EMPATHY AND INTERNALISING PROBLEMS IN PREADOLESCENCE: EXPLORING GENDER VARIATIONS

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Abstract

Empathy is a complex, multidimensional construct that plays a fundamental role in emotional and social development, comprising both cognitive and affective components. Cognitive empathy involves understanding another person's emotional state, while affective empathy refers to the shared emotional experience in response to another's feelings (Eisenberg et al., 2015; Shamay-Tsoory, 2011). Although typically associated with prosocial behaviour, elevated levels of affective empathy may also contribute to psychological vulnerability, particularly internalising problems such as anxiety, depression, and somatic complaints (Achenbach, 1966; Tone & Tully, 2014). Internalising problems are characterised by inward-focused emotional distress and self-directed symptoms, often difficult to detect through external observation.

This study explored the associations between cognitive and affective empathy and internalising problems in a normative sample of pre-adolescents, with a focus on gender differences and informant perspectives. Using self-, teacher-, and parent-reported data, it examined how empathy dimensions relate to internalising difficulties and whether these relationships vary by gender or informant.

Results showed that participants reported relatively high empathy, with girls scoring higher than boys, particularly in affective empathy. Affective empathy and self-reported internalising problems were significantly higher among children who reported being victims of bullying, and internalising problems were also higher among those receiving psychological support. Associations between empathy and internalising problems were only observed in self-reports, where affective empathy positively predicted internalising symptoms after controlling for gender. No significant effects were found in parent- or teacher-reports, and gender did not moderate the relationship.

These findings provide a nuanced understanding of empathy's role in developmental psychopathology and have implications for early identification and intervention strategies targeting emotional well-being in youth.

Keywords: empathy, internalising problems, pre-adolescents, gender

Resumo

A empatia é um construto complexo e multidimensional que desempenha um papel fundamental no desenvolvimento emocional e social, abrangendo componentes cognitivos e afetivos. A empatia cognitiva envolve a compreensão do estado emocional de outra pessoa, enquanto a empatia afetiva refere-se à experiência emocional partilhada em resposta aos sentimentos do outro (Eisenberg et al., 2015; Shamay-Tsoory, 2011). Embora geralmente associada ao comportamento pró-social, níveis elevados de empatia afetiva podem também contribuir para a vulnerabilidade psicológica, nomeadamente para problemas internalizantes como ansiedade, depressão e queixas somáticas (Achenbach, 1966; Tone & Tully, 2014). Estes problemas caracterizam-se por sofrimento emocional orientado para o interior e sintomas autodirigidos, frequentemente difíceis de detetar através da observação externa.

O presente estudo explorou as associações entre empatia cognitiva e afetiva e problemas internalizantes numa amostra normativa de pré-adolescentes, com enfoque nas diferenças de género e nas perspetivas de diferentes informadores. Foram utilizados dados de autorrelato, professores e pais para examinar de que forma as dimensões da empatia se relacionam com dificuldades internalizantes e se estas relações variam em função do género ou do informador.

Os resultados mostraram que os participantes reportaram níveis elevados de empatia, sendo que as raparigas apresentaram valores superiores, sobretudo na empatia afetiva. A empatia afetiva e os problemas internalizantes autorrelatos foram mais elevados em crianças vítimas de bullying, e os problemas internalizantes também mais frequentes entre as que receberam apoio psicológico. As associações entre empatia e problemas internalizantes foram apenas observadas nos autorrelatos, onde a empatia afetiva surgiu como preditor positivo mesmo após controlar o género. Não foram encontrados efeitos significativos nos dados de pais ou professores, e o género não moderou a relação.

Estes resultados aprofundam a compreensão do papel da empatia na psicopatologia do desenvolvimento e apresentam implicações para a identificação precoce e para estratégias de intervenção dirigidas ao bem-estar emocional dos jovens.

Palavras-chave: empatia, problemas internalizantes, pré-adolescentes, género

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I. THEORETICAL FRAMEWORK

1. Empathy

Empathy is frequently conceptualised as an affective reaction originating from the recognition or understanding of another individual's emotional state or circumstances, characterised by an emotional experience that closely mirrors or aligns with what the other person is feeling or is anticipated to feel (Eisenberg et al., 2015). Empathy is a complex, multidimensional construct encompassing both cognitive and affective components. The cognitive aspect involves the capacity to comprehend and interpret another individual's emotional state, while the affective component pertains to the experience of and response to the emotional state of another (Shamay-Tsoory, 2011). In accordance with Vachon and Lynam (2016), this dual nature of empathy serves as a means for individuals to obtain emotional insights via cognitive and emotional reflection, leading to compassionate actions and the avoidance of behaviour that could cause harm to others.

It is essential to distinguish empathy from other vicarious emotional responses, as these terms are often used interchangeably in the literature. Clarifying these distinctions is particularly relevant to the present study since different empathy-related processes may have distinct implications for social adjustment and internalising problems. Among these, empathy-related emotions—such as sympathy and personal distress—are especially important. Sympathy is an affective response that arises from empathy or cognitive processes such as perspective-taking and memory retrieval, and it involves feelings of sorrow or concern for another's distress rather than sharing their emotional state. In contrast, personal distress is a self-oriented, aversive emotional reaction triggered by witnessing another's emotions, leading to discomfort rather than compassionate concern (Eisenberg et al., 2015).

1.1. The Development of Empathy

The development of empathy begins as early as 10 to 14 months when children show initial responses to another's distress, often manifesting in agitation and seeking comfort from their mothers (Radke-Yarrow & Zahn-Waxler, 1984). This initial empathic response is rooted in dyadic interactions where social referencing and emotional communication with the mother play pivotal roles. Such experiences are foundational for empathy, which supports

future social and moral development (Eisenberg & Miller, 1987). By around 18 months, some children begin to display forms of "moral" prosocial behaviour, such as comforting others in distress, which may suggest an emerging capacity for emotion regulation and perspective-taking. However, these behaviours vary across individuals, both in form and intensity, and are influenced by the broader social and familial environment, which can either foster or constrain their expression (Radke-Yarrow & Zahn-Waxler, 1984). This development is necessary for the expression of "other-oriented empathy," defined as the ability to understand and respond to another's emotional state (Batson, 1990).

Additionally, the capacity for empathy hinges on the child's development of self-concept, role-taking abilities, and the recognition of person permanence (Tangney, 1991). Empathy enables individuals to consciously experience and tolerate emotional states such as shame, facilitating prosocial actions and inhibiting aggression (Hoffman, 1975). Hoffman argues that empathy's emergence aligns with moral development, supported by socialisation processes that start in the second year of life and align with broader definitions of socialisation. The development of empathy thus starts in infancy and intertwines with attachment and moral development, creating a complex interplay where early social interactions and cognitive development support a child's capacity to engage empathetically and regulate affect in themselves and others (Schore, 2015). This capacity for empathy enables children to envision potential states of self and others, bridging cognitive and emotional development to support social cognition and moral behaviours (Markus & Nurius, 1986; Meltzoff, 1990). By the age of five or six, the majority of children are typically able to succeed in fundamental cognitive empathy or theory of mind assessments, such as first-order false belief tasks (O'Reilly & Peterson, 2015).

