia 21*

al., 2019). This complexity can divert attention from the specific relationship between empathy and bystander roles. Of the remaining two, one examined associations between cognitive and affective empathy and defending as the main bystander role (Deng et al., 2021), while the other did not differentiate between affective and cognitive empathy (Nickerson et al., 2015). Searches by Deng et al. (2021) included papers published until 2020 and did not distinguish between willingness to intervene and actual defending behavior. Given bystanders' importance in enabling or hindering peer victimization, it is vital to examine the relationship between empathy and defender behavior, as well as empathy's relationship with other bystander roles, outsiders and pro-bullies, whose behavior can be shaped to promote prosocial actions.

The aim of the current systematic review and meta-analysis is to address these gaps and investigate the associations between cognitive and affective empathy and three bystander roles: defenders, outsiders and pro-bullies. The first objective of the study is to test the magnitude of the association between each type of empathy and each bystander role. The second objective of the study is to test whether the strength of this relationship is influenced by moderating factors such as: sample size, percentage of girls, validation status of the empathy scale, informant of the empathy scale (self or other), and country.

3.1.2. Method

Protocol

The study protocol was preregistered at https://osf.io/fpwhr. There were some minor deviations from the original protocol. First, we decided to exclude moderators based on bystander instruments because we aimed to focus on the outcome of interest, meaning empathy. We were also unable to analyze countries or regions where the studies were conducted as moderators due to lack of variability in the data. Most studies were based on Western samples. Additionally, statistical analyses were performed using Stata 18 and not Comprehensive Meta-Analysis software. This allowed for more analytical flexibility, which is in line with current objectives. Lastly, we decided not to perform a transformation on data extracted from studies reporting standardized regression Beta coefficients. Simulations and empirical data revealed that the use of beta estimation procedures was associated with potentially extensive biases and using only correlations performed consistently better than using beta estimations (Roth et al., 2018). Combining different types of effect sizes in one meta-analysis can lead to conceptual heterogeneity and therefore reduce interpretability (Aloe, 2015).

Identification and selection of studies

We systematically search by abstract and title the following databases: PsychINFO, Scopus, Web of Science and PubMed on March 12, 2025. Keywords and search terms for PsychINFO, Web of Science and PubMed included: (empath* AND defend*) OR (empath* AND bystand*) NOT medical* NOT nurse* NOT work*. This query string was mildly altered for Scopus: TITLE-ABS-KEY ((empath* AND defend*) OR (empath* AND bystand* AND NOT medical* AND NOT nurse* AND NOT work*). In Scopus, searches were made in title, abstract and keywords. We did not restrict our searches by publication date, language, or age of the participants. In addition, we conducted a manual search of the references in the previous systematic reviews and meta-analyses in order to retrieve potentially relevant studies. All obtained articles were included and further analyzed using EndNote. This process involved eliminating duplicates and reviewing papers based on their title and abstracts. Screening of the studies and full text analysis based on inclusion and exclusion criteria were conducted by two independent researchers, A.M.S and J.M. All disagreements were resolved through discussion.

Inclusion and exclusion criteria

Included studies had to be quantitative, published in English, in peer-reviewed journals, and containing samples of children and adolescents under 18 years old. We included studies containing data from cross-sectional, experimental, or longitudinal designs, but for the last two categories only if baseline or first-wave measurements were available. Studies had to measure at least one component of affective or cognitive empathy and at least one of the three bystander roles, defenders, outsiders or pro-bullies, referring to involvement in traditional bullying contexts. To be considered, studies had to provide data necessary for the estimation of the effect size. Studies were included if their definition of empathy allowed for the identification of either affective or cognitive empathy. Excluded studies were qualitative in nature, meaning case studies, book chapters, conference abstracts, reviews of the literature, commentaries, or dissertation theses. We also excluded studies investigating general aggression or only cyberbullying, studies based on clinical samples (e.g., ADHD, autism), studies not differentiating between affective and cognitive empathy, studies including general empathy scores and not distinguishing between bystander roles. Studies with data concerning the association between either cognitive or affective empathy and aggressive defending such as confronting, attacking, excluding or harming the aggressor in any other way were also eliminated. This decision was based on research pointing out that children who take action against the bully also bully others and cluster together in a separate group from overall defenders and victim-oriented defenders (Reijntjes et al., 2016). Therefore, we consider aggressive defending to be conceptually different from what we traditionally understand by peer defending and we chose not to include it.

Data extraction and coding

Full texts of the selected studies were examined by two independent researchers working in parallel (A. M. S and J. M). Disagreements were resolved by discussion and by consulting the specific paper where divergencies appeared. The following data were extracted from each included study: study identification data containing first author, title and year of publication, design, the country in which the study was conducted, sample size (including subgroup sample size when needed); sample characteristics such

as age and gender; outcome (cognitive and/or affective empathy), outcome measurement (type of measurement for empathy: validated or ad-hoc, respectively informant: self or other), bystander role, bystander measurement (type of measurement for bystander: validated or ad-hoc and type of informant: self or other) and estimators for the association between variables, specifically Pearson's *r*. When studies performed associations between multiple facets or subtypes of empathy, for example, empathic concern and personal distress, which are both facets of affective empathy (Lambe & Craig, 2023), and involvement in a bystander role, we included all correlations. Subsequently, they were all combined into a single effect size.

Assessment of study quality

The quality of each included study was assessed by using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies, developed by NHLBI (NIHLBI, 2021). This assessment tool contains 14 questions evaluating key characteristics which are relevant to the internal validity of a study. Each question can be answered by "Yes", "No", "Cannot determine" or "Not applicable". The total score was obtained by calculating the sum of all "Yes" answers, which could range from 0 (poor quality) to 14 (good quality). The total number of affirmative questions was then transformed into a percentage representing the quality of the study: <50% poor, between 50 and 75% fair, and over 75% good quality. Two evaluators rated the quality of each study and disagreements were discussed. The level of agreement between the rates was computed using Cohen's κ (kappa) (McHugh, 2012).

Data analysis

All analyses were performed using Stata 18 (StataCorp, 2023). A random-effects model was used to account for high heterogeneity, as it allows effects to vary across studies. For the main objective of the current meta-analysis effect sizes for the relationship between each type of empathy (cognitive and affective) and each type of bystander involvement role (defender, outsider and pro-bully) were calculated as Pearson's *r* along with the sample size (N) of included studies. Identified correlation coefficients were then transformed to Fisher's *z*, which represented the values included in the analyses (Borenstein et al., 2021). In order to allow interpretations these values were later transformed into correlations. Coefficients thus obtained were interpreted based on Cohen's benchmarks where an *r* of .10 represents a small effect, an *r* of .30 a medium effect and an *r* of .50 a large effect size (Cohen, 2013). Lower and upper 95% confidence intervals (CI) were computed to determine the statistical significance of estimated effect sizes.

The I^2 statistic was used to evaluate the heterogeneity of effect sizes. It reflects the proportion of variance in effect sizes across studies that is related to true differences between studies rather than chance or sampling error. Interpretation of I^2 values was based on the following ratings: 25% or less indicates low heterogeneity, 50% moderate heterogeneity and 75% or higher indicates high heterogeneity (Higgins et al., 2003). Similar to the effect sizes, the 95% CI was computed for each I^2 value as well.

Sensitivity and moderation analysis

Robustness of the meta-analytic findings was assessed by computing sensitivity analysis. For each association between an empathy type and a bystander role, we excluded categories of studies based on specific methodological characteristics. Specifically, we excluded ad-hoc measures and studies with empathy instruments based on other reports or informants. By conducting these analyses, we aimed to investigate whether the use of validated versus non-validated and self versus other-reported measures influenced the overall pooled effect sizes.

Additional sources of heterogeneity among effect sizes were explored by effectuating moderation analyses on three categories of moderation variables: sample size, mean age and the percentage of girls, reflecting gender composition. We were unable to run moderation analyses based on the country in which the study was conducted due to lack of variability. Included moderators were assessed in random-effects meta-regression models based on regression coefficients, standard error (SE), statistical significance and 95% CI. R^2 values were computed for the percentage of heterogeneity explained by each moderator.

Small study effects

Assessment of publication bias included the use of two strategies. First, funnel plots were visually inspected for asymmetry, which might indicate publication bias. Then, Egger's test, a regression-based statistical test, was performed to provide formal evidence of the absence or presence of publication bias (Egger et al., 1997).

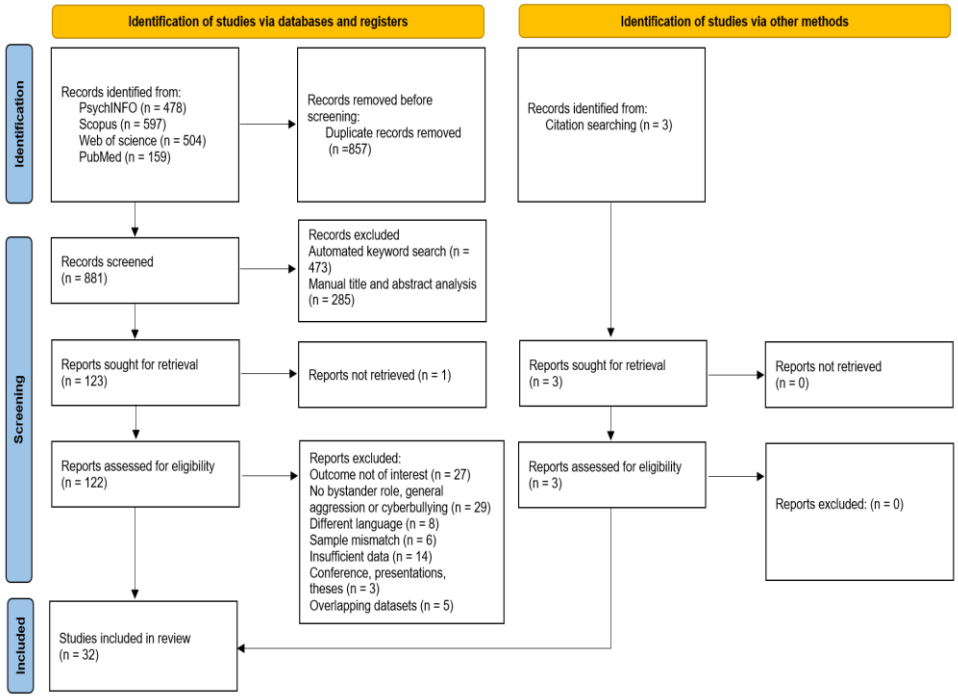
3.1.3. Results

Selection process

Figure 3.1 presents the PRISMA diagram containing all steps of the inclusion process and arguments for excluded studies. A total of 1738 studies were obtained after the initial search. We then eliminated 857 duplicates and excluded additional records by automated keyword search using terms as "law", "military" or "brain". This allowed for 285 articles to be examined by title and abstract. Next, 123 studies were retrieved for full text investigation, with the exception of one article which we were not able to obtain. Therefore, 122 articles were further examined for eligibility, out of which 29 met the inclusion criteria. Three additional studies were retrieved from the investigation of citations in previous studies. Finally, 32 studies
were included in the current meta-analysis.

Figure 3.1

PRISMA flow-diagram of the study selection process



Study characteristics

The combined sample of the 32 final samples includes 24783 participants, with a mean sample size of 774 participants. Studies were published between 2007 and 2025 and reflect samples across 13 countries, with the majority of studies coming from Italy (9 studies). The mean age of the 28 studies that offered information regarding specific sample age was 11.93. The remaining studies specified the mean age of the sample before eliminating some of the participants, thus making reports of mean age less representative for the sample included in the current meta-analysis. The percentage of girls across the 31 studies was 49.8%. One study lacked information regarding the percentage of girls in the final sample, therefore we could not include information regarding gender distribution (Fredrick et al., 2020). All 32 studies included affective empathy, and out of them, 15 included measures of cognitive empathy as well. The most frequently investigated bystander role was the defender, which was included in all studies with the exception of one study addressing only pro-bully behavior (Troop-Gordon et al., 2019). The next most frequently examined role was the outsider, which was included in 13 studies, and the last was the pro-bully, with 7 studies.

Quality assessment of the included studies

The evaluation of quality assessment resulted in 6 studies being included in the good category, representing high quality, and the remaining 26 studies obtained scores indicating inclusion in the fair category, representing moderate quality. No poor-quality studies were identified. The score for each study was calculated by determining the proportion of affirmative answers. Given that most of the studies were cross-sectional, we did not take into consideration questions which were not applicable to the examined study in calculating the percentage of affirmative answers. For example, question 12 regarding blinding of the assessor to the exposure status of the participants was not applicable across all 32 studies, therefore the percentage of affirmative answers was calculated by dividing to a maximum of 13 possible affirmative answers. The interrater reliability for the quality of the studies between the two assessors was very good, Cohen's $k = 0.87$, $p < .001$.

Overall meta-analytic effects and sensitivity analyses

Table 3.1 summarizes main findings for the association between the involvement of each bystander role and each type of empathy, including sensitivity analyses for ad-hoc measures and other informant reports of empathy.

Table 3.1

Overall meta-analytic effects and sensitivity analyses

Outcome	k	N	*r*	LCI	UCI	I^2	LCI	UCI
Defenders								
Cognitive	17	14.846	*0.26*	*0.21*	*0.32*	*92*	*88*	*94*
Excluding ad-hoc measures for cognitive empathy	10	11.788	*0.20*	*0.16*	*0.25*	*79*	*64*	*89*
Excluding reports by others of cognitive empathy	16	14.658	*0.25*	*0.20*	*0.31*	*92*	*88*	*94*
Affective	31	24.299	*0.29*	*0.24*	*0.35*	*95*	*93*	*96*
Excluding ad-hoc measures for affective empathy	26	14.665	*0.29*	*0.23*	*0.36*	*95*	*94*	*96*
Excluding reports by others of affective empathy	29	24.006	*0.28*	*0.23*	*0.33*	*94*	*93*	*95*
Outsiders								
Cognitive	5	1179	-0.09	-0.28	0.10	92	88	97
Excluding ad-hoc measures for cognitive empathy	4	1062	-0.09	-0.32	0.14	94	92	97
Excluding reports by others of cognitive empathy	4	991	-0.03	-0.21	0.16	88	85	89
Affective	13	7412	*-0.12*	*-0.23*	*-0.01*	*96*	*94*	*97*
Excluding ad-hoc measures for affective empathy	10	5771	-0.13	-0.26	0.01	96	95	97
Excluding reports by others of affective empathy	11	7119	-0.08	-0.19	0.04	96	94	97
Pro-bullies								
Affective	7	4334	*-0.17*	*-0.20*	*-0.14*	*0*	*0*	*77*
Excluding ad-hoc measures for affective empathy	5	2810	*-0.18*	*-0.21*	*-0.14*	*0*	*0*	*77*

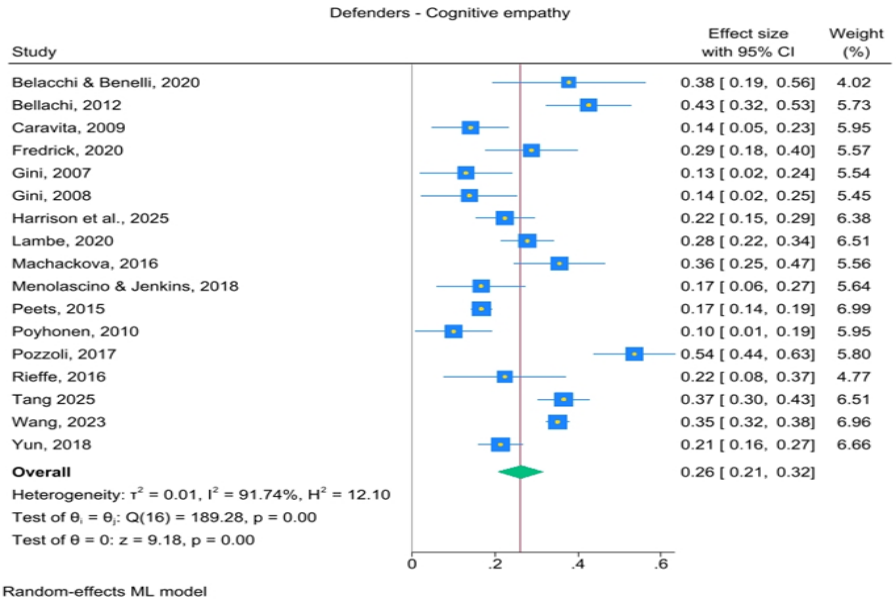
Note: Abbreviations: k = number of studies; N= number of participants; LCI=lower confidence interval, UCI=upper confidence interval, I^2= percentage of heterogeneity. Results are reported with r coefficients, random-effects model. The positive effect indicates a positive association. Significant results are marked with italics.

Defenders

Cognitive empathy and defending showed a significant and positive pooled effect size r = 0.26, 95% CI [0.21, 0.32], indicating a small to moderate correlation. The I^2 index for heterogeneity was high at 92%, 95% CI [88, 94]. Sensitivity analyses for result robustness were conducted by excluding 10 studies with ad-hoc measures and 16 studies with other informants, both for cognitive empathy measures. Results yielded statistically significant associations, but no significant improvement of the correlation. This indicates that the main results were not influenced by studies with these characteristics. A forest plot of the association between defending and cognitive empathy is presented in Figure 3.2.

Figure 3.2

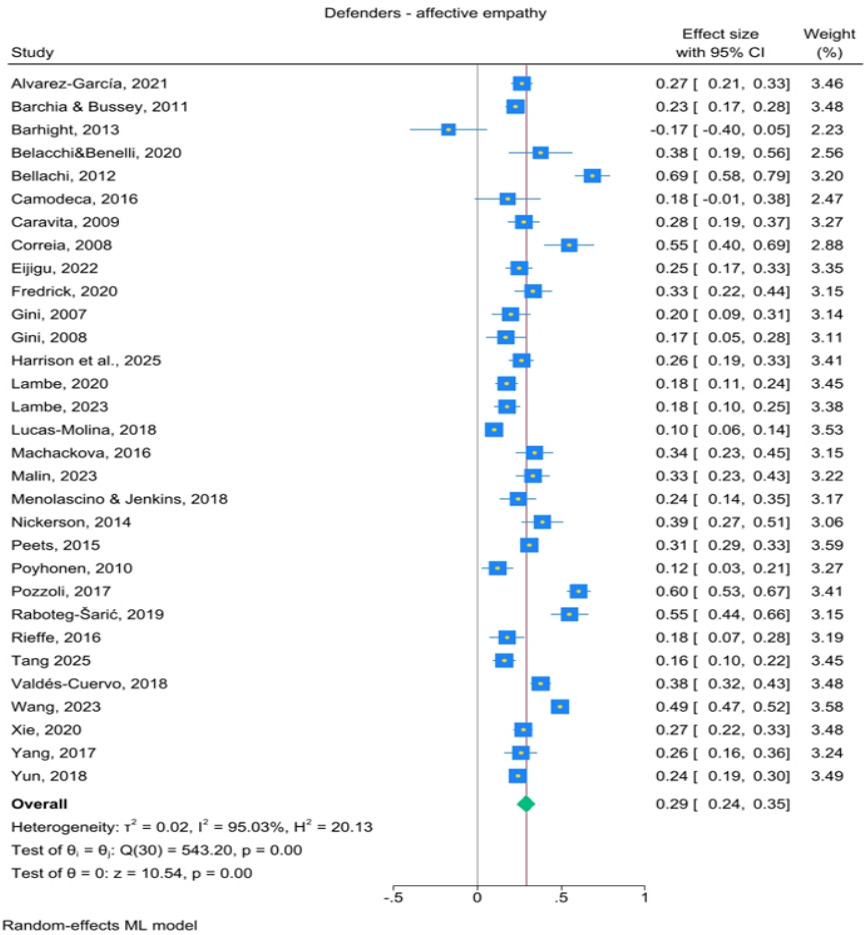
Forest plot: defending and cognitive empathy



The overall effect sizes for affective empathy were also positive and significant r = 0.29, 95% CI [0.24, 0.35], reflecting a small to positive effect size, with high heterogeneity I^2 = 95%, 95% CI [93, 96]. Sensitivity analyses showed that the overall effect remained consistent after eliminating 26 studies with ad-hoc reports and 29 with reports by other informants, indicating that results were not influenced by the investigated characteristics. Figure 3.3 includes forest plots for the associations between defending and affective empathy.

Figure 3.3

Forest plot: defending and affective empathy

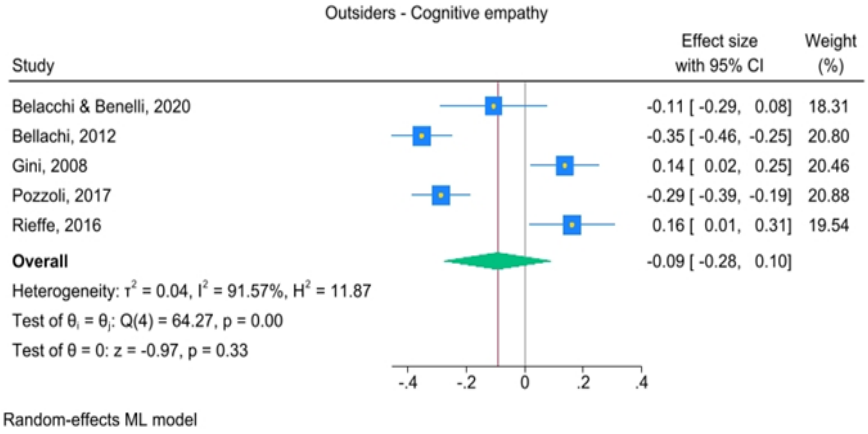


Outsiders

For the association between outsider behavior and cognitive empathy the overall effect size was negative and not significant r = -0.09, 95% CI [-0.28, 0.10]. Heterogeneity was high I^2 = 92%, 95% CI [88, 97]. Sensitivity analyses showed no improvement in effect sizes after excluding ad-hoc and other reported measurements of cognitive empathy. The forest plot, including correlations for each study, is presented in Figure 3.4.

Figure 3.4

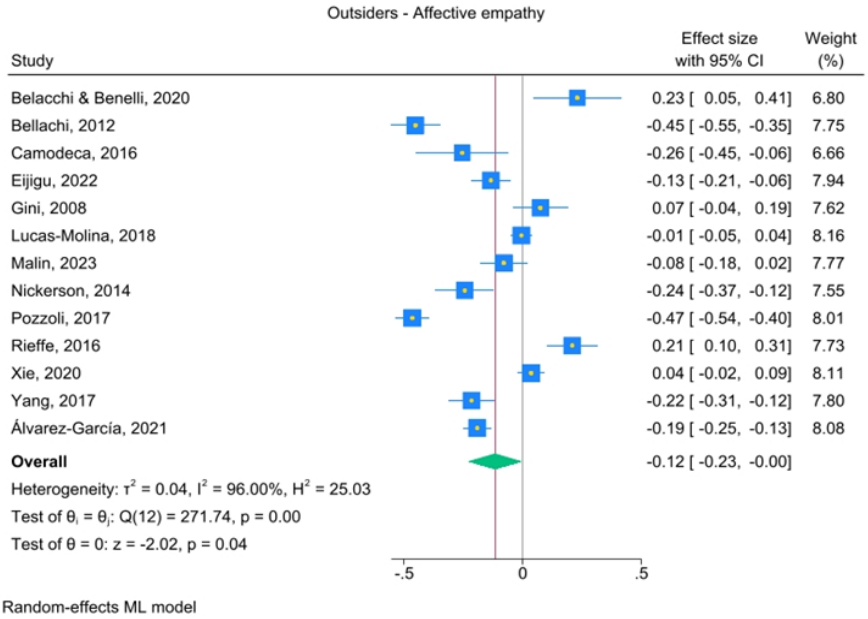
Forest plot: outsider and cognitive empathy



Pooled effect sizes for outsider involvement and affective empathy revealed a small negative significant effect size r = -0.12, 95% CI [-0.23, -0.01], with high heterogeneity levels I^2 = 96%, 95% CI [94, 97]. Sensitivity analyses showed no significant results after excluding ad-hoc and other reports measures for affective empathy. There was a small improvement in the correlation coefficient after excluding ad-hoc measures, but it was not statistically significant. Figure 3.5 presents a forest plot for the outsider-affective empathy association.

Figure 3.5

Forest plot: outsider and affective empathy

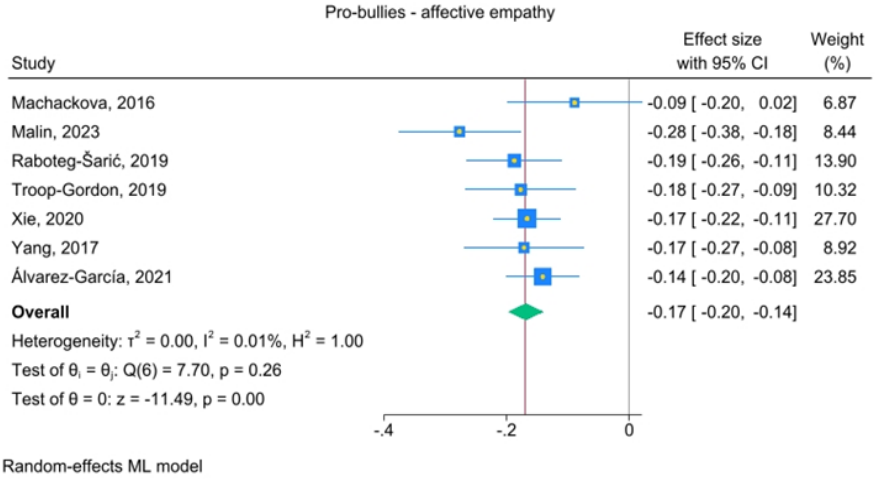


Pro-bullies

The pooled effect size for pro-bully involvement was assessed only with affective empathy due to the lack of studies investigating cognitive empathy. The results indicate a small, negative and significant effect size r = -0.17, 95% CI [-0.20, -0.14]. There was no observed heterogeneity I^2 = 0%, 95% CI [0, 77], meaning that variation across studies was minimal. Sensitivity analyses were performed only by excluding ad-hoc measures for affective empathy and showed a small significant improvement in the pooled effect size r = -0.18, 95% CI [-0.21, -0.14], with minimal heterogeneity as well I^2 = 0%, 95% CI [0, 77]. The forest plot for the associations between pro-bully involvement and affective empathy is presented in Figure 3.6.

Figure 3.6

Forest plot: pro-bully and affective empathy



Meta-regression analyses and small study effects

Random-effect meta-regression analyses were performed to examine whether sample size, mean age and the percentage of girls moderate the associations between each type of empathy and bystander behavior. For the small study effects visual examinations will be described, along with results of the Eggar's test for publication bias. Forest plots of effect sizes for every investigated subgroup and examined funnel plots are presented in Appendix D. Due to the limited number of studies included in the analyses regarding the roles of outsiders and pro-bullies, results should be interpreted with caution.

Defenders

For the association between defending and cognitive empathy neither sample size b = -4.1006, SE = 0.0000, z = -0.25, p = .801, 95% CI [-0.000, 0.000], mean age b = -0.0145, SE = 0.0140, z = -1.03, p = .303, 95% CI [-0.0421, 0.0130], nor the percentage of girls b = -0.0123, SE = 0.0086, z = -1.43, p = .153, 95% CI [-0.0293, 0.0046] were significant moderators. However, the percentage of girls explained 6.54% of the variance in effect sizes. Visual examination of the funnel plot revealed slight asymmetry, but Egger's test indicated no statistically significant proof of publication bias b = 0.41, SE = 1.57, z = 0.26, p = .794.

Results are similar for the association between defending and affective empathy. Sample size b = -0.0000, SE = 0.0000, z = 0.53, p = .593, 95% CI [-0.000, 0.000], mean age b = -0.0066, SE = 0.0126, z = -0.53, p = .599, 95% CI [-0.0314, 0.0181] and the percentage of girls b = 0.0021, SE = 0.0029, z = 0.73, p = .463, 95% CI [-0.0036, 0.0079] were not significant moderators. Based on visual inspection, the funnel plot seems to show some degree of asymmetry. However, Egger's test revealed no significant evidence of publication bias b = -0.92, SE = 1.32, z = -0.70, p = .485.

Outsiders

No significant moderators were revealed for the association between the involvement as an outsider and cognitive empathy (sample size: b = -0.0011, SE = 0.0009, z = -1.31, p = .192, 95% CI [-0.0029, 0.005], mean age b = -0.0488, SE = 0.0263, z = 1.85, p = .064, 95% CI [-0.0028, 0.1006], percentage of girls b = 0.0410, SE = 0.0323, z = 1.27, p = .205, 95% CI [-0.0223, 0.1044]). Although not significant, the sample size explained 18.22% of the variance in effect sizes, age explained 39.82% and the percentage of girls 15%. Visual examination of the funnel plot revealed some degree of asymmetry across included research, but the formal regression-based test of Eggar indicated no significant evidence of publication bias b = 5.39, SE = 6.94, z = 0.78, p = .437.

Similarly, no significant moderators were identified for the relationship between the outsider role and affective empathy across the three tested moderators: sample size: b = 0.0000, SE = 0.0001, z = 0.63, p = .529, 95% CI [-0.0001, 0.0002], mean age b = 0.0263, SE = 0.0173, z = 1.52, p = .129, 95% CI [-0.0076, 0.0603] and percentage of girls b = 0.0088, SE = 0.0117, z = 0.76, p = .448, 95% CI [-0.0140, 0.0318]. Only age explained 13.07% of the variance in effect sizes. Visual examination of the funnel plot revealed signs of asymmetry, but Egger's test was not significant, indicating no publication bias b = -1.41, SE = 3.24, z = -0.43, p = .665.

Pro-bullies

For the association between involvement as a pro-bully bystander and affective empathy there were no significant moderators: b = 0.0000, SE = 0.0000, z = 0.73, p = .462, 95% CI [-0.0000, 0.0001], mean age b = -0.0094, SE = 0.0090, z = -1.04, p = .298, 95% CI [-0.0270, 0.0082] and percentage of girls b = -0.0008, SE = 0.0009, z = -0.95, p = .341, 95% CI [-0.0026, 0.0009]. Age explained 18.28% of the variance across effect sizes. Visual inspection of the funnel plot indicated slight asymmetry, but Egger's test for publication bias was not significant b = -0.90, SE = 1.52, z = -0.59, p = .552, revealing no publication bias.

3.1.4. Discussions and conclusions

This meta-analysis investigated associations between cognitive and affective empathy and three bystander roles: defender, outsider and pro-bully. We tested whether these associations varied across conditions, including empathy instrument validation, self

or other informants, sample size, mean age, and percentage of girls. Results show cognitive and affective empathy are positively related to defending. Outsiders showed a negative relationship only with affective empathy, while for cognitive empathy, this association was negative and non-significant. Due to limited studies on pro-bullies and cognitive empathy, results included only affective empathy associations, revealing a negative significant association with pro-bully involvement.

Defenders

Affective and cognitive empathy were significantly related to defending, though this association was stronger for affective empathy. Previous meta-analytic research showed stronger associations between affective empathy and defending than cognitive empathy (Deng et al., 2021; Imuta et al., 2022). However, our correlation coefficients were larger than those reported in previous research. This could be due to including studies that mostly used validated empathy instruments, obtaining stronger associations.

Positive associations between cognitive and affective empathy and defending indicate that higher empathy levels correlate with more defending behaviors. The slight difference between affective versus cognitive empathy associations is reflected in multiple studies. For example, affective, not cognitive empathy significantly moderated the relationship between victimization and peer defending, suggesting affective empathy might be a stronger motivator of defending (Harrison et al., 2025). In another study, affective empathy predicted defending even when the bully's popularity was high (Choi & Park, 2021). In the same sample, children low in affective and high in cognitive empathy reported reduced intention to defend victims when the aggressor's popularity increased. Improving cognitive empathy through perspective taking skills relates positively to prosocial behaviors (Cigala et al., 2015) and self-reported prosocial actions (Tamnes et al., 2018). In some studies, cognitive, not affective empathy better predicted defending (Rizkyanti et al., 2021). Cognitive and affective empathy may relate differently to intervention steps, as presented in the bystander intervention model (Latané & Darley, 1970). Fredrick et al. (2020) revealed that affective empathy related to interpreting events as emergencies requiring intervention, while cognitive empathy was associated with noticing aggression, accepting responsibility and knowing how to intervene.

According to the empathy-altruism hypothesis (Batson et al., 2015), affective empathy through empathic concern produces altruistic motivation. Affective empathy enables understanding that someone is in need and activates altruistic motivation to increase another person's wellbeing. This activation leads to analyzing the advantages and disadvantages of intervening. When benefits outweigh costs, helping behavior occurs. However, affective empathy alone does not automatically lead to prosocial behavior, the person must be able to take another's perspective, demonstrating cognitive empathy.

Outsiders

Results concerning cognitive and affective empathy's association with outsider behavior revealed small negative association only for affective empathy. Most studies reported negative associations between affective empathy and outsider behavior (Álvarez-García et al., 2021; Camodeca & Coppola, 2016; Yang & Kim, 2017). Results of studies investigating both types of empathy and outsider behavior are divergent. Some show significant positive associations with affective empathy and negative non-significant associations with cognitive empathy (Belacchi & Benelli, 2020), others show non-significant positive results with affective empathy and positive significant results with cognitive empathy (Gini et al., 2008), some obtained negative significant associations with both types (Pozzoli et al., 2017), while others found positive associations with both types (Rieffe & Camodeca, 2016). The current meta-analysis indicates that high affective empathy reduces chances of being a passive outsider when witnessing bullying behavior. Previous meta-analytic data revealed no significant associations between outsider bystanding and either type of empathy (Imuta et al., 2022). The lack of significant results for cognitive empathy could be due to high variance across studies and few studies investigating cognitive empathy in outsiders. According to the empathy-altruism hypothesis, low empathy levels will not activate altruistic motivation, and cost-benefit analysis will show helping is too disadvantageous to intervene (Batson et al., 2015). Outsider behavior was related to empathic distress, suggesting outsiders tend to have a self-focused orientation (Rieffe & Camodeca, 2016), opposite to altruistic motivation, which requires other-orientation (Batson et al., 2015).

Pro-bullies

Analyses showed a small significant negative effect between affective empathy and the pro-bully role. Our results align with previous meta-analytic research (Imuta et al., 2022) for the bully role and follower of the bully role. Zych et al. (2019) identified high empathy as a protective factor against bullying. The only article including cognitive empathy in our meta-analysis (Machackova & Pfetsch, 2016) revealed negative associations with both types of empathy, though not significant. Similar results were found for the bully role with cognitive and affective empathy (Zych et al., 2019). One explanation could be that low empathy links to moral disengagement and justifications for aggressive acts, which predicts bullying perpetration (Kokkinos & Kipritsi, 2018). Meta-analytic data confirm moral disengagement as a predictor of aggressive behaviors (Gini et al., 2014).

Sensitivity, meta-regression analyses, and small study effects

Sensitivity analyses suggested a limited influence of empathy measurement status (validated or ad-hoc) and informant of the empathy measurement (self or other reported) on these associations. The only notable exception was the minimal improvement in the correlation coefficient for pro-bullies when ad-hoc measures for affective empathy were excluded. The slight improvement in effect sizes when ad-hoc measures of empathy were eliminated reflects how higher levels of heterogeneity among empathy instruments and the use of unstandardized or unvalidated instruments can negatively impact the results (Sesso et al., 2021).

Moreover, no significant moderating effect emerged in either of the investigated associations, and no evidence of publication bias was found. One potential reason for the lack of moderation effects might be related to the lower variance levels between the included studies. Indeed, most studies were based on samples within the same age range, including preadolescents and adolescents, and included similar percentages of girls. The absence of evidence for publication bias allows confidence in the obtained results. However, results based on a small number of studies should be treated with caution.

Implications, limitations and future directions

The results of the current meta-analysis and systematic review highlight some important theoretical and practical implications. From a theoretical point of view, it is important to regard empathy as a multidimensional construct rather than a singular one. Cognitive and affective empathy appear to have distinct contributions to bystander behavior. Specifically, affective empathy appears to show greater influence on defender, outsider and pro-bully behavior than cognitive empathy does. Practical implications concern anti-bullying interventions, particularly those focused on bystander interventions (Garandeau et al., 2022). In some cases, training based on affective empathy may be more beneficial to bystanders. Further differentiation in training, allowing greater personalization in accordance with bystander role and type of empathy for each child could also lead to better results.