Significant evidence supports the ongoing development of cognitive empathy throughout middle childhood and extending into adolescence (e.g., Devine et al., 2016; Vetter et al., 2013). Furthermore, a recent study by Gaspar and Esteves (2022) found that by the ages of 11–12, pre-adolescents exhibit a well-established capacity for emotional resonance with others, signifying a strong foundation for affective empathy. Gaspar and Esteves argue that this early development facilitates empathy-driven responses, such as compassion and prosocial behaviour, and supports cognitive processes influenced by emotional responses, including the accurate identification of emotions. Notably, affective empathy does not exhibit a linear increase from adolescence to adulthood, as it reaches advanced levels during the

transition from pre-adolescence to adolescence (Gaspar & Esteves, 2022). Research suggests that empathic concern, the emotional dimension of empathy, emerges earlier than cognitive empathy, with neurological networks maturing more rapidly in this domain, and tends to stabilise during adolescence rather than showing consistent growth into adulthood (Decety & Michalska, 2010; Gaspar & Esteves, 2022). This trajectory highlights pre-adolescents' strong proneness to emotional resonance, which provides the basis for prosocial and compassionate behaviour as well as emotion-related cognitive processes. The early consolidation of affective empathy appears to be shaped not only by neurodevelopmental factors but also by environmental influences, including parent–child interactions (Hoffman, 2000; Schore, 2001), parental styles (Morris et al., 2017), and the perceived school environment (Farrell & Vaillancourt, 2021). Longitudinal evidence also shows that maternal engagement and satisfaction with maternity predict empathic concern into adulthood (Koestner et al., 1990), while genetic influences contribute significantly to the continuity and stability of emotional empathy (Knafo et al., 2008). Taken together, these findings underline the importance of affective empathy in early adolescence as a relatively stable capacity that plays a central role in social and emotional adjustment.

1.2. The Role of Empathy in Social Behaviour

Although the understanding and definition of empathy have seen significant variation and debate over the past five decades (Batson, 2009; Vachon & Lynam, 2016), the consensus on empathy's critical role in social behaviour is widespread. Empathy is believed to encourage prosocial actions (Eisenberg & Miller, 1987) while deterring antisocial behaviours (Jolliffe & Farrington, 2004; Miller & Eisenberg, 1988). Affective empathy and cognitive empathy are linked to positive social outcomes (Decety & Jackson, 2004; Shamay-Tsoory et al., 2009). These include improved relationships with friends and partners, as well as increased prosocial behaviour (Chow et al., 2013; Smith & Rose, 2011).

Previous research has primarily examined the role of empathy in relation to social behaviour. For example, a recent multilevel meta-analysis by Qiu et al. (2024) found a significant positive correlation between prosocial behaviour and both theory of mind and empathy in children and adolescents aged 2 to 19 years. This study provided robust evidence for the connection between social understanding and prosocial behaviour, while also highlighting the influence of factors such as cultural background, age, and measurement

methods on the strength of these associations. Similarly, van Langen et al.'s (2014) meta-analysis investigated differences in empathy between offenders and non-offenders, showing that lower levels of cognitive empathy were more strongly associated with offending than affective empathy. Their analyses further revealed that methodological and demographic characteristics moderated these relationships, underscoring the complexity of studying empathy's role in social functioning. Together, these findings demonstrate that much of the existing literature has emphasised empathy's contribution to prosocial and antisocial behaviours, leaving less attention to its potential associations with internalising problems.

Beyond its well-established role in social functioning and emotional development, emerging evidence suggests that empathy may also play a role in the development of internalising behaviours. Studies have identified significant associations between elevated levels of affective empathy and symptoms of depression and anxiety, particularly in children. These findings suggest that while empathy is generally adaptive, excessive emotional attunement may lead to maladaptive guilt and heightened social anxiety (Bray et al., 2021; Tone & Tully, 2014).

2. Internalising Problems

Internalising problems refer to psychiatric symptoms characterised by inward-directed behaviours and emotional states, such as over-inhibition, self-deprivation, and self-directed negativity. They include anxiety, depression, somatic complaints, obsessions, and compulsions, manifesting as internal struggles that lead to emotional distress and physical symptoms without external behavioural issues. These problems form a broad category encompassing specific syndromes and symptoms, reflecting a complex internal psychological state affecting mood, self-perception, and sometimes physical well-being (Achenbach, 1966).

Psychiatric diagnoses of anxiety and mood disorders have traditionally relied on categorical classification systems, where disorders are treated as discrete entities, either present or absent based on diagnostic criteria. This perspective contrasts with dimensional approaches in psychology, which conceptualise internalising problems along a continuum of severity, encompassing normal, subclinical, and clinical levels of disturbance. While dimensional models provide a graded understanding, they often blur distinctions between

subtypes of internalising issues and do not align with categorical psychiatric diagnoses (Zahn-Waxler et al., 2000).

Factor analytic research has supported the integration of anxiety and depressive symptoms into a single scale (Achenbach, 1966), though this approach limits comparisons between these predominant internalising domains. Historically, the study of internalising disorders in children and adolescents applied adult-based models, which hindered a nuanced understanding of their developmental origins. The adoption of a developmental psychopathology framework has shifted the focus, encouraging longitudinal and cross-sectional research that illuminates adaptive and maladaptive trajectories, ultimately fostering more precise explanatory models and interventions tailored to childhood and adolescent psychopathology (Zahn-Waxler et al., 2000).

Advancements in the identification and diagnosis of anxiety disorders in children have greatly improved the understanding of their epidemiology. While no data were available on childhood anxiety disorders as recently as the mid-1980s (Orvaschel & Weissman, 1986), subsequent studies, including a review by Cartwright-Hatton et al. (2006), reported prevalence rates in pre-adolescent children ranging from 2.6% to 41.2%. These variations may reflect methodological differences, such as the inclusion of functional impairment criteria, which often lower prevalence rates, and the reliance on different informants, with children typically reporting more symptoms than their parents (Zahn-Waxler et al., 2000).