The current study presents several limitations. First, we found no moderation effect on either tested moderation factor. This could mean that the included studies lacked variation, which would be probable considering that empathy for example develops over time (Dorris et al., 2022) and bullying frequency usually peaks at around 13 years (López-Castro et al., 2023). Future studies could investigate different age ranges, empathy and bystander involvement trajectories across childhood and future meta-analytic studies could explore additional moderators, such as cultural differences, socio-economic status or peer dynamic. Secondly, we only included cross-sectional and baseline or first-wave data, therefore directionality and causality between cognitive, affective empathy and bystander behavior cannot be determined. Future longitudinal studies should address these gaps. Lastly, some of the analyses were based on a limited number of studies, which warrants precaution when interpreting the results. Upcoming studies could investigate not only defenders, but also outsiders and pro-bullies, addressing the lack of extensive data concerning these bystander roles.

This meta-analysis supports the association between cognitive and affective empathy and bystander behavior. Defending was positively related to both types of empathy, with a stronger relationship to affective empathy. Outsider behavior was negatively related only to affective empathy, with a small, negative, non-significant link to cognitive empathy. For pro-bully involvement, affective empathy showed significant negative associations. While moderation analyses showed no significant effect, sensitivity analyses indicated limited improvement for outsiders and pro-bullies when ad-hoc empathy measures were excluded. Our results emphasize the importance of distinguishing between cognitive and affective empathy in future studies and addressing multiple bystander roles beyond defenders.

3.2. Study 2: Measurement Invariance Across Gender, Age, Environment and Time for the Basic Empathy Scale

3.2.1. Introduction

Recent studies have reviewed empathy measurements for youth (Bayne et al., 2024; Neary, 2023; Sesso et al., 2021). Authors identified limitations of assessment instruments, including high variability among empathy definitions, with older instruments incorporating items reflecting empathy and related constructs like sympathy, and evaluating empathy as singular rather than multidimensional (Neary, 2023). The instruments neither consider the age or developmental stage of the child being evaluated (Bayne et al., 2024), nor align with study context and objectives (Sesso et al., 2021). These limitations could hinder understanding empathy's complexity and relationship to other constructs, particularly those relating to harmonious development of children and adolescents, including social interactions, prosocial behavior and those relating to bullying, aggressiveness or offending behaviors. The Basic Empathy Scale (BES), developed by Jolliffe and Farrington (2006a), overcomes several limitations. The BES contains twenty items, nine for cognitive empathy and eleven for affective empathy. Factor analysis confirmed the two-factor solution, providing scores for both types of empathy and general empathy. Developed for adolescents, it facilitates associations between empathy and offending behaviors and suits older children, considering age and development. The BES evaluates empathy as multidimensional, including items based on fear, sadness, anger, and happiness, along with general empathy items. This aligns with The Perception-Action Model (PAM) of empathy, which assumes emotion specificity (Preston & de Waal, 2002). Evidence supports specificity in empathy-induced helping (Dovidio et al., 1990), as people help those with similar problems. BES was designed to make socially desirable answers less identifiable, enabling precise responses.

BES has been translated for youth in Slovakia (Čavojová et al., 2012), Spain (Villadangos et al., 2016), Brazil (Lopes Loureto et al., 2022), and China (Geng et al., 2012). A seven-item version was tested on Salvadoran gang-involved adolescents and young adults (Salas-Wright et al., 2013) with good psychometric properties. Other adaptations led to shorter versions due to low item loading (Anastácio et al., 2016; Pechorro et al., 2015). With increasing studies on BES's psychometric properties, Cabedo-Peris et al. (2021) conducted a systematic review and reliability generalization meta-analysis, showing good reliability for cognitive and affective empathy subscales. However, high effect size heterogeneity was not explained by general versus special samples (clinical or forensic) and generational group, suggesting other moderators, like instrument language, could explain this variance.

Studies investigating the factorial structure of the scale showed contradictory results (Cabedo-Peris et al., 2021; Zych et al., 2022). Studies confirmed the two-factor structure of the BES (e.g., Albiero et al., 2009; D`Ambrosio et al., 2009; Villadangos et al., 2016), while others retained the two-factor solution after eliminating items with lower factor loadings (e.g., Heynen et al., 2016; Pechorro et al., 2015; You et al., 2018), negatively worded items (Zych et al., 2022), items not representative of the construct (Anastácio et al., 2016) or items with low discriminating power (Lopes Loureto et al., 2022). Herrera-López et al. (2017) tested a three-dimensional structure with superior results compared to the initial two-factor model. The three dimensions were emotional contagion, cognitive empathy, and emotional disengagement. Similar results were found by Bensalah et al. (2016) on a French child version of BES and by Chokri et al. (2024) on Arabic-speaking children, confirming good fit indices for the three-factor model. These components of empathy are based on recent theoretical and neurological advances (Decety & Jackson, 2004). The authors propose that empathy comprises three components: affective sharing between people, self-other awareness, and mental flexibility, which interact and correspond to the three-factor models mentioned before.

Measurement invariance across age and gender has been investigated in samples from Portugal, Slovakia, Spain, United States of America, Brazil and Korea, demonstrating that BES measures cognitive and affective empathy equally across populations (Anastácio et al., 2016; Čavojová et al., 2012; Herrera-López et al., 2017b; McLaren et al., 2019; Salas-Wright et al., 2013; You et al., 2018). Since differences in empathy across age and gender are supported by previous studies, establishing whether these reflect fundamental differences in the unobserved construct or measurement artifacts adds accuracy to subgroup comparisons (Benenson et al., 2021; Dadds et al., 2008; Geng et al., 2012; Trentini et al., 2022). However, BES measurement invariance across gender and age is limited to samples from European individualistic countries (Anastácio et al., 2016; Čavojová et al., 2012; Herrera-López et al., 2017b; McLaren et al., 2019; Salas-Wright et al., 2013). Cultural differences in empathy show distinct patterns across collectivistic versus individualistic countries (Jami et al., 2024). Evidence from 63 countries revealed higher dispositional empathy scores in countries with high collectivism (Chopik et al., 2017). Some studies found higher empathy scores in individualistic countries (Jami et al., 2019), while Birkett (2014) found no differences between collectivistic versus individualistic samples. However, examining empathy subscales shows higher personal distress scores in Asian, collectivistic cultures than western, individualistic ones (Birkett, 2014; Cassels et al., 2010). These studies revealed greater empathic concern in individualistic samples. Perspective taking was greater in collectivist cultures (Jami et al., 2019).

While measurement invariance across age and gender has been tested in samples, measurement invariance across time remains undemonstrated. Evidence shows empathy increases across the lifespan, with younger generations showing higher empathy than older ones (Oh et al., 2020). Another relevant grouping relates to urban versus rural environments. Rural adolescents showed higher mean scores on overall empathy compared to urban adolescents (Kaushik et al., 2020). Data showed empathy has a greater effect on prosocial behavior of adolescents from rural areas than urban areas (Nikmah, 2019).

This study analyzes the psychometric properties of the BES in Romanian adolescents. Evidence shows differences in empathy across groups. However, no data exists regarding measurement invariance of BES across gender, age, environment and time in a European collectivistic sample. We aim to address these literature gaps. Our first objective is to test the original bifactorial internal structure of BES. The second aim is to test measurement invariance across gender, age, environment and time. Third, we will provide evidence of reliability through internal consistency values and convergent validity by examining associations between empathy with prosocial behavior and internalizing problems, and discriminant validity by examining the association with externalizing problems.

3.2.2. Method

Participants

The current study included a convenience sample of 543 participants, aged between 11 and 15 years old, and the mean age was 12.75 (*SD* = 1.02). From the total sample, 416 participants completed questionnaires for both time points (T1 and T2), and 127 completed only the first round of questionnaires (T1). Two age groups, one including children between 11-12 years old and another including participants between 13-15 were created to test cross-age measurement invariance. Of the total sample, 48.8% were girls and 50.8% were boys. Most participants declared they lived in urban areas (62.1%).

Procedure

Participants were recruited from 10 public schools across different counties from Romania. Each school was contacted and offered an invitation to participate in the study. Parents were informed about the study and were asked to offer informed consent. Children whose parents agreed to participate were later given instructions about questionnaire completion. Data was collected in two sessions, the first between May and June 2022 and the second between November 2022 and January 2023. All children were briefed that their responses were confidential and that they had the right to withdraw from the study at any time. Data was collected during school hours under the supervision of a trained researcher. Questionnaires were completed in an online format.

Instruments

Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006a) is a twenty-items empathy scale, measuring both affective and cognitive empathy. Subscale scores are obtained by summing scores of the 11 affective items and 9 cognitive ones. It can also offer a general empathy score by summing up all item scores, ranging from 20 to 100. In order to obtain a Romanian version of BES, we first translated BES from English to Romanian. This initial translated version was then back-translated into English by another

bilingual Romanian researcher. Feedback was offered, and the latter back-translated version was compared to the original version of BES. The Romanian version of BES was evaluated as satisfactory. In our sample, internal consistency was 0.72 for affective empathy, 0.78 for cognitive empathy and 0.76 for total empathy at T1 and 0.73 for affective empathy, 0.76 for cognitive empathy and 0.75 for total empathy at T2.

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) is a behavioral screening questionnaire divided into 5 scales: emotional problems, conduct problems, hyperactivity, peer problems, and prosocial scale. Each scale contains 5 items, rated as follows: 0 = "Not true", 1 = "Somewhat true" and 2 = "Certainly true". SDQ's scale scores can be used individually or combined. Externalizing scores are obtained by summing up conduct and hyperactivity scales, and internalizing scores are obtained by summing up emotional and peer problem scales. The externalizing and internalizing scores can range from 0 to 20. A total difficulty score can also be computed by summing up all scales except the prosocial scale. Total difficulties scores can range from 0 to 40. Internal consistency in our sample was 0.68 for prosocial behavior, 0.69 for externalizing problems, and 0.74 for internalizing problems.

Data analysis

Descriptive statistics were computed using IBM SPSS Statistics (version 26) and JASP (version 0.19.3). For factor analyses and measurement invariance we used Mplus (version 8.11) (Muthén & Muthén, 1998). To test normality assumptions, we evaluated Skewness and Kurtosis for each item at T1 and T2. Mardia's test for multivariate normality was computed for both time points. Items at T1 (Mardia Skewness = 19.601, $p < .001$ and Mardia Kurtosis = 213.108, $p < .001$), and T2 (Mardia Skewness = 21.748, $p < .001$ and Mardia Kurtosis = 217.949, $p < .001$) revealed multivariate non-normal distribution. Maximum likelihood estimation was used across models. We tested the original bifactorial model of BES (Jolliffe & Farrington, 2006a) through Confirmatory Factor Analyses (CFA). The model fit was evaluated using: chi-square ($\chi 2$) (Satorra & Bentler, 2001), Root Mean Square Error of Approximation (RMSEA) (Steiger, 1998), Comparative Fit Index (CFI) (Bentler, 1990) and Standardized Root Mean Square Residual (SRMR) (Ximénez et al., 2022). Model fit was considered good if RMSEA < 0.08 (Awang, 2012), CFI > 0.90 (Schumacker & Lomax, 2010), and SRMR < 0.08 (Byrne, 1994). We examined $\chi 2$, but due to its sensitivity to sample size (Alavi et al., 2020), we analyzed the other indicators collectively.

To test measurement invariance across gender, age, environment and time we used Multiple-group Confirmatory Factor Analysis (MG-CFA). According to Widaman and Reise (1997), four steps test measurement invariance: configural invariance, weak factorial or metric invariance, strong factorial or scalar invariance, and strict or residual or invariant uniqueness. These models were tested sequentially with increasingly constraining nested models. First, we tested configural invariance, examining whether constructs have the same free and fixed loadings pattern across groups (girls vs. boys, 11-12 years vs. 13-15 years, urban vs. rural) at both time points, T1, T2, and across time. Second, we evaluated metric invariance - the equivalence of factor loadings. Next, we tested scalar invariance, reflecting that score differences can be attributed to actual differences in the underlying construct. The decision to accept or reject a measurement invariance model was based on multiple indicators, as suggested by Putnick and Bornstein (2016). Measurement invariance was confirmed if delta $\chi 2$ ($\Delta\chi 2$) was nonsignificant, ΔCFI was less than 0.010 (Cheung & Rensvold, 2002), ΔRMSEA was less than 0.015, and ΔSRMR was less than 0.030 for metric invariance and less than 0.015 for scalar or residual invariance (Chen, 2007). When delta $\chi 2$ and another indicator were not optimal, we based our decision mainly on ΔRMSEA and the remaining alternative fit index, as ΔRMSEA is less sensitive to large sample sizes (Schermelleh-Engel et al., 2003). We computed latent mean differences where tests confirmed measurement invariance.

3.2.3. Results

Descriptive statistics

Descriptive statistics for the Romanian version of BES are presented in Table 3.2 for each item at both time points, T1 and T2. Scales and general means of BES are as follows: T1 affective empathy mean was 17.74 (*SD* = 5.12), T1 cognitive empathy was 24.73 (*SD* = 4.02), T1 mean for total empathy was 42.47 (*SD* = 7.27), T2 affective empathy mean was 17.23 (*SD* = 5.23), T2 cognitive empathy was 24.51 (SD = 3.89) and T2 total empathy mean was 41.73 (*SD* = 7.24).

Table 3.2

Descriptive Statistics for Basic Empathy Scale (BES) at T1 and T2

	Table 1 BES T1				Table 1 BES T2			
	Mean	*SD*	Skewness	Kurtosis	Mean	*SD*	Skewness	Kurtosis
Affective								
Item 02	3.42	1.684	-0.509	-0.828	3.272	1.741	-0.383	-1.01
Item 04	2.74	2.1	0.193	-1.314	2.481	2.125	0.448	-1.209
Item 05	2.652	1.641	0.302	-0.94	2.642	1.615	0.314	-0.889
Item 11	3.125	2.025	-0.183	-1.264	3.058	2.223	-0.134	-1.37
Item 15	2.794	1.49	0.095	-0.904	2.788	1.599	0.131	-0.95
Item 17	3.024	1.353	-0.033	-0.643	2.986	1.346	-0.092	-0.654
Cognitive								
Item 03	4.523	0.633	-2.184	5.653	4.382	0.9	-1.925	3.71
Item 09	4.022	1.06	-1.198	1.15	3.976	1.014	-1.04	0.887
Item 10	3.93	1.026	-0.901	0.47	3.93	0.921	-0.808	0.412
Item 12	3.702	1.185	-0.698	0.004	3.736	1.012	-0.714	0.296
Item 14	4.322	0.83	-1.732	3.313	4.344	0.668	-1.394	2.213
Item 16	4.23	0.859	-1.43	2.131	4.139	0.937	-1.251	1.476

Note. SD = Standard deviation.

Confirmatory factor analysis

The two-factor solution was tested in multiple confirmatory factor analyses for each time point. The original version of BES yielded less than acceptable fit indices and low factor loading for some of the items. Negatively worded and reverse-scored items, specifically items 1, 6, 7, 8, 13, 18, 19, 20, were the most troublesome and were therefore excluded from the Romanian version of BES. Similar issues were encountered in previous evaluations of the factorial structure of BES (Anastácio et al., 2016; Heynen et al., 2016; Salas-Wright et al., 2013). The subsequently tested models presented adequate fits for both T1 ($\chi^2 = 190.602$, $df = 53$, $p > .05$, CFI = 0.095, RMSEA 90% confidence interval (CI) = 0.069 [0.059, 0.080], SRMR = 0.057) as for T2 ($\chi^2 = 133.191$, $df = 53$, $p > .05$, CFI = 0.920, RMSEA 90% CI = 0.060 [0.048, 0.073], SRMR = 0.055). The factorial structure of BES at T1 and T2, including unstandardized factor loadings, standard error, standardized factor loadings, and R square, is presented in Table 3.3. The factor loadings were satisfactory, with values over the generally accepted cutoff of 0.5 (Hair et al., 2006), except item 4, which still had an allowable value of 0.45. Interfactor correlation was 0.303, $p < .001$.

Table 3.3

CFA Estimation of Unstandardized, Standardized Factor Loadings and R square for BES at T1 and T2

	BES Factor structure T1				BES Factor structure T2			
	Unstandardized Factor Loading	Standard error	Standardized Factor Loading	R square	Unstandardized Factor Loading	Standard error	Standardized Factor Loading	R square
Affective								
Item 02	-	-	0.519	0.269	-	-	0.532	0.283
Item 04	0.989	0.133	0.459	0.211	1.007	0.148	0.484	0.235
Item 05	1.223	0.13	0.643	0.413	1.08	0.136	0.596	0.355
Item 11	1.213	0.141	0.574	0.329	1.208	0.162	0.568	0.323
Item 15	1.04	0.121	0.574	0.329	1.051	0.133	0.583	0.34
Item 17	1.044	0.115	0.604	0.365	1.02	0.123	0.617	0.381
Cognitive								
Item 03	-	-	0.555	0.308	-	-	0.482	0.233
Item 09	1.564	0.145	0.67	0.45	1.441	0.175	0.655	0.429
Item 10	1.438	0.143	0.626	0.392	1.318	0.17	0.629	0.395
Item 12	1.301	0.144	0.527	0.278	1.427	0.185	0.649	0.421
Item 14	1.407	0.129	0.682	0.464	1.055	0.138	0.591	0.349
Item 16	1.389	0.132	0.661	0.437	1.207	0.159	0.571	0.326

Note. BES = Basic Empathy Scale

Measurement invariance

Using the two-factor model, we tested for measurement invariance across gender, age, environment and time, at both time points, T1 and T2. First, we tested the model fit for each subgroup: girls, boys, adolescents aged between 11 and 13, adolescents aged between 13 to 15, urban and rural. Results are presented in the corresponding table for each category (Table 3.4, Table 3.5 and Table 3.6). Although chi-square values were all significant, this could be attributed to our larger sample size and to chi-square sensitivity to minor deviations from what could be considered an ideal model (Chen, 2007). However, the alternative fit indexes, meaning CFI, RMSEA and SRMR, all provided acceptable values. Next, configural, metric and scalar invariance were tested for each category.