Achenbach et al.'s (2016) review identified a vast number of studies assessing internalising and externalising problems in children, utilising diverse measures across various contexts and populations. This variability presents challenges for synthesising findings, drawing generalisable conclusions, and advancing both clinical practice and research. To ensure the credibility and generalisability of their findings, Achenbach et al. (2016) refined their systematic review to include studies using well-established instruments that met specific criteria. These criteria included the ability to assess a broad spectrum of internalising and externalising problems, supported by published data on standardisation, reliability, validity, and norms. This focused approach ensured that their review reflected the most reliable and widely applicable findings in the field, concluding that the variability in assessment procedures for internalising and externalising problems highlights the need to prioritise

standardised, reliable, and validated instruments with normative data to ensure consistency and accuracy in both clinical and research settings.

3. Relationship between Empathy and Internalising Problems

Tone and Tully's (2014) multilevel examination of empathy and the risk for internalising disorders indicated that exceptionally high levels of affective empathy were associated to an increase in depressive symptoms, proposing that the act of sharing emotions can lead individuals to feel an exaggerated sense of responsibility for the suffering of others, along with maladaptive guilt, potentially resulting in heightened depressive symptoms.

Furthermore, Bray et al.'s (2021) study investigated the relationship between empathy and internalising symptoms, including anxiety and depression, in a community sample of 9- and 10-year-old children. Results revealed a significant positive association between affective components of empathy, such as affective sharing and empathic distress, and internalising symptoms, with a notable link to social anxiety symptoms. In contrast, cognitive empathy, assessed through both self-reports and tasks, and empathic concern were not associated with symptoms of anxiety or depression. These findings suggest that the emotional aspects of empathy may play a distinct role in the development or maintenance of social anxiety, while cognitive empathy appears unrelated to internalising symptoms in this age group. This body of work suggests a complex relationship between empathy and mental health, where empathy contributes positively to social interactions but, at extreme levels, may have detrimental effects on an individual's emotional well-being.

While much of the existing literature has focused on younger children or adolescents, relatively fewer studies have examined the relationship between empathy and internalising problems in pre-adolescent populations. For example, Gambin and Sharp's (2016) study aimed to investigate the distinct associations between cognitive and affective empathy and internalising and externalising symptoms in inpatient adolescent girls and boys, while controlling for the overlap among different psychopathological indicators reported by multiple informants. Consistent with previous research, internalising symptoms, particularly anxiety and affective problems, were positively associated with higher levels of affective empathy in both genders, with stronger and more statistically significant associations observed in girls. Anxiety also emerged as the strongest predictor of affective empathy in

boys and one of the key predictors in girls. These findings challenge the prevailing focus on depression in empathy research and highlight anxiety as potentially more salient in its relation to affective empathy. The results suggest that in adolescents with pronounced internalising symptoms, affective empathy may reflect heightened personal distress, emotional overinvolvement, or avoidance of others' negative emotions, rather than adaptive empathic concern or prosocial functioning. Furthermore, Gambin and Sharp (2018) argue that their findings suggest that empathic processes may contribute to the emergence or persistence of anxiety symptoms.

Despite extensive research, the relationship between empathy and depression remains inconclusive. Yan et al.'s (2021) meta-analysis found no overall correlation between empathy and depression. However, subgroup analyses revealed that affective empathy was positively correlated with depression, while cognitive empathy showed no significant relationship. The association also varied across developmental stages, with a positive correlation in adolescence and a negative correlation in older adults. These findings suggest that affective empathy may act as a risk factor for depression, particularly during adolescence, highlighting the need for further research to explore the developmental trajectory and contributing factors of this relationship.

While developmental psychopathology often emphasises negative functioning, a recent review by Eisenberg et al. (2024) highlights meaningful relationships between empathy-related responses, prosocial behaviour, and psychopathology, presenting mixed findings with internalising problems. The authors argue that the relationship between internalising problems and empathy-related responses or prosocial behaviour is complex and less consistent compared to other aspects of developmental psychopathology. While empathy, sympathy, and pro-sociality are generally associated with social competence and positive adjustment, individuals with internalising problems, such as depression, anxiety, and social withdrawal, may exhibit self-focused responses, such as personal distress, which can impair their ability to engage in other-oriented prosocial behaviour. Anxious youth, particularly those with social fears, may struggle with prosocial behaviour in unfamiliar contexts.

Despite growing interest in the relationship between empathy and internalising problems, research focusing specifically on pre-adolescents remains limited, with the majority of existing studies concentrating on adolescent or adult populations, and clinical

samples (e.g., Gambin & Sharp, 2016; Gawronski & Privette, 1997; MacDonald & Price, 2019). Furthermore, existing studies tend to focus on specific internalising symptoms, such as anxiety (e.g., Gambin & Sharp, 2018; Shu et al., 2017; Tibi-Elhanany & Shamay-Tsoory, 2011) or depression (e.g., Calandri et al., 2021; O'Connor et al., 2002; Thoma et al., 2011), rather than internalising problems as a whole. Regarding child or adolescent populations, several studies rely solely on self-reports (e.g., Bray et al., 2021; Calandri et al., 2021; Green et al., 2018; Smith & Rose, 2011) and parent ratings (e.g., Gambin & Sharp, 2016; 2018), which may overlook important contextual or behavioural information observable by other adults, such as teachers.

4. Gender differences

The concept of adjustment trade-offs, where certain social and cognitive styles have both positive and negative outcomes, is particularly relevant in examining empathy and internalising problems, as well as gender-related variations. Smith and Rose (2012) highlighted the differential impacts of empathetic distress on girls and boys. Girls' enhanced social perspective-taking abilities facilitate deeper friendships but also predispose them to empathetic distress, with co-rumination playing a significant role in their social interactions. The study found that gender differences in social cognition and emotional responsiveness became increasingly pronounced with age, particularly during late adolescence. This aligns with developmental theories advocating for a nuanced understanding of behavioural and cognitive styles, recognising both beneficial and adverse outcomes. The findings also support the notion of adjustment trade-offs in peer relationship styles, suggesting that while girls' attunement to interpersonal dynamics fosters closer friendships, it conversely elevates their vulnerability to internalising problems.

Additionally, Masten et al. (2013) investigated the relationship between pubertal development and empathy-related processes, finding that the transition from ages 10 to 13 was associated with increases in empathic concern and personal distress. These developmental changes were further linked to heightened activity in neural regions implicated in both mentalising and affective pain processing, as indicated by self-reported increases in sympathy and personal distress during this period. However, these findings remained consistent even after controlling for sex, underscoring the robust connection between pubertal maturation and the neural and emotional correlates of empathy.

Eisenberg et al. (2015) argue that although research consistently suggests that girls exhibit higher levels of prosocial behaviour than boys, the underlying factors contributing to this sex difference remain unclear. It is difficult to discern whether these differences primarily reflect variations in moral reasoning and other-orientation or whether they are influenced by external factors, such as self-presentation. Furthermore, evidence indicates that sex differences may vary with age and across specific aspects or measures of prosocial and empathic responding. Therefore, examining the relationship between empathy and internalising problems in pre-adolescents is crucial due to the significant transformations in emotional and cognitive capacities occurring during this stage. Observations indicate that as children approach adolescence, their ability to understand and share the emotions of others deepens, potentially influencing their social interactions and psychological well-being (Steinberg, 2005).

5. Objectives and Hypotheses

Given the suggested links between high levels of affective empathy and increased risk for depressive symptoms, a nuanced understanding of this relationship could elucidate mechanisms underlying the emergence of internalising problems in youth. Furthermore, the study of empathy's relation to internalising problems in pre-adolescents, with attention to age and gender differences, is driven by the imperative to understand the multifaceted role of empathy in emotional development. Investigating this dynamic in pre-adolescents offers the opportunity to identify at-risk individuals and implement interventions aimed at fostering healthy emotional and social development. Such research not only contributes to the theoretical understanding of empathy's role in developmental psychopathology but also has practical implications for preventing the escalation of internalising problems during a pivotal period of emotional maturation.

The present study focuses specifically on a normative pre-adolescent sample, integrating data from multiple informants—children, parents, and teachers—to provide a more comprehensive understanding of the relationship between empathy and internalising problems. By adopting a multi-informant approach, the study seeks to identify potential early patterns in the interplay between affective and cognitive empathy and internalising difficulties, offering valuable insights into developmental pathways that may inform early

intervention and prevention strategies. More specifically, the study aims to investigate the relationship between different dimensions of empathy (affective and cognitive) and internalising behaviours in pre-adolescents, examining how this relationship varies as a function of age, gender, and informant type. In addition, it explores the specific association between affective empathy and internalising problems, given its heightened emotional intensity and potential links to psychological vulnerability during this developmental period.

Within the scope of this study, three variables will be explored:

- Independent Variables: Affective Empathy (dimension of empathy involving emotional resonance with others) and Cognitive Empathy (dimension of empathy involving perspective-taking and understanding others' thoughts and feelings).
- Dependent Variable: Internalising Problems (such as anxiety, depression, and other emotional distress indicators).

Furthermore, the hypotheses of the current study on a pre-adolescent sample are as follows:

1. Cognitive empathy will not demonstrate a significant positive association with internalising problems.
2. Higher levels of affective empathy will show a significant positive association with internalising problems.
3. Gender differences will emerge, with females expected to demonstrate higher levels of affective empathy and internalising problems compared to males.
4. Gender will not significantly moderate the relationship between affective empathy and internalising problems in pre-adolescents.

Investigating these hypotheses will provide insight into the mechanisms through which empathy contributes to emotional challenges in pre-adolescents and offer guidance for targeted interventions to support emotional resilience and well-being across genders.

II. METHODOLOGY

1. Participants

A total of 87 participants were initially recruited for the study; however, due to incomplete data and methodological constraints, not all cases could be included in the final analysis. To ensure an adequate sample size, data from a previously collected database with comparable characteristics were also incorporated.

The sample included 210 children (37.6% girls, 41.9% boys, and 20.5% missing gender data) between 10 and 14 years of age (M = 11.55; SD = 0.78). Most children reported having siblings (78.1%). Participants were distributed across school years: 47.1% were in the 5th grade (41% girls, 38% boys, and 21% missing gender data; age M = 10.98, SD = 0.53), and 52.7% in the 6th grade (34.5% girls, 45.5% boys, and 20% missing gender data; age M = 12.04, SD = 0.61).

Mothers' age ranged between 29 and 57 years (M = 41.42; SD = 5.40) and fathers' age ranged between 29 and 65 years (M = 44.06; SD = 6.38). Mothers' education level varied between secondary school or below (29.7%) and higher education (29.6%), fathers' education level ranged between secondary school or below (28.5%) and higher education (26.7%), and 44.7% of parents did not respond. Most parents lived together (45.7%), with 39.5% married, 6.2% cohabiting, 18.1% separated or divorced, and 13.3% reporting another situation. The majority of parents were employed full-time (66.7% of mothers and 67.6% of fathers), while a smaller proportion worked part-time (1.4% of mothers and 1% of fathers) or were unemployed (2.4% of mothers and 1.4% of fathers), and 29.5% of mothers and 30% of fathers did not respond.

Most children reported not currently having or never having had psychological support (52.4%), while 20.5% stated that they have or had accessed psychological support, primarily in the private sector (69.4%), and 21.9% did not respond. Among those who reported not receiving psychological support, 17.9% expressed a desire to have it, while 69.6% did not wish to, and 12.5% preferred not to respond. Regarding bullying, 43.3% reported not being victims, 24.3% indicated they had been victims, 21.9% did not respond, and 10.5% preferred not to respond.

The T-CRS was completed by a group of teachers with diverse demographic, professional, and educational backgrounds. The majority were female (65.7%), while 11.9% were male, and 22.4% did not respond. Their years of teaching experience ranged from 10 to

39 years (M = 28.86, SD = 5.57), reflecting variability in professional seniority. Teachers' ages ranged from 43 to 63 years (M = 53.47, SD = 5.68), encompassing both mid-career and highly experienced educators. In terms of educational attainment, the length of formal education ranged from higher education degree (62.9%) to master's degree (7.6%), indicating a relatively high level of academic qualification.

2. Procedure

Necessary authorisations were obtained from relevant educational bodies, including school administrations. Data collection occurred during the academic year to facilitate access to participants. The research team, composed of trained psychologists, coordinated with school administrations to schedule group sessions that minimised disruption to the educational process. Data was collected using the online survey platform Qualtrics, ensuring a higher response rate and accommodating participant preference. The online survey platform was accessed through a link sent via email.

The investigation employed a cross-sectional design to capture a snapshot of the relationship between empathy and internalising problems, and potential gender differences, at a single point in time. This design is suitable for efficiently gathering data from a large number of participants and allows for analysis of variables as they naturally occur within a normative population. By integrating responses from children, parents, and teachers, the study aims to provide a holistic view of potential associations within the targeted age group.

The study adhered to ethical codes from the American Psychological Association, the Portuguese Psychologists Association, and the European General Data Protection Regulation. Beneficence and non-maleficence were prioritised, using coded identifiers for questionnaires and reporting results in aggregate to protect individual identities. The research team, trained in the selected methodologies, ensured data collection and analysis techniques were valid and reliable. Written informed consent was obtained from teachers and legal guardians, with assent from minors. The feasibility of the research was confirmed through prior contact with data collection sites, and the availability of appropriate instruments verified. These procedures aimed to uphold the highest ethical standards while contributing valuable insights.