Measurement invariance across gender

Table 3.4 summarizes the results of measurement invariance across gender at T1 and T2. The configural model showed good fit indices at both time points. As with the case of subgroup CFAs, chi-square was significant, CFI values were slightly under the 0.90 cutoff score, but RMSEA and SRMR values were both under the cutoff value of 0.80, thus indicating that a similar factor structure is present across groups. Similar results were obtained for metric and scalar invariances at T1 and T2. When comparing configural and metric models $\Delta\chi^2$ was nonsignificant at both T1 ($\Delta\chi^2 = 17.467$, $p > .05$) and T2 ($\Delta\chi^2 = 10.207$, $p > .05$), and differences in CFI, RMSEA and SRMR were under the established cutoff points. Therefore, we decided to accept this constrained model and confirmed metric invariance across gender at T1 and T2. In the comparison between metric and scalar models, $\Delta\chi^2$ was significant at both time points (T1$\Delta\chi^2 = 40.962$, $p < .05$; T2$\Delta\chi^2 = 47.443$, $p < .05$) and ΔCFI was over the cutoff value of 0.01. However, differences in RMSEA and SRMR were acceptable, therefore we decided to accept the scalar models as well. Equivalent factor loadings are confirmed between the groups.

Latent mean differences for affective and cognitive empathy were estimated. At T1 for affective empathy, boys showed a significantly lower mean difference of -0.571 (*SE* = 0.075, *t* = -7.642, *p* < .001) when compared to girls, but there were no significant differences in cognitive empathy -0.057 (*SE* = 0.043, *t* = -1.321, *p* = .186). At the second time point (T2), the mean difference in affective empathy was -0.624 (*SE* = 0.089, *t* = -6.982, *p* < .001), and in cognitive empathy was -0.157 (*SE* = 0.054, *t* = -2.893, *p* < .05). They were both significant, indicating that boys presented lower affective and cognitive empathy levels than girls.

Table 3.4

Average fit statistics of measurement invariance across gender

	χ^2	*df*	CFI	RMSEA [CI90%]	SRMR	$\Delta\chi^2$	Δ*df*	*p*	ΔCFI	ΔRMSEA	ΔSRMR	Decision
T1												
Girls	157.108	53	0.843	0.086 [0.071, 0.102]	0.063							
Boys	102.442	53	0.929	0.058 [0.041, 0.075]	0.061							
Configural	259.549	106	0.886	0.073 [0.062, 0.084]	0.062							
Metric	277.016	116	0.881	0.072 [0.061, 0.083]	0.070	17.467	10	0.065	-0.005	-0.001	0.008	Accept
Scalar	317.978	126	0.858	0.075 [0.065, 0.085]	0.078	40.962	10	0.000	-0.023	0.003	0.008	Accept
T2												
Girls	102.992	53	0.861	0.067 [0.047, 0.086]	0.059							
Boys	92.303	53	0.925	0.060 [0.039, 0.081]	0.076							
Configural	195.295	106	0.899	0.064 [0.050, 0.078]	0.068							
Metric	205.502	116	0.899	0.061 [0.047, 0.075]	0.076	10.207	10	0.423	0.000	-0.003	0.008	Accept
Scalar	252.945	126	0.856	0.070 [0.057, 0.082]	0.085	47.443	10	0.000	-0.043	0.009	0.009	Accept

Note. T1 sample size: n girls = 265, n boys = 276; T2 sample size: n girls = 211, n boys = 203; χ^2 = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI90% = 90% confidence interval; SRMR = standardized root mean square residual; $\Delta\chi^2$ = chi−square difference; ΔCFI = CFI difference; ΔRMSEA = RMSEA difference.

Measurement invariance across age

Table 3.5 contains results of average fit statistics of measurement invariance across age. The configural model presents good fit indices; chi-square is significant at both time points, CFI is close to 0.9, and RMSEA and SRMR are under the established value of 0.08. At T1, both the differences between the configural and the metric models and the differences between the metric and the scalar models are within the requirements for accepting the corresponding models. $\Delta\chi^2$ is nonsignificant, and differences in CFI, RMSEA and SRMR are under the cutoff values of 0.01 for ΔCFI, 0.015 for ΔRMSEA and 0.030 for metric invariance and 0.015 for scalar invariance for ΔSRMR. Therefore, evidence of configural, metric and scalar invariance across age is confirmed at T1.

Differences between the configural and metric models at T2 were as expected, including a nonsignificant $\Delta\chi^2$ and differences in CFI, RMSEA and SRMR under the cutoff values. In accordance, we accepted the metric model of invariance. Differences in metric and scalar models yielded a significant $\Delta\chi^2$, a CFI over the cutoff value and ΔRMSEA, respectively ΔSRMR under the expected cutoff values, therefore we accepted the scalar model.

Latent mean differences at T1 were nonsignificant for both affective empathy (mean difference = 0.089, *SE* = 0.068, *t* = 1.315, *p* = .188) and cognitive empathy (mean difference = 0.023, *SE* = 0.042, *t* = 0.541, *p* = .588), suggesting no differences between the younger and the older group. Similarly, nonsignificant results were obtained at T2 (mean difference for affective empathy = 0.035, *SE* = 0.080, *t* = 0.436, *p* = .663 and mean difference for cognitive empathy = 0.070, *SE* = 0.053, *t* = 1.325, *p* = .185). These results show no cognitive or affective empathy differences between younger and older adolescents at either time point.

Table 3.5

Average fit statistics of measurement invariance across age

	χ^2	*df*	CFI	RMSEA [CI90%]	SRMR	$\Delta\chi^2$	Δ*df*	*p*	ΔCFI	ΔRMSEA	ΔSRMR	Decision
T1												
< 13 years	121.226	53	0.887	0.074 [0.056, 0.091]	0.070							
≥ 13 years	163.229	53	0.875	0.082 [0.068, 0.097]	0.064							
Configural	284.455	106	0.880	0.079 [0.068 0.090]	0.066							
Metric	293.946	116	0.880	0.075 [0.065 0.086]	0.071	9.491	10	0.486	0.000	-0.004	0.005	Accept
Scalar	303.085	126	0.881	0.072 [0.062 0.082]	0.073	9.139	10	0.519	0.001	-0.003	0.002	Accept
T2												
< 13 years	112.568	53	0.875	0.078 [0.058 0.098]	0.075							
≥ 13 years	97.601	53	0.920	0.060 [0.041 0.079]	0.056							
Configural	210.169	106	0.899	0.069 [0.055 0.082]	0.065							
Metric	223.697	116	0.896	0.067 [0.054 0.080]	0.076	13.528	10	0.196	-0.003	-0.002	0.011	Accept
Scalar	246.621	126	0.883	0.068 [0.055 0.080]	0.083	22.924	10	0.011	-0.013	0.001	0.007	Accept

Note. T1 sample size: n < 13 years = 237, n ≥ 13 years = 306; T2 sample size: n < 13 years = 184, n ≥ 13 years = 232; χ^2 = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI90% = 90% confidence interval; SRMR = standardized root mean square residual; $\Delta\chi^2$ = chi−square difference; ΔCFI = CFI difference; ΔRMSEA = RMSEA difference.

Measurement invariance across environment

Fit statistics of measurement invariance across environments are presented in Table 3.6. Measurement invariance at the configural, metric, and scalar levels for T1 and T1 yielded appropriate model fit index values. As with the previous models, chi-square was significant at both time points, but CFI values were slightly under the cutoff only for values at T1, while at T2 they were over 0.90. The comparisons between the configural with the metric model and those between the metric with the scalar model all exhibited satisfactory differences at both time points, following the proposed criteria. All $\Delta\chi^2$ values were nonsignificant, and ΔCFI, ΔRMSEA and ΔSRMR were less than their cutoff values. Therefore, regarding measurement invariance across environment, equivalence across groups was obtained at the scalar level. This indicates that mean differences in the latent construct reflect all differences in the shared variance among the items.

Latent mean differences reveal no significant differences in affective empathy at T1 between adolescents from rural versus urban regions (mean difference = -0.020, *SE* = 0.071, *t* = -0.287, *p* = .774) but revealed a significant difference for cognitive empathy, adolescents from rural settings displaying lower levels of cognitive empathy when compared to adolescents from urban areas (mean difference = -0.092, *SE* = 0.046, *t* = -2.010, *p* < .05). Result for T2 show no latent mean differences in affective empathy (mean

difference = 0.084, *SE* = 0.082, *t* = 1.019, *p* = .308), nor in cognitive empathy (mean difference = -0.041, *SE* = 0.053, *t* = -0.783, *p* = .434).

Table 3.6

Average fit statistics of measurement invariance across environment

	χ^2	*df*	CFI	RMSEA [CI90%]	SRMR	$\Delta\chi^2$	Δdf	*p*	ΔCFI	ΔRMSEA	ΔSRMR	Decision
T1												
Urban	141.723	53	0.877	0.070 [0.057 0.085]	0.063							
Rural	110.425	53	0.920	0.073 [0.053 0.092]	0.061							
Configural	252.148	106	0.899	0.071 [0.060 0.083]	0.062							
Metric	265.166	116	0.896	0.069 [0.058 0.080]	0.070	13.018	10	0.223	-0.003	-0.002	0.007	Accept
Scalar	271.369	126	0.899	0.065 [0.055 0.076]	0.078	6.203	10	0.798	0.003	-0.004	0.000	Accept
T2												
Urban	124.352	53	0.874	0.074 [0.057 0.091]	0.059							
Rural	80.736	53	0.940	0.055 [0.028 0.078]	0.076							
Configural	205.088	106	0.903	0.067 [0.053 0.081]	0.068							
Metric	215.590	116	0.903	0.064 [0.051 0.077]	0.076	10.502	10	0.398	0.000	-0.003	0.006	Accept
Scalar	227.836	126	0.901	0.062 [0.049 0.075]	0.085	12.246	10	0.269	-0.002	-0.002	0.003	Accept

Note. T1 sample size: n urban = 337, n rural = 206; T2 sample size: n urban = 244, n rural = 172; χ^2 = chi-square; df = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI90% = 90% confidence interval; SRMR = standardized root mean square residual; $\Delta\chi^2$ = chi−square difference; ΔCFI = CFI difference; ΔRMSEA = RMSEA difference.

Measurement invariance across time

Results of measurement invariance across time are presented in Table 3.7. General model fit values for each time point were addressed in a previous section concerning the Confirmatory Factor Analysis. Configural, metric and scalar models showed adequate model fit indexes. Differences between the configural and the metric model are as expected, $\Delta\chi^2$ values are nonsignificant and ΔCFI, ΔRMSEA and ΔSRMR were all under the established cutoff values, confirming the presence of measurement invariance at a metric level. In comparing the metric and the scalar models, $\Delta\chi^2$ became significant, but the rest of the indicators were under the cutoff values. Therefore, we also decided to accept the model at the scalar level, establishing scalar measurement invariance across time.

Latent mean differences reveal significant results for affective empathy of -0.071 (*SE* = 0.034, *t* = -2.081, *p* < .05), indicating that affective empathy levels at T2 were significantly lower than those obtained at T1. No significant latent mean differences were identified for cognitive empathy (mean difference = 0.025, *SE* = 0.025, *t* = -1.003, *p* = .316).

Table 3.7

Average fit statistics of measurement invariance across time

	χ^2	*df*	CFI	RMSEA [CI90%]	SRMR	$\Delta\chi^2$	Δdf	*p*	ΔCFI	ΔRMSEA	ΔSRMR	Decision
Configural	642.541	246	0.862	0.054 [0.049 0.060]	0.060							
Metric	654.113	256	0.862	0.054 [0.048 0.059]	0.063	11.572	10	0.315	0.000	0.000	0.003	Accept
Scalar	673.393	266	0.859	0.053 [0.048 0.058]	0.065	19.280	10	0.037	-0.003	-0.001	0.002	Accept

Note. N = 543; χ^2 = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI90% = 90% confidence interval; SRMR = standardized root mean square residual; $\Delta\chi^2$ = chi−square difference; ΔCFI = CFI difference; ΔRMSEA = RMSEA difference.

Reliability and validity of BES

Cronbach's alpha internal consistency coefficients were .72 for affective empathy, .78 for cognitive empathy, and .73 for the entire scale at T1 and .73 for affective empathy, .76 for cognitive empathy, and .75 for total empathy at T2. Associations between affective, cognitive and total empathy at both time points with prosocial behavior, internalizing and externalizing problems are presented in Table 3.8. All correlations with prosocial behavior were positive and significant, with the exception of affective empathy at T2. Similar results were obtained regarding internalizing problems, low positive and significant correlations, except cognitive empathy at both time points. Externalizing problems were positively correlated with affective empathy at T1 and negatively correlated with cognitive empathy at T2.

Table 3.8

Correlations between BES subscales and total score with SDQ subscales

Subscale	1	2	3	4	5	6	7	8
1. T1 affective empathy								
2. T1 cognitive empathy	.255**							
3. T1 total empathy	.845**	.732**						
4. T2 affective empathy	.602**	.151**	.507**					
5. T2 cognitive empathy	.195**	.441**	.378**	.245**				
6. T2 total empathy	.540**	.346**	.570**	.854**	.714**			
7. Prosocial behavior	.095*	.342**	.256**	0.068	.287**	.203**		
8. Internalizing problems	.348**	0.037	.266**	.256**	0.049	.211**	-.089*	
9. Externalizing problems	.139**	-0.082	0.052	0.09	-.116*	0.003	-.284**	.543**

Note. BES = Basic Empathy Scale, SDQ = Strengths and Difficulties Questionnaire, *$p < .05$, **$p < .001$

3.2.4. Discussions and conclusions

With concern for the factorial structure of the Romanian version of BES, the two factor CFA results yielded suboptimal values of fit indexes, therefore, the model could not be accepted. Subsequent item analysis revealed that some of the items had low factor loadings. These problematic items were reverse-scored and some worded negatively, for example item 7 from the original version: "I don't become sad when I see other people crying". Eliminating these items significantly improved both factor loadings for each item and model fit indices for the two factor model, at T1 and T2. Other researchers encountered similar difficulties with items when investigating the factor structure of BES. Items were eliminated based on their lack of discriminative power (Anastácio et al., 2016; Lopes Loureto et al., 2022), due to their low factor loadings (Bensalah et al., 2016; Geng et al., 2012; Heynen et al., 2016; McLaren et al., 2019; Pechorro et al., 2015) or because they were regarded as inappropriate or not applicable for the sample (Heynen et al., 2016; Salas-Wright et al., 2013; Sánchez-Pérez et al., 2014). Specifically, negatively worded items were eliminated in a couple of cases where BES was adapted for certain samples, such as juvenile offenders (Heynen et al., 2016) or gang involved adolescents and young adults (Salas-Wright et al., 2013). One possible explanation for this could be that younger children and children with lower reading skills might have difficulties interpreting these negatively worded items (Marsh, 1986). These different interpretations for negatively worded items are stable over time, but they differ from those of the positively worded items in both youth (Borgers et al., 2004) and adult samples (Weems et al., 2003). Changing items from their negative form to their positive counterparts improved reliability values and the factor structure of the investigated instruments (Dodeen, 2023). All negatively worded items and some positively worded items were also reverse-scored. Low factorial loadings of these items could be explained by requiring additional mental effort to be understood correctly (Weijters & Baumgartner, 2012). At the same time, participants could be negligent with their responses to reversed items (Zhang et al., 2016), or they might be having difficulties deciding whether the reverse item is in accordance with the participant's own beliefs (Swain et al., 2008).

Results from the current study also support evidence of measurement invariance across gender, age, environment and time. For measurement invariance across gender, results confirmed the scalar model of invariance for both time points. This indicates that adolescents across genders have the same understanding of the items included in BES. Given that scalar invariance was attained and it is a minimal condition for latent mean difference across groups, we also looked at comparisons in affective and cognitive empathy across groups. Latent mean differences revealed that boys had lower affective empathy levels at T1 and lower levels of cognitive empathy at both T1 and T2. Results were consistent with previous studies indicating generally lower levels of empathy in boys than in girls (Trentini et al., 2022). Sex differences in empathy are attributed to multiple factors, such as neurobiological ones, including greater activation in mirror neuron networks and areas linked to emotion regulation in women compared to men, as well

as different patterns of information processing and social and cultural influences in the form of gendered socialization and expectation (Rochat, 2023).

Concerning measurement invariance across age, we obtained strong, scalar invariance for T1 and T2. This means that adolescents, regardless of age, understood and interpreted the items of BES similarly. Latent mean differences revealed no differences in affective or cognitive empathy between younger and older adolescents. This could be explained by the fact that our sample was composed of adolescents within a small age range, 11 to 15 years old, and whatever differences there might have been were too small to be detected. On the one hand, our results are consistent with those who identified no age effect on empathy (Dadds et al., 2008; Sánchez-Pérez et al., 2014), but on the other hand, studies that highlighted age differences in empathy were based on samples of different ages, from childhood, adolescence, and adulthood (Dorris et al., 2022). This could help reveal significant changes in developmental trajectories of empathy.

Scalar measurement invariance was obtained across environment at both time points. This illustrates that adolescents from both urban and rural settings interpret BES items similarly. Latent mean differences present significant differences only in cognitive empathy and only at T1. Adolescents from rural settings displayed lower levels of cognitive empathy than adolescents from urban settings. This is in line with studies identifying lower levels of cognitive empathy than affective empathy in students from rural areas (Nguyen & Newton, 2019).

Lastly, we retained all models for measurement invariance across time, indicating that adolescents have similar understandings and interpretations of BES items at different time points, six months apart. This shows that the current version of BES possesses certain stability in time. Latent mean differences show lower empathy levels at the second time point than at the first one. Dorris et al. (2022) revealed that adolescents scored lower than children on empathy. Our results reflect comparable tendencies. One possible reason can be associated with compensatory hyperactivation in adolescents' emotional empathy-related brain regions, associated with lower cognitive empathic abilities (Kim et al., 2020).

Internal consistency values are in accordance with those obtained in previous studies, although lower than the means identified in a recent meta-analysis (Cabedo-Peris et al., 2021). However, all Cronbach's alpha values exceeded the established cutoff value of 0.70, indicating good internal consistency. Evidence of convergent validity was offered by positive, significant associations between empathy at both time points with prosocial behavior and internalizing problems, as expected. Other studies reported similar results (Bray et al., 2021; Geng et al., 2012). Discriminant validity was obtained by means of a low positive association with affective empathy at T1 and a negative association with cognitive empathy at T2. Studies suggest that some externalizing behaviors stem from heightened emotional sensitivity (Paz et al., 2021), which might correspond to empathic distress, usually a component of affective empathy.