3. Instruments

3.1. Sociodemographic Questionnaire

A sociodemographic questionnaire was designed for both pre-adolescents and parents to collect information on key background variables. The questionnaire for pre-adolescents and parents included items on age, gender, current grade level, sibling composition (number and ages), whether the child has previously received or is currently receiving psychological support, and whether the child is or has been a victim of bullying (physical or psychological aggression). Furthermore, parents' age, marital status, educational level, and employment status was collected. This information was used to describe the sample, assess representativeness, and explore potential sociodemographic influences on the study variables.

3.2. The Questionnaire to Assess Affective and Cognitive Empathy in Children (QACE)

The Questionnaire to Assess Affective and Cognitive Empathy in Children (QACE, children's version; Zoll & Enz, 2010; Portuguese version by Veigas & Santos, 2011) assesses empathy through children's responses to hypothetical scenarios. This self-report instrument comprises 22 items divided into two subscales: affective empathy (10 items), related to the capacity to experience others' emotions, and cognitive empathy (12 items), associated with perspective-taking. Responses are provided on a five-point Likert scale, ranging from 1 (does not apply to me) to 5 (fully applies to me). The instrument is intended for children aged between 8 and 14 years. Scores for the affective and cognitive dimensions are calculated separately by averaging the respective items, while the global score is the mean of all 22 items. Higher scores on the subscales and global score indicate greater levels of affective empathy, cognitive empathy, and overall empathy, respectively. The original version of the instrument demonstrated good internal consistency (α = .84 for affective empathy and α = .78 for cognitive empathy). The Portuguese adaptation by Veiga and Santos (2011) confirmed the instrument's reliability, with α = .85 for affective empathy and α = .71 for cognitive empathy, validating its use for assessing empathy in children. In the present study, internal consistency was acceptable for cognitive empathy (α = .70) and affective empathy (α = .74), and good for the global empathy score (α = .81).

3.3. Strengths and Difficulties Questionnaire (SDQ)

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; Portuguese version by Fleitlich et al., 2005) was employed to assess self-reported internalising behaviours in children and adolescents. The SDQ is a brief behavioural screening tool designed to identify a range of emotional and behavioural difficulties in youth. It is available in multiple versions, and in the present study, the youth self-report form for individuals aged 11–16 years was utilised (Goodman et al., 2010). This version comprises 25 items, organised into five subscales—*emotional symptoms*, *conduct problems*, *peer relationship problems*, *hyperactivity/inattention*, and *prosocial behaviour*—with each subscale consisting of five items. Responses are rated on a 3-point Likert scale (0 = *Not True*, 1 = *Somewhat True*, 2 = *Certainly True*). Higher scores reflect greater difficulties on all subscales except *prosocial behaviour*, for which higher scores indicate more positive behaviours.

In the current study, scoring followed an alternative scoring method, recommended for low-risk, community populations. In this approach, *internalising problems* are calculated by summing the *emotional symptoms* and *peer relationship problems* subscales (Goodman et al., 2010). Previous research has provided evidence supporting the alternative factor structure, with good construct validity, α = .65 - .85 (Goodman et al., 2010). In the present study, the subscales for internalising problems demonstrated low internal consistency (α = .57), suggesting that findings related to this subscale should be interpreted with caution.

3.4. The Teacher-Child Rating Scale (T-CRS)

The Teacher-Child Rating Scale (T-CRS; Hightower et al., 1986) is a 44-item instrument used to evaluate children's social, behavioural, and academic competencies based on teacher observations. Teachers rate each item using a five-point Likert scale ranging from 1 (not at all) to 5 (very much), reflecting the frequency or intensity of observed behaviours. It comprises both problem dimensions and competence dimensions, offering a comprehensive evaluation of maladaptive and adaptive behaviours. The problem dimensions include Acting-Out, which reflects externalising behaviours such as impulsivity, defiance, and disruptive classroom conduct; Shy–Anxious, which captures internalising tendencies characterised by social withdrawal, anxiety, and low self-confidence; and Learning Problems, which denote academic difficulties and challenges in classroom engagement. In contrast, the competence

dimensions assess adaptive functioning, including Frustration Tolerance, which reflects the ability to regulate emotions and persist in the face of challenges; Social Assertiveness, indicating confidence and initiative in peer and teacher interactions; Task Orientation, referring to attentional control, persistence, and goal-directed academic behaviour; and Peer Social Skills, which evaluate the quality of peer relationships and cooperative behaviours. Together, these dimensions provide an ecologically valid profile of children's behavioural adjustment and social-emotional competencies in the educational setting.

For the purposes of the current study, only the Shy-Anxious subscale will be used. This subscale was selected due to its relevance in assessing children's emotional difficulties within educational contexts. Scores for internalising problems are calculated by averaging the relevant item ratings, with higher scores indicating greater internalising difficulties. The T-CRS has demonstrated high internal consistency across its subscales, with Cronbach's alpha coefficients ranging between $\alpha = .85$ (for the Social Competence subscale) and $\alpha = .95$ (for the Shy-Anxious subscale), confirming the reliability of this measure. In the present study, internal consistency was good for internalising problems (Shy-Anxious subscale, $\alpha = .85$). Higher scores on the Shy-Anxious subscale signify more pronounced emotional and social challenges, enabling educators and psychologists to identify children who may require additional emotional or social support.

3.5. The Parent-Child Rating Scale (P-CRS)

The Parent-Child Rating Scale (P-CRS; Law et al., 2012), adapted from the original Teacher-Child Rating Scale (T-CRS; Hightower et al., 1986), is a 38-item instrument designed to evaluate children's social-emotional competencies and difficulties from the perspective of parents. Parents respond to items using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), indicating their agreement with statements about their child's behaviours and emotional responses. It includes problem dimensions—Acting-Out, reflecting externalising behaviours such as hyperactivity, restlessness, attention-seeking, oppositionality, and aggression; Shy–Anxious, capturing internalising tendencies such as social withdrawal, shyness, fearfulness, tension, unhappiness, and difficulty expressing feelings; and Learning Problems, relating to attention, concentration, and engagement with academic tasks. The competence dimensions assess adaptive functioning, with Task Orientation reflecting the ability to work independently, maintain organisation, and stay

focused; Tolerance to Frustration indicating adaptive coping with challenges, teasing, and failure; Sociability measuring the ease and quality of social interactions; and Social Assertiveness capturing confidence, initiative, and appropriate self-expression. The P-CRS provides an ecologically valid, parent-based perspective on children's behavioural adjustment, emotional regulation, and social competencies in everyday life.