Implications

The results of the current study have methodological and practical implications. We confirmed the two-factor structure of BES and measurement invariance across gender, age, environment and time. The Romanian version of BES also has good internal consistency and convergent, respectively, discriminant validity. Therefore, BES has a solid psychometric base and can make valuable comparisons across girls and boys, younger and older adolescents, adolescents from urban or rural areas, and across time. From a practical point of view, BES can be confidently used to assess empathy in adolescents and adolescents with a background of European collectivistic origins, thus enabling meaningful evaluations across cultures. At the same time, this study is the first to test and confirm measurement invariance across environment and time, a much-needed development, especially in the light of heightened variability among the majority of instruments addressing empathy (de Lima & Osório, 2021).

Limitations and future directions

Several limitations need acknowledgment. First, we collected data during school hours in larger groups, which might lead to lower concentration and attention paid to items (Bowne et al., 2017). Second, our analyses were based on unequal groups at two time points and across groups regarding the environment. This could impact fit indexes for measurement invariance (Alavi et al., 2020). However, we addressed this by considering multiple fit indexes. Future studies could investigate BES factor structure across samples from different cultures and measurement invariance between clinical versus community samples. This could be useful, as BES was created to evaluate empathy in samples with aggression or offending backgrounds.

The current study proves good psychometric properties in BES among Romanian adolescents. We confirmed the original two factor solution and provided evidence of measurement invariance across gender, age, environment and time. We obtained good values for interval consistency, both overall and for each subscale, and support for convergent and discriminant validity. Our findings advance future studies regarding affective, cognitive, and general empathy for theory and interventions aimed at youth samples. We offer evidence for the psychometric properties of the Romanian BES and facilitate research in countries with Eastern European collectivistic backgrounds.

3.3. Study 3: Social Competence Characteristics and Mental Health Problems in Defenders of Bullying Victims: a Latent Profile Analysis

3.3.1. Introduction

Bullying remains a frequent issue in today's educational system. Bullying is defined as intentional aggressive behaviors aimed at hurting another person, characterized by repetitiveness and a power imbalance (Olweus, 2013). A recent study estimated that 30.5% of children and adolescents were victims of bullying on one or more days in the last 30 days (Biswas et al., 2020). Involvement in school bullying has negative consequences that persist into adulthood, such as anxiety and depression symptoms, suicidal ideation and substance abuse (Halliday et al., 2021).

An important direction in understanding bullying behaviors among youths focuses on bystanders in the bullying dynamic (Salmivalli et al., 1998). Recently, it has been proposed that successful interventions aimed at reducing bullying victimization and perpetration should focus on bystanders, specifically on encouraging them to intervene as defenders of victims (Menesini & Salmivalli, 2017). Evidence showed that programs encouraging bystander intervention are effective in increasing defensive behaviors towards bullying victims and decreasing bullying perpetration and victimization (Huitsing et al., 2014; Polanin et al., 2012).

Research into bullying defenders usually portrays them as a homogenous group of well-adjusted and socially competent youths (Park, 2013). Evidence shows that defending was associated with positive indicators including empathy, self-esteem, self-efficacy, assertiveness, social-emotional competencies, popularity and peer acceptance (Gini et al., 2008; Jenkins & Tennant, 2022; Ma et al., 2019; Poyhonen et al., 2010; Sainio et al., 2011). However, the stereotypical profile of defenders as well adjusted and socially competent was questioned by several studies, emphasizing that defenders might be heterogenous and not all possess these positive characteristics (e.g., Malamut et al., 2021)).

Social competence and defending

Empathy is a key social competence dimension studied in relation to defending behavior (Yin & Wang, 2023). Theoretical frameworks propose that exposure to victim distress triggers empathy and desire to reduce that distress, resulting in helping behaviors (Batson, 1987; Hoffman, 2000). This is supported by evidence showing empathy's positive association with bystander defending among youths (Deng et al., 2021; Gini et al., 2007; Zych et al., 2019). However, some studies found a negative correlation between empathy and defending in school bullying (Barhight et al., 2013), while others reported no significant relationship (Jenkins et al., 2016). Conflicting results emerged when empathy was measured as a multidimensional construct of affective and cognitive empathy. Wolfgang (2017) reported that affective empathy, but not cognitive empathy positively predicts defending, while Polanin et al. (2012) concluded that only cognitive empathy relates positively to being a defender in bullying dynamics. Furthermore, some studies indicated contrasting directionality, with affective empathy being negatively associated with defending behavior (Barhight et al., 2013).

A relevant dimension of social competence linked to defending in school bullying is prosocial behavior. Research emphasizes that those who intervene for victims in bullying situations report high levels of prosocial behavior (Evans & Smokowski, 2015). However, other studies indicate that defending is not always prosocial behavior, but can consist of passive aggressive, non-assertive behavior, especially in groups with low anti-bullying sensitivity (Carmona-Rojas et al., 2023).

Mental health and defending

Research on defending's effects on defender mental health yielded controversial results for internalizing and externalizing problems. Studies support that defending benefits not only victims and reduces school bullying frequency, but also strengthens defenders' self-esteem and wellbeing (Correia et al., 2009; Evans et al., 2018). Other studies reported that intervening for victims does not predict later internalizing problems such as depressive symptoms or school anxiety (Lubon et al., 2024; Malamut et al., 2021). For externalizing symptoms, teacher ratings of externalizing problems were lower for children reporting higher defending (Badger et al., 2023). Similarly, conduct problems were negatively associated with defending (Thornton et al., 2012).

Research raises concerns over potential detrimental effects of defending behaviors on defenders' mental health (Evans et al., 2018; Wu et al., 2018). Self-reported defending was positively associated with concurrent symptoms of internalizing problems (Callaghan et al., 2019; Evans et al., 2018; Wu et al., 2018). Youths who actively intervene for victims reported more negative emotions, such as guilt and sadness, compared to passive bystanders (Lambe et al., 2017). Poor mental health outcomes for defending have been documented in relation to externalizing problems. In an observational study, Hawkins e al., (2001) identified defenders that use physical aggression as a response to bullying situations. When successful, these strategies are being negatively reinforced, resulting in a pattern of aggressive behaviors and externalizing problems (Davis et al., 1998; Jouriles et al., 2014).

Previous studies suggest that youths who adopt the role of defenders in bullying dynamics are a heterogeneous group, contradicting the narrative of socially competent and well-adjusted defenders. The variety of social, emotional and behavioral characteristics associated with defending, along with contradictory results, suggest several different profiles among defenders, based on their social competencies and mental health problems. To investigate this possibility, a person-centered analytic approach is needed. Unlike the variable centered approach, this will unmask how these characteristics may be combined (Laursen & Hoff, 2006). Furthermore, existing research investigating distinct profiles of defenders focused on motivations to intervene and involvement in other bullying roles (Wu et al., 2016; Yun, 2020). To our knowledge, no study has examined defenders' profiles of

social and emotional characteristics, as well as internalizing and externalizing psychopathology concurrently. Therefore, this study aims to explore whether different profiles of defenders exist based on affective and cognitive empathy, prosocial behavior, internalizing and externalizing symptoms and to characterize these profiles. This could have implications for future bystander interventions by offering tailored strategies for defenders, based on their strengths and weaknesses.

3.3.2. Method

Participants

The initial sample consisted of 675 children and adolescents, with ages between 11 and 15 years old. For the purpose of this study, we included only those participants with a total score of at least 3 on the defending scale. The final sample consisted of 380 participants. Mean age of the sample was 12.63 years (*SD* = 1.04). Gender distribution was 52.89% girls and 47.11% boys. Most of the participants reported living in an urban area (63.42%).

Procedure

We collected data from 10 public schools from Romania. Schools were contacted and invited to participate in the study. Parental consent was obtained and children whose parents provided consent were subsequently approached and asked for their agreement to participate in the research. Children were given detailed instructions regarding the questionnaires they were required to complete, informed about the confidentiality of their responses and reminded of their right to withdraw from the study at any time. Data collection took place online during school hours, under the supervision of a research assistant to ensure adherence to the study protocol.

Measures

Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006a) was used to assess affective and cognitive empathy. The scale consists of 20 items and was developed to assess the extent to which someone can comprehend and share others' emotional experiences. An example of a cognitive item would be "I find it hard to know when my friends are frightened", while an example of an affective item would be "I often get swept up in my friend's feelings. In our sample, Alpha Cronbach was .68 for affective empathy and .73 for cognitive empathy.

The Student Bystander Behavior Scale (SBBS) (Álvarez-García et al., 2021) was used to assess the involvement of each participant as a defender. The scale has 10 items divided in 3 subscales: passive bystanding, pro-bully and defending. For the purpose of this study, we only used the defending behavior subscale. Each item is dichotomically rated, with "Yes"/ "No" answers. Defending scores were obtained by summing the number of affirmative answers, ranging from 0, therefore lack of defending to 4, reflecting greater involvement as a defender. In our sample, the Alpha Cronbach was .87.

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) was used to assess internalizing, externalizing problems and prosocial behavior. SDQ contains 25 items, rated on a 3-point Likert scale (0 = Not true, 1 = Somewhat true and 2 = Certainly true). Examples of items include "I get very angry and often lose my temper" and "I worry a lot". In our sample, Alpha Cronbach coefficient was .71 for externalizing problems, .74 for internalizing problems and .50 for prosocial behavior.

Data analysis

Latent Profile Analyses (LPA) using the maximum likelihood estimation with robust standard errors were employed to identify distinct defending profiles using mean scores of 5 indicators: cognitive empathy, affective empathy, externalizing, internalizing problems and prosocial behavior. Mplus (version 8.11) and jamovi (version 2.3) softwares were used for main, respectively additional analysis. Solutions with one to four profiles were estimated sequentially. The optimal number of profiles was determined by assessing their interpretability and comparing various fit indices, including Log Likelihood, the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), Sample-Adjusted BIC (SABIC), Entropy and Lo-Mendell-Rubin Test (LMR) (Ferguson et al., 2020). The model with the best fit was characterized by lower AIC and BIC values, a significant LMR, and the highest entropy value. Additionally, profiles representing less than 5% of the sample were excluded to avoid the challenges associated with underrepresentation (Spurk et al., 2020) The selection of the ideal number of profiles does not rely on a single method (Masyn, 2013); instead, it involves integrating empirical evidence with insights from the existing literature.

3.3.3. Results

Table 3.9 presents relative goodness-of-fit indices for LPA models ranging from two to four profiles. Log Likelihood, AIC and SABIC values consistently decreased with the inclusion of each additional profile in the model. The 4-profile model was excluded because it yielded an extremely small subgroup size, specifically less than 5% of the sample. Conserving this, models containing 2, respectively 3 profiles were further compared. With the exception of SABIC, whose value was marginally lower for the 2-profile model compared to the 3-profile solution one, all other indicators, Log Likelihood, AIC, BIC and Entropy provided a better fit for the 3-profile model. Additionally, the LMR test also supported the 3-profile solution.

Table 3.9

Fit statistics for latent profile analysis

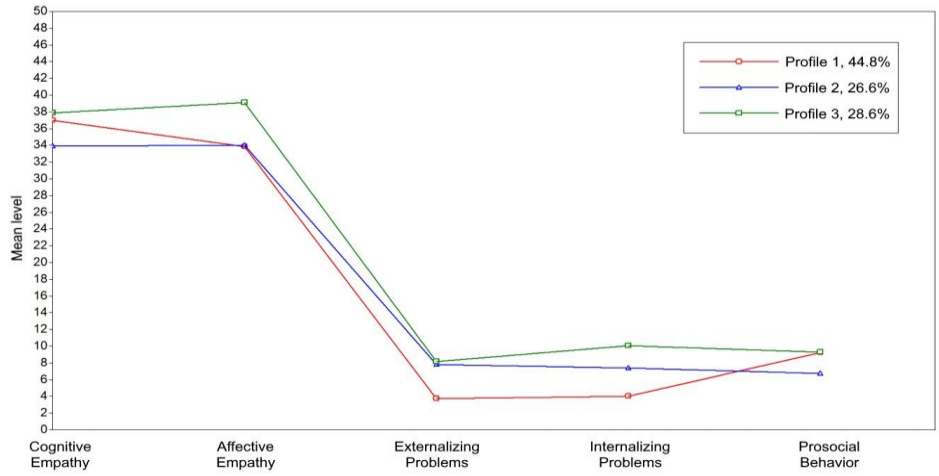
Model	Log Likelihood	AIC	BIC	SABIC	Entropy	*p* Value for LMR	LMR	Smallest category (%)
1	-5035.01	10090.02	10129.21	10097.48				
2	-4956.19	9944.38	10007.08	9956.32	0.71	.001	2>1	45
3	**-4898.51**	**9841.03**	**9927.25**	**9857.45**	**0.75**	**.001**	**3>2**	**26**
4	-4887.55	9831.1	9940.83	9852	0.72	.21	4=3	0,7

Note. The bold line indicates selected model. Abbreviations: AIC, Akaike Information Criterion; BIC, Bayesian Information Criterion; LMR, Lo, Mendell and Rubin test; LPA, latent profile analysis; SABIC, sample-adjusted BIC

Figure 3.7 presents the proportion of participants in each profile and means for each of the four indicators. The first and largest profile consisted of 44.8% of students. It was labeled "adaptive defenders" and is characterized by high cognitive empathy, low affective empathy, low externalizing, respectively internalizing problems and high prosocial behavior. Second profile accounted for 26.6% of participants and was labeled "low empathy, dysregulated, low prosocial defenders". Children in this profile showed lower cognitive and affective empathy, high levels of both internalizing and externalizing problems and low prosocial behavior. The third and last profile included 28.6% of participants. Its label was "high empathy, dysregulated, high prosocial defenders". Participants inside this profile had high levels of both types of empathy, although the cognitive one had lower levels compared to the affective one and low externalizing problems, high internalizing problems and high prosocial behaviors.

Figure 3.7

Proportions of participant and variable means for the three-profile model



Note. Profile labels are: Profile 1: adaptive defenders; Profile 2: low empathy, dysregulated, low prosocial defenders; Profile 3: high empathy, dysregulated, high prosocial defenders. Percentages in the upper right corner represent the proportion of participants in each profile.

3.3.4. Discussions and Conclusions

Previous studies on defending have largely used variable-centered methods, limiting exploration of how mental health issues, such as externalizing and internalizing problems, manifest in children who defend others (Reijntjes et al., 2011; Tennant et al., 2019). These studies often overlook characteristics like empathy and prosocial behavior. By adopting a person-centered approach, this study confirmed different subgroups of defenders, based on social competence characteristics, internalizing and externalizing problems. Three distinct profiles emerged: an adaptive profile, with high cognitive empathy and prosocial behavior and low affective empathy, externalizing and internalizing problems; a dysfunctional non-empathic profile, with high externalizing

and internalizing problems and low cognitive empathy, affective empathy and prosocial behavior; and a dysfunctional empathic profile with high levels of all characteristics. Results show that investigating defending profiles offers a detailed understanding of children who engage in defending behaviors. Furthermore, it provides insights into how defenders, even resilient ones, may be at risk for developing mental health issues. Their vulnerability to mental health problems should be addressed more often, especially given new findings provided in this paper.

Our findings suggest that socially competent defenders make up the profile with the most participants. Children in this group understand the victim cognitively, without excessive affective empathy that could impede prosocial behavior (Pang et al., 2022). This aligns with studies showing stronger associations between prosocial behavior and cognitive empathy facets than with affective empathy facets (Pang et al., 2022). In this profile, higher empathy levels, low externalizing, internalizing problems and high prosocial behavior align with research identifying negative associations between empathy and externalizing/internalizing problems and positive associations between empathy and prosocial behavior (Başay et al., 2021). However, while this profile matches a resilient defender, children still exhibit some externalizing and internalizing problems. This highlights that no defender profile is completely free of mental health issues.

The other two identified profiles are distinguished by an interesting pattern of social competence characteristics and mental health problems. While both second and third profiles were characterized by higher levels of both internalizing and externalizing problems, compared to the first profile, one profile had the highest levels of cognitive empathy and prosocial behavior, whereas the other had the lowest levels of cognitive empathy and prosocial behavior.

The relationship between empathy and externalizing problems is complex in both profiles. In the second profile, low empathy corresponds with high externalizing behaviors. Research by Gambin and Sharp (2016) indicates a negative association between empathy and externalizing behaviors, explaining this profile's tendency toward such behaviors. Low empathy partially mediates the relationship between externalizing problems and aggressive behavior (de Sousa et al., 2021), suggesting children in this profile may struggle with empathy deficits. In contrast, the third profile shows high empathy while still exhibiting significant externalizing behaviors. Studies indicate that some externalizing behaviors may emerge from heightened emotional sensitivity rather than lack of empathy (Paz et al., 2021). The high empathy in this profile suggests difficulties managing intense emotions could contribute to externalizing difficulties. Such findings are corroborated by Liu et al. (2023), who propose that externalizing behaviors follow varied trajectories, some stemming from low empathy and others from heightened emotional sensitivity with regulation difficulties (Paz et al., 2021).

Regarding empathy and internalizing problems, the profiles show differences in how affective empathy interacts with internalizing symptoms. In the second profile, low empathy correlates with lower levels of internalizing symptoms compared to the third profile, but indicates significant internalizing problems. This aligns with studies showing negative associations between empathy and internalizing problems (Başay et al., 2021). In contrast, children in the third profile show high cognitive and affective empathy, coinciding with elevated internalizing problems. Bray et al. (2021) show positive associations between affective empathy and internalizing symptoms, with affective empathy more closely linked to internalizing issues than cognitive empathy. This is evident in the third profile, where higher affective empathy correlates with increased internalizing symptoms, as children respond strongly to distressed peers (Klimecki et al., 2014). Therefore, emotional regulation becomes essential, as children need good regulation skills to manage distress from intense empathic responses (Decety & Jackson, 2004). Empathy training increases negative affect in children, heightening sensitivity to others' suffering and reinforcing brain regions associated with empathy for pain (Klimecki et al., 2014). This suggests that children with high affective empathy may struggle to manage distress when empathizing, increasing their susceptibility to internalizing symptoms.