For this study, only the Shy-Anxious subscale will be utilised, specifically measuring emotional distress, anxiety, social withdrawal, and depressive symptoms. This subscale was selected to capture relevant emotional and behavioural difficulties experienced by children within the family context. Scores are calculated by averaging responses to the respective items, where higher scores reflect more pronounced internalising problems, suggesting greater emotional or social difficulties. The P-CRS demonstrates good reliability across its subscales, with Cronbach's alpha coefficients ranging from $\alpha = .72$ (Social Competence) to $\alpha = .86$ (Shy-Anxious). In the present study, the Shy–Anxious subscale of internalising problems demonstrated low internal consistency ($\alpha = .59$), suggesting that findings related to this subscale should be interpreted with caution. Higher scores on the Shy-Anxious subscale indicate higher levels of emotional distress and related difficulties, offering valuable insights into children's emotional well-being at home, complementing educational assessments and providing contextually sensitive parental perspectives (Law et al., 2012).

4. Data Analysis

Data were organised and analysed using IBM SPSS Statistics to facilitate comprehensive statistical analyses. Descriptive statistics were computed separately by gender for affective empathy, cognitive empathy, and internalising problems. Correlation analyses, using Pearson's correlation for normally distributed data, assessed the relationships among these variables. Gender differences were examined using independent samples t-tests when assumptions of normality were met.

Multiple regression analyses were conducted to evaluate the predictive relationship of affective and cognitive empathy with internalising problems, controlling for gender. Additionally, moderation analyses were performed to explore potential interaction effects, specifically whether gender moderates the relationship between each empathy dimension and

internalising problems. This comprehensive analytical approach aims to clarify the complex relationships among empathy, internalising problems, and gender.

III. RESULTS

1. Empathy

Participants reported relatively high levels of empathy overall, indicating that they perceived themselves as capable of both understanding and sharing the emotions of others (see Table 1). Children reported higher affective empathy compared to cognitive empathy (see Table 1, $t(145) = 1.17$, $p < .05$). Cognitive and affective empathy were positively correlated, $r(143) = .49$, $p < .001$.

Results showed that girls perceived themselves as more empathic compared to boys (see Table 1). Overall, girls consistently reported higher levels of empathy than boys, with the largest difference observed in affective empathy, where the distinction was most pronounced.

Table 1.

Descriptive statistics and sex differences in empathy dimensions

Empathy dimension	Total		Girls		Boys		*t*(143)	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*	*M*	*SD*			
Cognitive	3.96	.49	4.04	.53	3.88	.43	1.99	**.049**	.33
Affective	4.04	.58	4.29	.56	3.80	.50	5.55	**<.001**	.92
Global	4.00	.46	4.16	.46	3.85	.40	4.30	**<.001**	.71

Pearson correlation analyses were conducted to examine the associations between age and empathy. No significant correlation with age was found.

Independent-samples t-tests were conducted to examine whether children's self-reported empathy levels differed across sociodemographic variables. No significant

differences were found in global, cognitive, or affective empathy as a function of parents' marital status, children's psychological support, or children with siblings and those without siblings. Similarly, no significant group differences emerged for global or cognitive empathy between children who reported being victims of bullying and those who did not. However, a significant effect was found for affective empathy, with children who reported being victims of bullying scoring higher (M = 4.25, SD = .48) than those who did not (M = 3.97, SD = .56), $t(122) = 2.82$, $p = .006$.

2. Internalising problems

Children reported generally low levels of internalising problems, with girls scoring higher than boys on self-reported internalising problems (see Table 2). Similarly, the teacher-reported internalising problems score indicated generally low levels of internalising symptoms in the school context. The parent-reported internalising problems score suggested moderate levels of internalising symptoms as perceived in the home and community context.

Table 2.

Independent-samples t-test comparing internalising problems scores by group (self-reported, teacher and parent report)

Informant	*N*	Total		Girls		Boys		*t*(145)	*p*	Cohen's
		M	*SD*	*M*	*SD*	*M*	*SD*			*d*
Child	147	1.67	.29	1.73	.29	1.61	.29	2.51	**.01**	.42
Teacher	94	1.18	.36	1.15	.26	1.22	.45	-1.03	.31	-.21
Parent	87	2.34	.56	2.49	.62	2.27	.67	1.14	.30	.34

Regarding the internalising problems score, an independent-samples *t*-test revealed that girls reported significantly higher levels than boys ($t(145) = 2.51$, $p = .01$). No significant gender differences were found in teacher-reported or parent-reported internalising problems, despite girls scoring slightly lower on teacher reports and slightly higher on parent reports compared to boys.

Pearson correlation analyses were conducted to examine the associations between age, grade, and self-reported, teacher-reported, and parent-reported internalising problems. No significant correlations were found. Furthermore, no significant correlations were found between teacher-reported internalising problems and teachers' age, education level or years of experience. No significant correlations were found between parent-reported internalising problems and parents' age, marital status, education level, or employment status.

Independent-samples t-tests were conducted to examine whether internalising problems differed across sociodemographic variables. Self-reported internalising problems were significantly higher among children who had received or are receiving psychological support compared to those who had or are not (M = 1.84, SD = .29), $t(135) = 4.28$, $p < .001$. Similarly, self-reported internalising problems were significantly higher among children who had been victims of bullying (M = 1.83, SD = .32) than those who had not (M = 1.60, SD = .24), $t(122) = 5.10$, $p < .001$.

3. Associations Between Empathy and Internalising Problems

To examine the relationships between empathy dimensions (global, cognitive, and affective) and internalising problems, Pearson correlation analyses were conducted separately for self-reported, teacher-reported, and parent-reported internalising problems. Table 3 presents the correlation coefficients, associated *p*-values, and number of participants for each analysis.

Table 3.

Pearson correlations between empathy dimensions and self-, teacher-, and parent-reported internalising problems

Internalising Problems	Cognitive Empathy			Affective Empathy			Global Empathy		
	r	*p*	*N*	*r*	*p*	*N*	*r*	*p*	*N*
Self-report	.04	.596	145	.33	**<.001**	145	.22	**.009**	145
Teacher-report	-.11	.32	83	-.2	.065	83	-.18	.097	83
Parent-report	-.21	.265	29	.28	.146	29	.03	.874	29

Only self-reported internalising problems showed significant positive associations with empathy, specifically with global empathy and affective empathy (see Table 3). Cognitive empathy was weakly and non-significantly related to self-reported internalising problems. No significant correlations were found between empathy dimensions and internalising problems as rated by teachers or parents.

4. Predicting Internalising Problems

A hierarchical multiple regression was conducted to examine whether cognitive and affective empathy predicted self-reported internalising problems after controlling for gender (see Table 5). In Step 1, gender was entered and accounted for 4% of the variance in self-reported internalising problems, $F(1, 145) = 6.21$, $p = .014$. In Step 2, cognitive and affective empathy were added, explaining an additional 13% of the variance, $Fchange(2, 145) = 7.20$, $p < .001$. In the final model, affective empathy emerged as a significant positive predictor of self-reported internalising problems, whereas cognitive empathy and gender were not significant predictors. These findings indicate that higher affective empathy is associated with greater self-reported internalising symptoms, even after controlling for gender.