Despite differences in empathy levels, both profiles share similar levels of externalizing and internalizing problems, which may be partially attributed to variations in emotion regulation abilities (Paulus et al., 2021). In the second profile, low empathy and limited emotion regulation skills might contribute to a high degree of internalizing and externalizing problems. Poor emotion regulation is linked to heightened aggression (Mitchison et al., 2020) and reduces the ability to empathize, leading to increased self-focus, rather than other-focus (Eisenberg et al., 1998). Without adequate regulation, children in this profile may be more likely to experience aggressive behaviors and less able to engage in empathy-driven responses, leading to pronounced externalizing and internalizing symptoms. In contrast, children in the third profile demonstrate high empathy levels alongside similar levels of externalizing and internalizing problems, again suggesting that emotion regulation plays a central role. For these children, effective emotional regulation is important in managing the distress associated with high empathy, particularly affective empathy. Deficiencies in emotion regulation have been observed to exacerbate both internalizing and externalizing symptoms (Cai et al., 2021). This is evident in the third profile, where high empathy might intensify emotional sensitivity. Children with strong empathy but low regulation abilities may be more vulnerable to self-focused distress, exacerbating both internalizing and externalizing issues. Children skilled in emotional regulation display fewer behavioral issues, while those with lower regulation skills are prone to more severe internalizing and externalizing symptoms (Mihic & Novak, 2018). This complex relationship is further highlighted by Powell (2018), who found that while cognitive empathy typically lowers distress, it does not reduce anxiety in individuals who habitually suppress emotions, suggesting that emotional regulation is central to managing distress levels in empathetic children.

Prosocial behavior varies between the two profiles, with distinct relationships. In the second profile, low empathy accompanies reduced prosocial behaviors, as children may lack motivation or abilities for prosocial actions (Hoffman, 2000). In contrast, children in the third profile, with high cognitive and affective empathy, show prosocial behavior levels similar to the first profile. Their strong empathy enables them to empathize deeply, driving prosocial actions despite distress. Bailey et al. (2020) suggest that children with high affective empathy often overcome personal distress to help others. Emotion regulation processes may transform empathy into prosocial behavior, as these children prioritize other-oriented actions (Song et al., 2018). This aligns with evidence that prosocial behavior requires self-regulation skills, while externalizing behaviors stem from lack of regulation, and internalizing symptoms from over-regulation (Memmott-Elison et al., 2020). Thus, children with high empathy and sufficient regulation skills may act more prosocial, despite experiencing internalizing and externalizing problems.

These profiles show how empathy and emotion regulation align to externalizing, internalizing problems and prosocial behaviors. The second profile's low empathy and poor regulation contribute to higher externalizing and internalizing issues and reduced prosocial behavior. The third profile's capacity for prosocial behavior amid distress shows empathy's potential to drive prosocial actions, while balanced empathy with robust regulation skills could protect against severe internalizing and externalizing problems (Dunsmore et al., 2013; Tully et al., 2016).

Implications

The present study highlights several significant theoretical and practical implications. From a theoretical perspective, the current study offers a new approach for future research regarding defending behavior in school bullying settings. We propose a new defender profile classification, one that takes into account both social competence factors, such as empathy and prosocial behavior and mental health issues, as externalizing and internalizing problems.

Regarding practical implications, our findings could improve bullying interventions by increasing bystander involvement. It provides understanding of defender characteristics, including empathy and prosocial behavior, and their challenges, such as externalizing and internalizing problems. While the first profile matches the stereotypical defender who is resilient with minor difficulties, the other profiles show more prominent externalizing and internalizing problems. These issues can lead to children's future vulnerability, including mental health problems and increased victimization risk (Lambe et al., 2017).

Moreover, the findings of our study emphasize the importance of tailoring the prevention and intervention programs to fit defenders' unique social competence characteristics and mental health problems. For example, children with deficits in either affective or cognitive empathy could benefit from interventions aimed at promoting empathy, gaining a dual advantage: reduced aggression and increased protection against the potential development of internalizing and externalizing problems. On the other hand, for children who already have high levels of empathy, particularly affective empathy, interventions could focus less on developing this facet of empathy and more on effective emotional regulation strategies. Specifically, these interventions can help children learn how to better manage the distress caused by heightened affective empathy and how to respond effectively in such situations (Espenes et al., 2024). In this way, these children can continue to engage in defender behaviors and prosocial actions without being at risk of developing internalizing problems.

Thirdly, future prevention and intervention programs could take into consideration and address children's mental health issues, such as externalizing and internalizing problems. If children involved in bullying, regardless of their role, are at risk of developing long lasting issues these issues should be tackled from the start. It is important to develop and test comprehensive interventions, which account for the complexity of the problems children face each day at school, both individual and interpersonal, in order to raise resilient children.

Limitations and future directions

The current study presents several limitations. First, the cross-sectional design prevents identifying temporal relationships between characteristics and tracking children's transitions between profiles. Second, the internal consistency for empathy subscales, particularly affective empathy, was less than optimal, highlighting the need to validate instruments measuring complex constructs. Using self-report scales with behavioral tasks or multiple informants could address these challenges. Regarding the LPA models, the selected three-profile model shows acceptable indicators, though replication in other samples could achieve better fit indices.

Moreover, the present study addressed only a subset of characteristics that can define a defender's profile. While empathy and prosocial behavior are essential and desirable traits in most settings, it is crucial for future studies to focus more on the problematic aspects defenders may face. In this study, we broadly addressed externalizing and internalizing problems, a more in-depth analysis was beyond the scope of our objectives. However, future interventions could benefit from a more nuanced understanding of these difficulties. Specifically, behaviors typically associated with externalizing and internalizing problems, such as aggression, delinquent behavior, substance abuse, depressive symptoms, or anxiety, might be present among defenders and relate differently to prosocial behavior (Memmott-Elison et al., 2020).

In conclusion, the present study aimed to identify defender profiles based on five indicators: cognitive empathy, affective empathy, externalizing problems, internalizing problems, and prosocial behavior. Among all the tested models, the three-profile solution showed the most optimal fit indices. Data revealed the presence of an adaptive profile, characterized by moderate empathy levels, low levels of externalizing and internalizing problems, and high levels of prosocial behavior. In contrast, the other two

profiles highlight the challenges defenders may face. The second profile is marked by low empathy, high levels of both externalizing and internalizing problems, and low prosocial behavior, while the third profile shows high empathy, higher internalizing problems compared to externalizing ones, and elevated prosocial behavior. These findings confirm that defenders also encounter difficulties and possess unique characteristics that should be considered in the development of future interventions. Such considerations are crucial both for protecting defenders from developing future mental health issues and for maximizing the effectiveness of bystander-based interventions.

3.4. Study 4: Empathy and Peer Defending: Half-Longitudinal Mediation Role of Social and Emotional Competencies[2]

3.4.1. Introduction

Being defended by a peer was positively related to the adjustment and social status of the victim (Sainio et al., 2011) and to diminished daily mood problems (Laninga-Wijnen et al., 2024). Being defended could also moderate the risk factors for victimization, such as social anxiety and peer rejection (Kärnä et al., 2010). These risk factors were greater in classrooms with high bully reinforcing and low peer defending. Additionally, bystander interventions, including strategies for raising victim defending among peers, are effective in reducing bullying behavior (Hikmat et al., 2024; Polanin et al., 2012). Therefore, it would be advantageous to identify the factors that facilitate defending behavior. This way, we can contribute to better and more efficient bullying prevention and intervention programs.

Empathy is one such factor that has been consistently investigated in relation to different aspects of bullying, such as significant relationships between low empathy and bullying (Jolliffe & Farrington, 2006b). Cognitive empathy refers to the ability to understand the perspectives and feelings of others (Dorris et al., 2022), whereas affective empathy reflects the sharing of the emotional response of the interacting partner (Cuff et al., 2016). A systematic review indicated that bullying was negatively associated with both affective and cognitive empathy, victimization was negatively associated only with cognitive empathy, and defending was consistently positively associated with both types of empathy (van Noorden et al., 2015). Meta-analytic data also confirmed these results in multiple instances (Imuta et al., 2022; Ma et al., 2019). Given its importance in bullying studies, raising empathy towards victims or developing social skills such as empathy have been components of many intervention or prevention programs aimed at reducing bullying or victimization in schools (Gaffney et al., 2021).

Previous examples indicate that interventions, including empathy training (Gaffney et al., 2021), can effectively reduce bullying and victimization. Although we know empathy's potential in these interventions, we know little about the mechanisms underlying this association. One potential candidate are social and emotional competencies (SEC). According to The Collaborative for Academic, Social and Emotional Learning (CASEL) (CASEL, 2013), social and emotional competencies reflect skills allowing people to recognize, understand, regulate, and express emotions in the larger context of social interactions, all while making responsible decisions. There are five interconnected areas in which SEC can be categorized: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Social-emotional learning interventions aiming to improve SEC are effectively enhancing social functioning, social inclusion, and school well-being in students (Hassani, 2024). Furthermore, a recent review of meta-analyses concerning universal school-based social-emotional learning programs confirmed statistically significant results, including better SEC, prosocial behaviors, academic success, lower levels of conduct problems, and emotional distress (Durlak et al., 2022).

General, cognitive, and affective empathy have been positively associated with total SEC scores in several studies (Ferreira et al., 2024; Hirn et al., 2019; Llorent et al., 2020, 2021). In younger children, positive empathy, meaning expressing happiness resulting from understanding another person's positive affect, was positively associated with social competence at the first measurement and at the second time point one year later (Sallquist et al., 2009). More empathic children demonstrate a better understanding of socially sensitive behavior, such as shyness and aggression, than their less empathic peers, which might indicate better social competence (Findlay et al., 2006). In adolescents, changes in empathy predicted individual differences in social competencies twenty-three years later (Allemand et al., 2015). Additionally, children's social competencies mediate the relationship between parents' cognitive empathy and children's emotional and behavioral problems (Meng et al., 2020). Given that affective and cognitive empathy are heritable traits (Abramson et al., 2020), children's empathy could also predict better SEC for themselves.

SEC is of great importance not only for the healthy development of children and important life outcomes in adulthood but also plays a relevant role in behavioral change processes (Domitrovich et al., 2017). Interventions aimed at developing better SEC in children efficiently raise prosocial behaviors, such as helping, comforting, and cooperating (Schonert-Reichl et al., 2012). Results are consistent with meta-analytic data, demonstrating overall improvement in social skills, mental health, and prosocial behavior (Sklad et al., 2012). Indeed, adolescents who act in a prosocial manner are more socially accepted by their peers and have better peer relationships (Zorza et al., 2013). Additionally, victim-oriented defending, meaning consoling or comforting bullying victims, is positively associated with social acceptance and perceived friendship, which are indicators of SEC (Reijntjes et al., 2016). At the

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other end of the spectrum, children with aggressive behaviors, for example, bullies and bully-victims have lower levels of SEC in comparison to uninvolved children (Zych et al., 2018). Coelho and Sousa (2021) confirmed better SEC scores for adolescents uninvolved in bullying.

Evidence thus far shows that higher levels of empathy are associated with peer defending (Ma et al., 2019). Social and emotional skills are positively related to general and specific types of empathy (Ferreira et al., 2024), and are relevant to aggressive and prosocial behaviors during childhood development (Belacchi et al., 2022). Peer status or peer acceptance has been identified as a significant mediator in the relationship between empathy and defending (Zhou et al., 2024). In younger children, being liked by peers was related to more prosocial behaviors and higher levels of emotional competencies (Farina & Belacchi, 2022). These interactions act as a positive feedback loop, encouraging children to further act in prosocial ways. Future interventions concerning bystander behavior and defending victimized peers could benefit from a better understanding of the mechanisms on which these relationships are based. However, we still lack extensive knowledge of how empathy promotes prosocial behavior. We propose that SEC could function as a bridge between empathy and defending, representing the missing link that contributes to empathy's involvement in defending and prosocial behavior. Accordingly, the current study aims to investigate at two time points the role of SEC as a mediator in the relationship between empathy and defending. More specifically, the study's first objective is to test whether SEC mediates the relationship between cognitive empathy and defending, and the second objective is to test SEC's role as a mediator between affective empathy and defending behavior in a sample of Romanian adolescents.

3.4.2. Method

Participants

The total sample included 695 participants. Of these, 414 completed both time points and 281 completed the scales only at T1. The number of total participants at T1 was 695, with a mean age of 12.72 (*SD* = 1.14). Some adolescents (*n* = 19) with data at both time points were excluded from the analysis due to invalid responses, meaning all items were answered with one rating such as 1 or 3, regardless of item content. Missing data were managed by full information maximum likelihood (FIML), which showed superior results compared to other techniques such as listwise deletion or mean imputation (Enders, 2001). This enabled us to include participants with scores for only the first time point. Demographic data were only collected at T1. Gender distribution at T1 reflects a majority of boys, with a percentage of 50.94%. Most adolescents were from urban areas (65.75%). Mean age of participants at T2 was 13.20 years (*SD* = 0.89). In this portion of the sample, 48.30% were boys. Both participants at T1 and T2 had ages ranging from 11 to 15.

Procedure

Ten schools across four counties from Romania were invited to participate in the study. Informed consent was obtained from parents after they were informed of the study. Only adolescents whose parents signed the informed consent were included in the sample. Additionally, assent from the adolescents was also requested. We first collected data between May and June 2022 (T1), and then, the second time, between November 2022 and January 2023 (T2). We informed all adolescents about the confidentiality of their responses and their right to withdraw from the study at any time. Data were collected online during school hours under the supervision of a trained member of the research team. Adolescents completed an online form containing all questionnaires. The questionnaires were completed in their classrooms or in the computer science labs using their phones or the laptops made available by the school. All three instruments were collected at both time points.

Instruments

The Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006a) was used to measure cognitive and affective empathy in adolescents. It has 20 items, 9 for cognitive empathy and 11 for affective empathy. It can also provide a total empathy score. Both subscale and total empathy scores were calculated by summing all items. Each item is rated on a five-point Likert scale, from 1 representing "Strongly disagree" to 5 meaning "Strongly agree". Of the 20 items, eight were reverse-scored. In our sample, the Cronbach's alpha coefficient at T1 was .72 for cognitive empathy and .71 for affective empathy, respectively, while for T2 it was .76 for both cognitive and affective empathy.

The Student Bystander Behavior Scale (SBBS) (Álvarez-García et al., 2021) was used to assess different types of bystander involvement, such as the defender of the victim, pro-bully, or passive behavior. In the current study, we used only the defender subscale of the instrument. The scale is composed of 10 items, each evaluated dichotomously by answering "Yes" or "No". Adolescents are first presented with the definition of bullying and then asked how they reacted in that situation or how they would react in such a situation. A score for defending was obtained by summing all the affirmative answers. Scores could range from 0, reflecting no defending behavior, to 4, representing a more active role as a defender. The internal consistency in our sample for T1 was .56 and for T2 .67.

The Social and Emotional Competencies Questionnaire (SEC-Q) (Zych et al., 2018) was used to assess adolescents' social and emotional competencies. It contains 16 items distributed across four subscales: self-awareness, self-management and motivation, social-awareness and prosocial behavior and decision making. Each item is rated on a five-point Likert scale, from 1 representing "Strongly disagree" to 5 meaning "Strongly agree". The questionnaire offers the possibility of calculating both subscale scores and a total social and emotional competencies score by summing the scores of each item corresponding to a subscale or all

items for the total score. For this study, we only used the total score for social and emotional competencies. Internal consistency for T1 and T2 was .88, indicating excellent reliability.

Data analysis

Descriptive preliminary analysis included mean, standard deviation, and correlations between all variables at both time points, and were analyzed using RStudio (RStudio Team, 2024). Reliability analyses were performed using the Jamovi (version 2.3). For the study's main aim, respectively, to test the mediation effect of social and emotional competencies on the relationship between empathy and defending, a cross-lagged panel model for a half-longitudinal design was used. This type of design allows causal relationships to be revealed in datasets with only two time points (Preacher 2015). Although it makes it possible to test for indirect effects, it limits the ability to directly test for stationarity and the stability of the model over time. The half-longitudinal design was introduced by Cole and Maxwell (2003) and estimates the indirect effect by multiplying two paths, a and b. The first one, path "a", is the effect of the predictor, in this case, first cognitive, then affective empathy at T1 on the mediator, social and emotional competencies at T2. The second one, the "b" path, is the effect of the mediator at T1 on the criterion, specifically peer defending at T2. Although this model cannot directly test for stationarity, it is an important assumption. We used the robust maximum likelihood estimator to adjust for non-normal data to estimate the regression model. The Henze-Zirkler test for multivariate normality at both time points was non-significant, meaning that our data did not fit the normality assumption (Henze & Zirkler, 1990). We also examined the skewness and kurtosis for each variable. Skewness values ranged between -0.09 and -0.87, and kurtosis values between -0.89 and 1.49, considered within normal limits (Lei & Lomax, 2005). For the assessment of indirect effects, maximum likelihood bootstrapped mediation analysis was used, with 3000 iterations. Confidence intervals of 95% were generated, and an indirect effect was considered significant if the confidence intervals did not contain 0 (Preacher & Hayes, 2004). Because this model has zero degrees of freedom, the fit indices are rendered irrelevant.

3.4.3. Results

Descriptive statistics

Table 3.10 presents descriptive statistics and correlations between all variables at the first and second time points. All correlations were positive and significant, as expected, except for the correlation between affective empathy and SEC at both time points and the correlation between cognitive empathy and defending both at T2, which were not significant.

Table 3.10

Means, standard deviations, and correlations between variables

Variable	*M*	*SD*	1	2	3
First time point (T1)					
1. SEC T1	61.93	11.10			
2. Cognitive Empathy T1	35.78	5.45	.45**		
3. Affective Empathy T1	34.62	7.20	.01	.26**	
4. Defending T1	2.56	1.25	.14**	.14**	.15**
Second time point (T2)					
1. SEC T2	61.19	11.06			
2. Cognitive Empathy T2	35.83	5.52	.49**		
3. Affective Empathy T2	34.27	7.59	.08	.26**	
4. Defending T2	2.50	1.37	.22**	.09	.15**

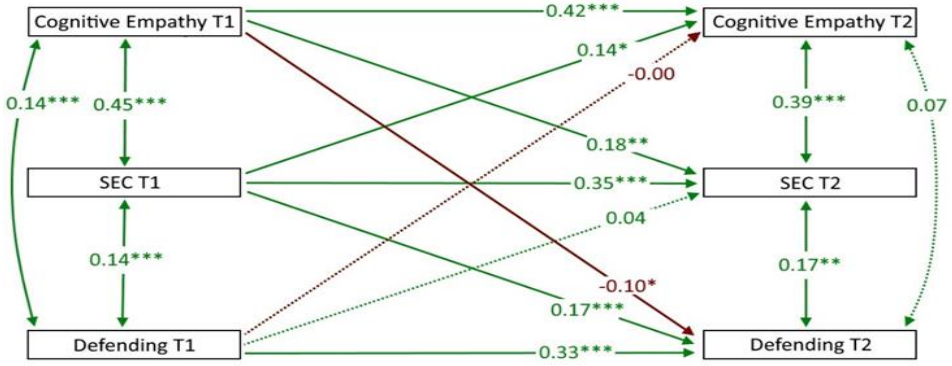
Note. M and *SD* are used to represent mean and standard deviation, respectively. * indicates $p < .05$. ** indicates $p < .01$. SEC= Social and Emotional Competencies

Half-longitudinal mediation model with cognitive empathy

In order to investigate the first objective of our study, respectively, to test the effect of SEC on the relationship between empathy and defending, we used a cross-lagged half-longitudinal design to test mediations with two time points, as portrayed in Figure 3.8.

Figure 3.8

Cross-lagged panel model for a half-longitudinal design for testing the indirect association between cognitive empathy and defending via social and emotional competencies



Note. T1= Time 1, T2 = Time 2, SEC = Social and Emotional Competencies, * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$, continuous lines represent significant relationships, dotted lines represent non-significant relationships, green lines represent positive relationships and red lines represent negative relationships.

We first tested the "a" path of the mediation model, regressing SEC at T2 on cognitive empathy at T1. Indeed, cognitive empathy at T1 predicted higher levels of SEC at T2, β = 0.18, $p = .003$. For the second path, "b", we regressed defending at T2 on SEC at T1. SEC at T1 positively predicted defending at T2, β = 0.17, $p < .001$. Lastly, the indirect effect of the interaction between paths "a" and "b" was also statistically significant, β = 0.03, $p = .019$, confirming the indirect mediation effect. The results of each regression and indirect effects are presented in Table 2. There was a significant negative direct effect of cognitive empathy at T1 on defending behavior at T2, β = -0.10, $p = .031$.

Table 3.11

The standardized coefficients, along with their 95% bootstrap confidence interval

Predictor	Criterion	β	95% CI Lower	95% CI Upper	*z*	*p*
SEC T1	SEC T2	0.35	0.23	0.48	5.52	< .001***
Cognitive Empathy T1	Cognitive Empathy T2	0.42	0.28	0.57	5.69	< .001***
Defending T1	Defending T2	0.33	0.26	0.47	6.78	< .001***
Cognitive Empathy T1	Defending T2	-0.10	-0.05	-0.00	-2.15	.031*
Cognitive Empathy T1	SEC T2	0.18	0.13	0.62	2.94	.003**
Defending T1	Cognitive Empathy T2	-0.00	-0.37	0.34	-0.06	.954
Defending T1	SEC T2	0.04	-0.45	1.11	0.81	.420
SEC T1	Defending T2	0.17	0.01	0.03	3.53	< .001***
SEC T1	Cognitive Empathy T2	0.14	0.01	0.13	2.36	.019*
Indirect effect	*a1*b1*	*0.03*	*0.00*	*0.02*	*2.35*	*.019**

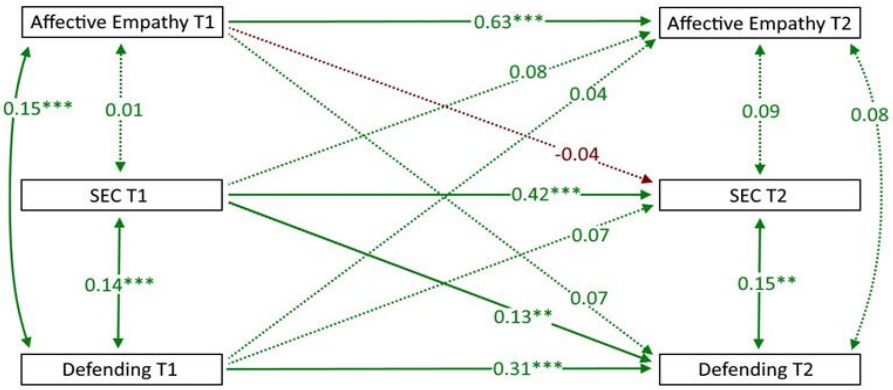
Note. * $p < .05$. **, $p < .01$. ***, $p < .001$, T1 = time 1, T2 = time 2, SEC = Social and Emotional Competencies, CI = Confidence Interval, a1 = Regression coefficient for the effect of cognitive empathy at T1 on SEC at T2, b1 = Regression coefficient of SEC at T1 on defending at T2, β = Standardized Beta Coefficient.

Half-longitudinal mediation model with affective empathy

The mediation model based on affective empathy is shown in Figure 3.9. The "a" path, specifically, the regression of SEC at T2 on affective empathy at T1, yielded non-significant results, meaning that affective empathy at T1 does not predict SEC at T2, β = -0.04, *p* = .146. However, the "b" path, respectively, the regression of defending at T2 on SEC at T1 was significant β = 0.13, *p* = .002. SEC at T1 positively predicted defending at T2. The indirect effect, meaning the interaction between paths "a" and "b", was also non-significant, β = -0.00, *p* = .467, indicating no indirect effect of affective empathy on defending through SEC. Table 3 summarizes the results of the regression analysis of this model. Affective empathy at T1 had no direct effect on defending at T2, β = 0.07, *p* = .146.

Figure 3.9

Cross-lagged panel model for a half-longitudinal design for testing the indirect association between affective empathy and defending via social and emotional competencies



Note. T1= Time 1, T2 = Time 2, SEC = Social and Emotional Competencies, * indicates *p* < .05. ** indicates *p* < .01. *** indicates *p* < .001, continuous lines represent significant relationships, dotted lines represent non-significant relationships, green lines represent positive relationships and red lines represent negative relationships.

Table 3.12

The standardized coefficients, along with their 95% bootstrap confidence interval

Predictor	Criterion	β	95% CI Lower	95% CI Upper	*z*	*p*
SEC T1	SEC T2	0.42	0.31	0.53	7.36	< .001***
Affective Empathy T1	Affective Empathy T2	0.63	0.58	0.76	14.12	< .001***
Defending T1	Defending T2	0.31	0.23	0.45	6.18	< .001***
Affective Empathy T1	Defending T2	0.07	-0.01	0.03	1.45	.146
Affective Empathy T1	SEC T2	-0.04	-0.20	0.08	-0.78	.436
Defending T1	Affective Empathy T2	0.04	-0.22	0.75	1.07	.283
Defending T1	SEC T2	0.07	-0.20	1.36	1.48	.138
SEC T1	Defending T2	0.13	0.01	0.03	3.09	.002**
SEC T1	Affective Empathy T2	0.08	0.00	0.11	1.96	.050
Indirect effect	*a1*b1*	*-0.00*	*-0.00*	*0.00*	*-0.73*	*.467*

Note. * indicates *p* < .05. ** indicates *p* < .01. *** indicates *p* < .001, T1 = time 1, T2 = time 2, SEC = Social and Emotional Competencies, CI = Confidence Interval, a1 = Regression coefficient for the effect of affective empathy at T1 on SEC at T2, b1 = Regression coefficient of SEC at T1 on defending at T2, β = Standardized Beta Coefficient.

3.4.4. Discussions and conclusions

This study aimed to test the mediating effect of SEC on the relationships between cognitive, respectively affective empathy, and defending behaviors in a cross-lagged half-longitudinal study. The results concerning the first model, including cognitive empathy, confirmed the mediation hypothesis, stating that cognitive empathy is indirectly associated with defending through SEC. Adolescents with higher cognitive empathy have higher levels of SEC and are more likely to be involved in defending behaviors. Several studies have shown that empathy and defending are indirectly related through other factors, such as motivation to defend (Longobardi et al., 2020), peer acceptance (Kim & Park, 2021) and student-teacher relationship (Rizkyanti et al., 2021), but only the latter included cognitive empathy. The indirect effect of cognitive empathy on defending is consistent with results indicating that cognitive empathy contributes more to defending than affective empathy (Rizkyanti et al., 2021). Other studies have highlighted that cognitive empathy is more strongly associated with SEC than affective empathy is (Hirn et al. 2019; Llorent et al. 2020). Children with high cognitive empathy are more likely to notice bullying events, accept responsibility to intervene, and report knowledge on how to intervene (Fredrick et al., 2020). Additionally, SEC at the first time point positively predicted defending six months later at the second time point. Literature confirms that perceived social competence is associated with higher levels of autonomous prosocial motivation, which was later associated with greater prosocial behavior (Collie, 2022). Furthermore, meta-analytic data on the follow-up effects of interventions aimed at promoting social and emotional competencies indicate that these interventions contribute to more prosocial attitudes and behaviors among children (Taylor et al., 2017). Adolescents with high cognitive empathy might be more likely to defend their peers, especially due to better social skills that allow them to navigate difficult situations such as bullying.

Regarding the significant negative direct effect of cognitive empathy on defending, our results are in line with those observing that only affective empathy, not cognitive empathy, was predictive of defending behavior both over time (Van Der Ploeg et al., 2017) and cross-sectionally (Belacchi & Farina, 2012). One possible explanation could be that cognitive empathy alone might not be enough to directly influence prosocial behavior. For example, Belacchi and Farina (2012) showed that children with high affective, not cognitive empathy are more emotionally connected to others, which in turn is associated with more prosocial behavior. At the same time, there are no differences in cognitive empathy between aggressive and non-aggressive children (van Zonneveld et al., 2017). Our defending measurement included all defending scores and not only those with higher defending levels. Therefore, it could also take into account adolescents who, although they have higher levels of cognitive empathy, do not involve themselves in prosocial actions such as peer defending. Additionally, according to interdependence theory (Meter & Card, 2015), the decision to act in unjust social situations is influenced not only by individual factors, but also by social dynamic characteristics, such as social status, social reward, or avoidance of harm. Adolescents with high cognitive empathy are less likely to defend their peers and more likely to stand passively when the bully is perceived as popular (Choi & Park, 2021). When the bully was not considered popular, adolescents were more likely to defend their peers, indicating that the decision to intervene or not might be influenced by social factors, as well as individual ones. Taking into consideration both individual and social factors, adolescents with high cognitive empathy might choose not to defend and even avoid defending their peers if they evaluate those situations as threats to their well-being or lacking benefits or rewards.

The second-tested half-longitudinal mediation model, including affective empathy, was not significant. First, affective empathy at T1 did not predict social and emotional competencies at T2. Cognitive and affective empathy have different genetic and environmental origins; specifically, affective empathy is more heritable and cognitive empathy is influenced by the shared family environment (Abramson et al., 2020). Therefore, it is plausible to observe dissimilar patterns across relationships with the other constructs. For example, affective and cognitive empathy relate differently to emotion regulation (Thompson et al., 2022). Higher affective empathy was related to heightened emotional interference tasks, whereas no such relationship was found for cognitive empathy. These findings suggest that greater affective empathy indicates increased emotion regulation difficulties. Concurrently, interpersonal emotion regulation predicts social competencies (Malkoç et al., 2019), and longitudinal data have shown cascading and reciprocal effects between SEC and emotional regulation (Blair et al., 2015). SEC was also positively associated with emotional regulation strategies, such as cognitive reappraisal and expressive suppression (Chen et al., 2024). Furthermore, emotion regulation skills are an important part of social and emotional learning interventions such as RULER, a school-based approach for developing SEC in children (Hoffmann et al., 2020).

Taking all information into consideration, it might be that affective empathy is less compatible with social and emotional competencies since it is not as strongly related to skills such as good emotion regulation strategies, which are an important part of SEC and are necessary to prosocial behavior. Affective empathy has been previously linked to internalizing symptoms (Bray et al., 2021), and has been shown to predict greater affective distress than cognitive empathy. Decety and Jackson (2004) proposed that, for children with high levels of affective empathy, good emotion regulation skills might be required to manage personal emotional distress related to their empathy responses. This might later allow them to act in prosocial ways, in this case defending victimized peers. Such data could potentially explain why, in our study, affective empathy at the first time point did not predict defending at the second time point and why there was no significant mediation effect of SEC on the relationship between affective empathy and defending.

Implications

The findings of the current study have several theoretical and practical implications. From a theoretical perspective, they broaden our understanding of the relationship between empathy and defending behavior. Following empirical and theoretical points of view (Decety & Holvoet, 2021) it is important to acknowledge and view cognitive and affective empathy separately, as they have different routes regarding their effects on defending behavior. Our results confirm that SEC represent one intermediate factor, a mechanism through which we can explain cognitive empathy's indirect influence on defending.

From a practical perspective, our data contribute to the improvement of future interventions or school-based prevention programs aimed at reducing bullying and victimization by developing greater empathy levels in adolescents for their victimized peers. First, it would be helpful to consider more personalized programs by identifying whether the included adolescents have deficiencies in empathy or SEC, and specifically, which type of empathy should be further encouraged. Furthermore, future interventions could also include components based on social and emotional learning strategies aimed at developing SEC. Mediators, moderators, or other mechanisms of change, such as SEC, should be routinely analyzed in intervention studies in which better outcomes for the experimental groups are confirmed. One study found that affective empathy, but not cognitive empathy, is associated with somatic complaints, suggesting that interventions promoting SEC could help ameliorate other difficulties, such as somatic complaints (Espejo-Siles et al., 2020) or other factors that could hinder helping behavior.

Limitations and future directions

The current study presents certain limitations that need to be considered. Our design was limited to only two time points, allowing us to test a half-longitudinal cross-lagged mediation model and not a full cross-lagged panel model, thus necessitating measurements at three time points. This has implications for interpreting causality in identified relationships; therefore, we can infer causality only partially. Another limitation was the use of self-reported data. Adolescents could offer socially desirable answers by overestimating or underestimating empathy levels, SEC, or the frequency of defending behaviors, which could skew our data.

Future research could benefit from exploring multiple trajectories. First, multiple bullying roles could be included in further analysis, such as victims, bullies, and other bystanders, such as non-involved peers or adolescents supporting the bully. Huitsing et al. (2014) revealed that victims with the same aggressor tend to defend each other. This indicates that some adolescents have multiple bullying roles, which in turn could lead to different prediction patterns in the relationships among types of empathy, SEC, and defending. By involving multiple roles, interventions can also prevent overreliance on defenders (Downes & Cefai, 2019), especially in light of findings showing that defenders are at risk of developing mental health issues, for example, psychosocial difficulties (Lambe et al., 2017). Moreover, future studies could address multiple mediators and moderators to further expand the relationship between each type of empathy and defending. An example of a potential mechanism is the ability to regulate emotions or specific emotion regulation strategies. If proven to be relevant, developing such abilities could help mitigate the effect of the emotional distress created, for example, when experiencing affective empathy on prosocial actions. Finally, future interventions could include SEC components in interventions aimed at reducing victimization and bullying, besides components aimed at raising empathy levels in bystanders.

In summary, the current study aimed to test the indirect effect of SEC on the relationships between first cognitive empathy and second affective empathy and defending behavior in a sample of Romanian adolescents. The results of the half-longitudinal cross-lagged mediation design revealed a significant indirect effect of SEC on the relationship between cognitive empathy and defending. In this model, cognitive empathy at T1 positively predicted SEC at T2 and SEC at T1 positively predicted defending at T2. No significant direct effects of cognitive empathy at T1 on defending at T2 were identified. The mediation model including affective empathy yielded no significant indirect effects. The only significant relationship was between SEC at T1 positively predicting defending at T2. Findings confirm that SEC are a significant mechanism for defending behavior but only for cognitive empathy. Our results have implications for future theoretical developments and upcoming interventions meant to reduce bullying and victimization by bystander involvement.

CHAPTER IV. GENERAL CONCLUSIONS AND IMPLICATIONS

4.1. General conclusions

School bullying is a widespread and complex adversity among children and adolescents (Wang et al., 2009). It has been related to multiple negative effects such as poor mental health outcomes like depression and anxiety, sleeping problems, decreased quality of life or lower graduation rates (Bhatia, 2023). Peer victimization was associated with altered brain activation of certain regions involved in processing reward, social pain and affectivity (Ke et al., 2022). Not only victims and bullies, but bystanders as well are negatively affected by witnessing recurrent bullying episodes, presenting more psychological problems, somatic symptoms and low life satisfaction in comparison to their counterparts which were not exposed to bullying (Callaghan et al., 2019). Particularly, even peer defenders reported significant levels of detrimental mental health outcomes (Callaghan et al., 2019). Although they are the most prevalent group, bystanders are also the least investigated among children who were involved in school bullying (Volkova & Volkova, 2020). Based on the fact that bystanders can have a significant impact on how bullying episodes unravel, it is important to have a good understanding of their characteristics (Volkova & Volkova, 2020). Building upon the limitations identified in the literature we addressed some of these caveats, in general those regarding bystanders, with a particular interest in defenders and empathy as a relevant characteristic. In the following paragraphs, we present the main findings of the current thesis.

We first conducted a meta-analysis and a systematic review to investigate the relationship between cognitive and affective empathy and three main bystander roles, namely defender, outsider and pro-bully. Previous studies mostly investigated the roles of victim, bully and defender (e.g., Deng et al., 2021; Imuta et al., 2022; Nickerson et al., 2015; van Noorden et al., 2015; Zych et al., 2019) and only a couple of them included other roles such as outsiders or bully followers (Imuta et al., 2022; van Noorden et al., 2015). However, no other meta-analytical investigation has employed a systematic search and analysis directly focused on the association between involvement in bystander roles and cognitive and affective empathy. In addition to the main outcome concerning associations between each role of bystanding and each empathy type, we investigated potential moderators for these relationships. Based on the inclusion and exclusion criteria, 32 studies were included in the analysis.