Table 4.

Hierarchical multiple regression predicting self-reported internalising problems from cognitive and affective empathy, controlling for gender

Variable	*B*	95% CI for *B*		*SE B*	*β*	R^2	ΔR^2
		LL	*UL*				
Step 1						.04*	.04
Constant	1.85	1.70	2.01	.08			
Gender	-.12	-.22	-.03	.05	-.20		
Step 2						.13***	.09
Constant	1.33	.83	1.83	.25			
Gender	-.04	-.14	.06	.05	-.07		
Cognitive Empathy	-.09	-.197	.02	.05	-.15		
Affective Empathy	.19	.09	.29	.05	.37***		

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.
*$p < .05$. **$p < .01$. ***$p < .001$.

A hierarchical multiple regression was conducted to examine whether cognitive and affective empathy predicted teacher-rated internalising problems after controlling for gender. Neither gender nor the empathy dimensions significantly predicted teacher-rated internalising problems, and the overall model did not explain a significant proportion of the variance.

A hierarchical multiple regression was conducted to examine whether cognitive and affective empathy predicted parent-rated internalising problems after controlling for gender. In Step 1, gender predicted parent-rated internalising problems, accounting for 11% of the variance; however, this effect was not statistically significant. In Step 2, the addition of cognitive and affective empathy explained an additional 24% of the variance, but this change did not reach conventional significance. In the final model, neither cognitive nor affective empathy emerged as a significant predictor of parent-rated internalising problems.

5. Gender as a Moderator of the Relationship Between Empathy and Internalising Problems

A macro process analysis was conducted to examine the potential moderating role of gender in the relationship between empathy dimensions (cognitive and affective) and internalising problems as reported by children, teachers, and parents. Across all three informants, no significant interaction effects (gender × empathy) were found. These results provided no evidence of moderation, suggesting that gender did not significantly influence the strength or direction of the relationship between empathy and internalising symptoms.

IV. DISCUSSION

The present study sought to examine the relationship between empathy—specifically its cognitive and affective dimensions—and internalising problems in a normative sample of pre-adolescents, while also exploring gender differences and the potential moderating role of gender. The findings offer several meaningful contributions to the literature on empathy and emotional development in pre-adolescence, particularly by incorporating a multi-informant perspective and distinguishing between cognitive and affective empathy.

1. Research hypotheses and conjectures

As hypothesised, cognitive empathy did not demonstrate a significant association with internalising problems. Correlational and regression analyses consistently indicated that this dimension, reflecting the ability to understand others' perspectives and emotions, was not associated with internalising symptoms, whether reported by children, teachers, or parents. It should be noted, however, that these reports do not necessarily refer to the same child, which may contribute to discrepancies across informants. These findings align with prior research suggesting that cognitive empathy may serve a more socially adaptive function, without necessarily placing a psychological burden on the individual (e.g., Bray et al., 2021; Gambin & Sharpe, 2016; Yan et al., 2021). Unlike affective empathy, cognitive empathy may not elicit the same level of emotional arousal or personal distress, which could explain its lack of association with internalising difficulties in this age group.

In contrast, affective empathy emerged as a significant predictor of internalising problems, but only in self-reports. Again, it is important to acknowledge that the reports from children, parents, and teachers may not correspond to the same individual, which could partly explain the discrepancies observed across informants. Regression analyses indicated that after controlling for gender, affective empathy significantly predicted higher levels of self-reported internalising symptoms. This partially supports the second hypothesis and aligns with the theoretical view that affective empathy—entailing emotional resonance with others' distress—can increase vulnerability to internalising difficulties such as anxiety and depression (Bray et al., 2021; Tone & Tully, 2014; Yan et al., 2021). Interestingly, affective empathy was not significantly associated with internalising problems as rated by teachers or parents, suggesting a potential divergence between internal and external perceptions of psychological functioning. This suggests a reflection of the more private and subjective nature of internalising symptoms, which may be more accurately captured through self-report than through external observation.

However, it is important to note that the subscale used to assess self-reported internalising problems in the present study demonstrated relatively low internal consistency (α = .57), indicating limited reliability. As such, findings based on this measure should be interpreted with caution, as measurement error may have influenced the strength and stability

of the observed associations. In contrast, the internal consistency of the teacher-reported and parent-reported internalising problem scales was higher (although still low for parent-reported internalising problems, $\alpha = .59$), suggesting more reliable assessments from those informants, despite the absence of significant associations with empathy dimensions. Furthermore, the teacher-reported and parent-reported data sets were comparatively smaller than the self-reported data set for internalising problems. Nonetheless, the absence of significant associations may also indicate that affective empathy's link to internalising symptoms is more salient at the subjective level, highlighting the complexity of assessing internal psychological experiences across different informants.

With respect to gender, the findings partially supported the third hypothesis. Girls reported significantly higher levels of both affective empathy and internalising problems compared to boys, which is consistent with developmental literature highlighting early emerging gender differences in emotional sensitivity and psychological distress (e.g., Smith & Rose, 2012). These patterns may be shaped by both biological predispositions (e.g., heightened emotional reactivity in females) and socialisation processes that encourage emotional expressiveness and relational attunement in girls (Masten et al., 2013). Research suggests that from a young age, girls are often socialised to be more emotionally responsive and attuned to the needs and feelings of others, which may contribute to their higher affective empathy scores. Simultaneously, these same social expectations may increase girls' vulnerability to internalising symptoms, particularly when they struggle to regulate the emotional intensity elicited by others' distress (Zahn-Waxler et al., 2008).

However, it is important to note that gender differences were more evident in self-reports than in teacher or parent ratings, which could suggest that girls may be more attuned to or more willing to report internalising symptoms. Alternatively, it may reflect adults' underestimation of girls' emotional difficulties or a broader tendency for internalising symptoms to go unnoticed in external contexts such as school. The lack of significant gender differences in teacher and parent ratings may therefore underscore the limitations of relying solely on external informants to detect internal psychological distress, especially in populations where symptoms are more likely to be internalised and expressed in subtle or socially acceptable ways. This discrepancy across informants highlights the need for multi-method, multi-informant approaches in the assessment of internalising problems and supports the inclusion of children's subjective experiences as a critical source of data in both research

and clinical settings. However, caution is warranted when interpreting these results, as the different informants may not necessarily be reporting on the same child.