The results revealed positive and significant associations between defending and both cognitive and affective empathy, with a slightly larger coefficient for affective empathy. For involvement as an outsider, the results indicated a significant and negative association with affective empathy and a negative non-significant one with cognitive empathy. For the pro-bully role, the number of included studies only permitted the evaluation of the relationship with affective empathy, which was significant and negative. Although heterogeneity was large across the results, there was no formal evidence of publication bias. Moderation analysis revealed no significant effects, but the sensitivity analyses indicated slight improvements in the correlation coefficients after eliminating ad-hoc measures of empathy.

In the second study, we aimed to adapt and validate the Basic Empathy Scale for measuring cognitive and affective empathy in youth in a sample of Romanian adolescents (Jolliffe & Farrington, 2006a). Most studies evaluating the psychometric properties of the BES were based on samples from Western European regions or individualistic countries. As empathy is influenced by culture (Jami et al., 2024), it is important to ensure access to psychometrically sound instruments for use in samples with diverse cultural backgrounds. More specifically, we evaluated the psychometric properties, the factorial structure and tested for measurement invariance across gender, age, environment and time. The results confirmed the two-factor solution for the internal structure of the instrument after eliminating some of the negatively worded items. Additionally, we also established measurement invariance at scalar or strict level for each tested category, meaning gender, age, environment and time. The internal consistency values were good for both cognitive and affective empathy, and we provide evidence of convergent and discriminant validity.

The third study explored whether peer defenders have diverse profiles based on social competence characteristics and potential mental health issues. These social competencies include affective empathy, cognitive empathy, and prosocial behaviors, while the difficulties encountered by adolescents were assessed in the form of externalizing and internalizing problems. A person-centered approach was used, namely, a latent profile analysis was conducted in order to capture and delineate different profiles of defenders. The results revealed three distinct profiles, supporting the assumption of heterogeneity among defenders of victimized peers. The first one was named “adaptive defenders” as it included higher cognitive than affective empathy, low levels and externalizing and internalizing problems and high levels of prosocial behavior. The second one included “low empathy, dysregulated, low prosocial defenders”, which was characterized by low levels of both types of empathy, higher levels of both types of problems and low prosocial behavior. The last profile, “high empathy, dysregulated, high prosocial defenders” included adolescents with high affective and cognitive empathy, high externalizing and internalizing problems, and high levels of prosocial behavior.

Finally, in the fourth study, we aimed to investigate the mechanisms underlying the relationship between empathy and defending. Social and emotional competencies (SEC) were good candidates for the mediator role, as they are related to both empathy and prosocial actions such as peer defending. Therefore, the specific objective was to test for the indirect effect of cognitive and affective empathy on peer defending through SEC. The used design was a cross-lagged panel model for a half-longitudinal study, as it contained two measurement points. The results confirm the indirect effect of cognitive empathy on defending through SEC. No indirect effect was noted for affective empathy.

4.2. Implications of the Thesis

4.2.1. Theoretical implications

The results of the present thesis reveal several important theoretical implications. First, in Study 1, Study 3, and Study 4, cognitive and affective empathy had different patterns of association and prediction with the corresponding factors and were not always congruent. In Study 1, meta-analytic data showed that affective empathy was more consistently and significantly associated with bystander roles. In the third study, the profile with the most adaptive features was higher in cognitive empathy than in affective empathy. Conversely, profiles with the highest levels of externalizing and internalizing problems were simultaneously higher in affective empathy than in cognitive empathy. In the fourth and last study, SEC indirectly explained the effect of empathy on defending, but only for cognitive empathy.

Taken together, these results offer support for the multidimensional conceptualizations of empathy (Cuff et al., 2016; Decety & Jackson, 2004; Eklund & Meranius, 2021). However, this perspective of empathy does not mean that cognitive and affective empathy are fully independent, but that they are most likely separate yet interrelated processes (Decety & Jackson, 2004). The positive and stronger association of affective empathy with defending behavior and the negative significant associations with being involved as an outsider or a pro-bully indicate that affective empathy might have a more direct effect on prosocial actions like peer defending. This is in accordance with Hoffman's perspectives on empathy and prosocial behavior (Hoffman, 2008). Hoffman suggests that for some people, as the victim's levels of distress increase, so does the observer's empathic distress, a component of affective empathy, and their actual helping behavior, intention, or willingness to help (Hoffman, 2008). However, as Hoffman continues to explain, too much affective empathy in the form of empathic distress can lead to empathic overarousal, which might cause bystanders turn their attention away from the victim and to their own personal distress (Hoffman, 2008). This could be one possible justification for the lack of a positive relationship between affective empathy and defending.

Another relevant theoretical implication stems from the fact that empathy alone, neither cognitive nor affective empathy, did not characterize the defenders of bullying victims. Theoretical frameworks that aim to explain and explore bystanders' actions when witnessing someone in a difficult situation include multiple factors. For example, the five-step intervention model (Darley & Latane, 1968) necessitates other prerequisites, such as the development of theory of mind, self-efficacy, knowledge on how to intervene or motivation (Jenkins & Nickerson, 2019; Thornberg et al., 2020). A second important approach in this regard was presented by Piliavin et al. (1982). The authors proposed that helping behavior is not purely altruistic, but it requires an internal cost-benefit analysis after which the witness decides whether to intervene or not. Additionally, as previous research has indicated, peer defenders are not exclusively resilient (Lambe et al., 2017; Malamut et al., 2021; Wu et al., 2016). Applying these frameworks to better understand the discrepancies between bystanders' profiles would indicate two main aspects. First, empathy is not the only characteristic of peer defenders and second, defenders are not free from mental health difficulties.

Lastly, the final study confirmed that empathy predicts defending through other variables, in this case, social and emotional competencies (SEC). Particularly, the fact that cognitive empathy positively predicted defending through SEC could be interpreted as evidence that SEC are more important to the relationship between cognitive empathy and defending than to the relationship between affective empathy and defending. This enables us to have a better understanding of how empathy operates within the complexity of peer defending. The results are also in line with the hypothesis that affective empathy, when it leads to excessive personal distress, detracts the attention of the bystander from the victim to their own personal distress (Hoffman, 2008), therefore resulting in less actual defending behavior. Correspondingly, Decety and Lamm (2006) accentuate the importance of emotion regulation as a necessary component of empathy, with implications for prosocial actions.

4.2.2. Methodological implications

For every study conducted as part of the present thesis, new and distinct methodologies were used. This allowed for multiple designs to be explored, from meta-analytic synthesis, psychometric evaluation of an empathy instrument, and a person-centered approach to a half-longitudinal model. Each study contributed in unique ways to a more layered understanding of the relationship between empathy and peer defending behavior in adolescents.

The first study, the meta-analysis and systematic review, offered several methodological strengths, which permit confidence in the obtained results. First, we only included studies that measured actual defending behavior and not intention to defend, willingness to intervene, and other hypothetical answers (e.g., Nickerson et al., 2015). In this way, we trust that our results reflect more of the associations between empathy and past behaviors of peer defenders and less of the potentially socially desirable answers that children and adolescents may offer. Secondly, we only included published studies in peer-reviewed journals, thus offering greater quality of the included results. Thirdly, only studies that reported correlation coefficients between empathy types and bystander roles were included and no other transformational operations were performed. In accordance with the scientific literature, using only correlation coefficients prevents additional heterogeneity and potential biases in the results (Roth et al., 2018). Lastly, using a meta-analytical approach permitted us to cover a large portion of the literature regarding bystanders' roles and their cognitive and affective empathy levels which were underrepresented, in a methodologically sound design.

The second study evaluated the psychometric properties of the BES by using multiple methods. The evaluation of the instruments ensures that the obtained results are based on conceptually and psychometrically robust measures. Testing the factorial structure of the scale confirmed the two-factor solution for cognitive and affective empathy, meaning that the instrument holds its

structure in samples based on Romanian adolescents. Confirming measurement invariance across age, gender, environment and time at strict or scalar level offers confidence that results concerning affective and cognitive empathy can be interpreted similarly across the previously mentioned conditions. This allows for meaningful comparisons to be made between adolescents of diverse characteristics pertaining to age, gender, environment and time. Further confirmation for the quality of the psychometric properties of the BES was offered by good coefficients for internal consistency and evidence of convergent and discriminant validity.

The third study employed a person-centered approach, exceeding variable-centered approaches and thus revealing heterogeneous profiles of peer defenders. In this manner, it was possible to observe co-occurring characteristics that define defenders beyond single features like empathy alone. This greater level of elaboration offers the chance to take into consideration multiple facets that might be relevant to peer defending. Specifically, it allows us to view defenders not only as stereotypically resilient, popular, and well-liked adolescents, but also as complex people, with unique traits and patterns of characteristics that might include mental health difficulties such as externalizing and internalizing problems.

The final study employed a cross-lagged panel model for a half-longitudinal design in order to evaluate the role of SEC as a mechanism of the relationship between cognitive empathy, affective empathy and defending behavior. Half-longitudinal designs are useful to unravel the temporal relationships between variables, although full causality cannot be determined. They offer more insight into the evaluated relationships in comparison to cross-sectional designs. Therefore, the choice of design helps to infer directionality while simultaneously accounting for baseline measurements.

4.2.3. Practical implications

The findings across studies, particularly Study 1, 3 and 4, suggest that effective anti-bullying prevention and intervention programs should delineate between cognitive and affective empathy, and should distance their focus from a unidimensional perspective of empathy. In particular, the results of the meta-analysis indicate that affective empathy has a direct positive association with peer defending, which is stronger than the association between cognitive empathy and defending. Correspondingly, the negative and significant associations between affective empathy and the outsider and pro-bully roles reaffirm the potential direct relationship between affective empathy and involvement in bystander roles. This pattern of association might indicate that affective empathy and its constituent components, such as empathic concern or empathic distress, are more directly related to prosocial behaviors like peer defending.

Taking into consideration the results from the last study, the fact that only cognitive empathy predicted defending through SEC, at first glance, might seem a somewhat contradicting result. However, there are two possible explanations for this. First, empathy alone, regardless of being cognitive or affective, is not enough to directly lead to defending behavior, although this might be less true for affective empathy than for cognitive empathy. Secondly, results revealing that cognitive empathy positively predicts defending through social and emotional competencies suggest that cognitive empathy requires additional resources, for example, regulatory, decision making, or other interpersonal competencies in order to predict defending. Without these additional competencies or intermediate factors, cognitive empathy alone can even hinder peer defending.

Accordingly, the results of the meta-analysis and the half-longitudinal mediation model reveal new nuances in the relationship between empathy and bystander behavior, particularly peer defending. Specifically, we argue for addressing cognitive and affective empathy independently. Further, each type of empathy can be considered relevant to bystander behavior by taking into account intermediate components such as social and emotional competencies for cognitive empathy and a more direct approach concerning affective empathy.

The second study of the present thesis illustrates that an extensively used empathy instrument has a stable internal two-factor structure as well as good psychometric properties in the form of satisfactory internal consistency for each subscale, cognitive and affective empathy, and proof of convergent and discriminant validity. Moreover, it has reached scalar or strict measurement invariance across age, gender environment and time, suggesting equivalence across groups of youth with these characteristics. Confirming the psychometric soundness and stability of an empathy instrument is particularly relevant to both research and educational practices, especially when that instrument was created to be used in contexts associated with aggressiveness (Jolliffe & Farrington, 2006a). Establishing measurement invariances ensures that the risk of misinterpreting results is lower, and the additional psychometric evaluated features allow this instrument, BES, to be confidently used in schools or research. In addition, given the large diversity of human behavior and the fact that empathy is reliant on cultural factors (Jami et al., 2024), it is important to make sure that empathy is measured similarly across children and adolescents coming from various cultural backgrounds. Eastern European countries are less represented, therefore confirming the psychometric strength of an empathy instrument in a sample of Romanian adolescents is of great importance in this regard.

The final study revealed that not all defenders were highly resilient. The three main identified profiles show an adaptive defender, a low empathy high dysregulated low prosocial defender and a high empathy, high dysregulated high prosocial defender. These contrasting profiles can inform bystander-based anti-bullying programs about how different types of defenders should be involved in distinct ways in these interventions. Taking care and giving thought to the individual needs of each defender might lead to better results. Practically, adaptive defenders can be encouraged to take the lead and become an example of good practices for other children. In the case of low empathy dysregulated low prosocial defenders, it would be important to first address their needs regarding social and emotional skills, including better emotional regulation strategies, and to highlight the importance of prosocial

actions in bullying episodes. For adolescents included in the last profile, it can be beneficial to include intervention components targeting emotion identification, impulse control, development of adaptive coping skills, and other mental health resources. This can allow them to continue to be involved in prosocial actions while having better resources to deal with empathic distress, such as empathic arousal. Overall, the use of a person-centered approach calls attention to the complexity of the defenders' profiles and enables interventions to redirect from one-size-fits-all programs to more personalized and nuanced programs which can better match the individual needs of each bystander or peer defender.

4.3. Limitations and future directions

The present thesis offers valuable insights into the role of cognitive and affective empathy in bullying-related behaviors, namely, peer bystanding and peer defending. However, the findings should be interpreted with caution in the context of several limitations.

In the first study, one limitation is related to the lack of studies evaluating cognitive empathy in bystanders' roles, such as the outsider, but mainly the pro-bully. Due to the identification of only one study addressing the relationship between cognitive empathy and pro-bully involvement, we were not able to perform analyses. Future studies should take into consideration the inclusion of cognitive empathy measurements when evaluating empathy. This would be important especially in the light of the current research findings, highlighting the discrepancies between cognitive and affective empathy in the context of bullying bystander involvement. Another limitation is linked to the fact that there was no moderating effect of either of the investigated factors. Future research could explore alternative characteristics, such as age, cultural factors, the social and economic status of the family, or aspects pertaining to peer social dynamics, which could act as potential moderators. Next, the meta-analytic study only included cross-sectional data, baseline measurements, or first-wave data from experimental or longitudinal research. This means that the causality and directionality of the relationship between the two empathy types and each bystander role cannot be assessed. A limitation such as this one should be addressed two-fold: first, by conducting multiple independent longitudinal evaluations of these relationships, respectively experimental research, and second, by summarizing the findings of future research in systematic reviews and meta-analyses. In this way, the aggregated results can offer greater depth and a profound understanding of directionality and causality. Finally, some of the evaluated relationships were based on a limited number of studies. This warrants some level of precaution when interpreting the results. However, this only highlights the need for more studies looking separately into cognitive and affective empathy and peer bystanding.

Regarding the second study, one limitation is related to having unequal groups across some of the investigated characteristics, such as the two time points and environment. This lack of balance could potentially influence some of the results (Alavi et al., 2020). Future studies could ensure equality in the number of participants in each group and greater variability in their ages. Future scientific endeavors should also examine clinical versus non-clinical populations and evaluate samples from diverse cultural backgrounds.

Particular limitations characterizing the third study include limited internal consistency values for some subscales and the fact that it only addressed a narrow category of possible features representing peer defenders. Not only desirable traits but also other mental, physical and social issues should be paid more attention in future studies, including in-depth analyses of particular symptoms related to externalizing and internalizing problems. Future studies and interventions should take into account and adapt accordingly to the identified profiles.

One limitation of the fourth study is the lack of one additional measurement in time, which would allow testing of a full cross-lagged panel model and further interpretation of causality. In this way, we can infer directionality, but no conclusions regarding full causality can be made. Future studies should make more use of longitudinal designs in order to permit causal observations of the relationship between empathy and defending. Additional mediating factors should be addressed in future research. This can help identify supplementary mechanisms for the relationship between cognitive empathy and defending and establish significant mediators for the relationship between affective empathy and peer defending.

In Studies 2, 3 and 4 all used instruments were self-reported. This could potentially lead to socially desirable answers for both empathy and peer bystanding. Adolescents could overestimate their empathic or social and emotional abilities and underestimate or under-report less acceptable behaviors like supporting a bully or not intervening when witnessing bullying episodes. Future research should employ multi-informant approaches, including peers, teachers or parents, and should include performance-based tasks together with physiological measures, particularly for empathy. This could allow for a more complex and bias-free perspective on both empathy and peer bystanding, as well as help identify potential discrepancies between the evaluated perspectives.

Lastly, while the focus of the current thesis was on individual factors related to peer bystanding, given that bullying is a group process (Salmivalli et al., 1998), the potential role of contextual factors is undeniable. Therefore, future research could examine contextual factors like group norms related to bullying, classroom climate, teacher attitudes, friendship quality, and involvement in multiple bystander roles, as in the case of bully-victims. Adopting a larger perspective on peer bystanding could help inform future intervention to consider both individual factors and contextual features as well.

4.4. Summary of main contributions

In accordance with results indicated by the studies included in the present thesis we can draw a series of conclusions, as follows:

1. Cognitive and affective empathy have distinctive patterns of associations with each bystander role: defender, outsider and pro-bully.
2. Affective empathy was systematically related to bystander roles, presenting a greater association with defending than cognitive empathy and significant negative associations with outsider and pro-bully involvement. More studies should include cognitive empathy in order to clarify its relationship to bystander roles other than defenders.
3. The Romanian version of the Basic Empathy Scale has good psychometric properties and has shown invariance at scalar, strict level for age, gender, environment and time. Therefore, it can be confidently used to conduct sound comparisons between these groups. Additionally, it was validated in a sample originating from a country in Eastern Europe with a collectivistic background.
4. Empathy alone does not fully characterize the complexity and variability in peer defenders, and higher empathy does not automatically co-occur with prosocial actions.
5. Peer defenders are not the stereotypically resilient students. They present complex patterns of features, including mental health outcomes, such as externalizing and internalizing problems. This can be of great importance for future bystander-based interventions, particularly as it allows for more personalization and a better match between the intervention and the particular needs of each adolescent.
6. High affective empathy co-occurs with internalizing and externalizing problems. Future studies should shed light on whether and how empathic distress or empathic overarousal are associated with less peer defending.
7. Cognitive empathy significantly and positively predicts defending behavior through social and emotional competencies. This indicates that cognitive empathy necessitates additional skills or abilities in order to positively predict peer defending.
8. Although affective empathy had a small positive, but not significant direct effect on defending and there was no indirect effect through social and emotional competencies, other factors could potentially mediate this association and should be addressed in future studies.

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