In accordance with the fourth hypothesis, gender did not significantly moderate the relationship between affective empathy and internalising problems. Across all informants, no significant interaction effects were found between gender and either empathy dimension. This suggests that although girls reported higher levels of both affective empathy and internalising problems, the strength of the association between these constructs was similar across genders. These findings imply that while gender differences exist in baseline levels of empathy and psychological distress, the underlying mechanism linking affective empathy to internalising symptoms may operate similarly for boys and girls during this developmental stage, in line with previous research (e.g., Eisenberg et al., 2015; Masten et al., 2013).

Furthermore, no significant associations were found between age and any of the primary variables, which may reflect the relatively narrow age range of the sample and the limited developmental variation within it. Similarly, the absence of differences based on sibling status suggests that the presence of siblings does not appear to influence levels of empathy or internalising symptoms in this age group. In contrast, higher levels of affective empathy were reported by children who identified themselves as victims of bullying, which may indicate that increased emotional sensitivity heightens vulnerability in social contexts where negative peer interactions occur. Consistently, self-reported internalising problems were more pronounced among children who had received or were currently receiving psychological support. It is important to consider the possibility of bidirectional effects: children with greater internalising difficulties may be more likely to seek or be referred for psychological support, while access to such support may also influence the way difficulties are recognised and reported.

Taken together, these findings support the view that affective empathy may represent a developmental risk factor for internalising problems in pre-adolescence, particularly from the perspective of the child. The results underscore the importance of distinguishing between cognitive and affective components of empathy, as they appear to play distinct roles in emotional functioning. Moreover, the findings point to the value of including children's own perspectives in the assessment of internalising symptoms, as external informants may not always detect these difficulties.

2. Limitations and future directions

Despite the contributions of this study, several limitations must be acknowledged. First, the cross-sectional design limits the ability to draw conclusions about causality or the developmental trajectory of the relationship between empathy and internalising problems. Longitudinal data would be essential to better understand whether heightened affective empathy precedes or results from internalising difficulties, or whether this association is bidirectional. Second, although the use of a multi-informant approach strengthens the ecological validity of the findings, the reliance on self-report measures of empathy may be influenced by social desirability or individual differences in emotional insight, particularly in a pre-adolescent sample. Additionally, the discrepancies across informants—particularly the lack of significant associations in teacher- and parent-reported data—highlight the challenges of assessing internalising symptoms through external observation, as these symptoms are often internalised and not easily observable by others.

A key limitation of the present study concerns the use of multiple informants. While self-reports were directly linked to the participating children, the parent-reported and teacher-reported questionnaires were not always completed for the same individuals. As a result, the data sets for each informant group may not correspond to identical subsets of children. This introduces the possibility that discrepancies across self-, parent-, and teacher-reported outcomes reflect differences in sample composition rather than true differences in perception. Although the use of multiple informants is a recognised strength in developmental research, as it provides a more comprehensive view of children's functioning across contexts, the lack of matched cases reduces the comparability of perspectives and limits the extent to which findings can be interpreted as converging or diverging assessments of the same child. Future studies would benefit from designs ensuring that data from all informants refer to the same participants, thereby strengthening conclusions regarding cross-informant consistency.

The study also used a convenience sample drawn from a normative school population, which, while appropriate for the study's aims, may limit generalisability. The relatively low variability in internalising problems (especially in teacher ratings) may have attenuated possible effects. Furthermore, the narrow age range may have constrained the ability to detect age-related changes in empathy or internalising symptoms, particularly during a

developmental stage characterised by rapid emotional, cognitive, and social change. Future studies should consider including broader and more diverse samples—both in terms of age and sociocultural background—to enhance generalisability.

Another important limitation concerns the psychometric properties of the self-reported internalising problems subscale of the Strengths and Difficulties Questionnaire (SDQ) used in the present study. Specifically, this subscale demonstrated low internal consistency, falling below the commonly accepted threshold for acceptable reliability in psychological research. This suggests that the items within the subscale may not be consistently measuring the same underlying construct, and as a result, the findings derived from this measure should be interpreted with caution. Although the SDQ is widely used and well-validated across diverse populations (Goodman, 2001), prior research has similarly noted weaker internal consistency for certain SDQ subscales, particularly in self-report versions completed by younger populations (Van Roy et al., 2008). Future research would benefit from using alternative or supplementary measures of internalising symptoms with stronger psychometric properties, especially when relying on self-report data from children and adolescents. This would help ensure that the observed associations more accurately reflect true underlying psychological processes rather than potential measurement error.

Furthermore, the psychometric properties of the parent-reported internalising problems subscale of the Parent-Child Rating Scale (P-CRS) used in the present study also demonstrated low internal consistency, falling below the commonly accepted threshold for acceptable reliability in psychological research. This limitation raises concerns about the reliability of the parent-reported data, as low internal consistency suggests that the items within the subscale may not be consistently measuring the same underlying construct. In addition, the relatively small data set for parent reports further restricts the robustness of the findings. A limited sample size reduces statistical power, increasing the likelihood of non-significant results even when effects may exist, and may also contribute to unstable estimates of reliability. As a result, the non-significant findings regarding the association between empathy and internalising problems in parent reports should be interpreted with caution. It is possible that measurement error and low statistical power contributed to the lack of observed effects, rather than a true absence of association. Future studies should consider employing parent-report instruments with stronger internal consistency, ensuring sufficiently large and representative samples, or using multiple assessment tools to triangulate data and enhance the

robustness of findings. Additionally, it may be beneficial to further evaluate the psychometric adequacy of the P-CRS in normative pre-adolescent populations, as its performance may vary depending on sample characteristics and developmental stage.

Despite these limitations, the findings hold several important theoretical and practical implications. The study contributes to the growing body of literature on the differential roles of cognitive and affective empathy in emotional development, supporting the view that affective empathy may increase emotional vulnerability during pre-adolescence. By distinguishing between empathy dimensions, this research aligns with theoretical models that emphasise the dual nature of empathy—as both a facilitator of prosocial behaviour and a potential risk factor when not regulated effectively. Clinically, the findings suggest that interventions aimed at promoting emotional resilience in pre-adolescents might benefit from incorporating components that enhance emotion regulation skills in children with high levels of affective empathy, particularly among girls.

From a school and community perspective, these results underscore the importance of attending to children's self-perceptions of distress, as internalising problems may go unnoticed by teachers and parents. This supports the value of direct self-report tools in mental health screenings in school contexts, especially when designing early identification and prevention strategies.

Future research would benefit from adopting longitudinal and experimental designs to explore how the relationship between empathy and internalising problems evolves over time, particularly through adolescence and into early adulthood. Moreover, the role of emotion regulation, rumination, and executive functioning should be examined as potential mediators or moderators of this relationship, to better understand the mechanisms by which affective empathy may translate into psychological distress. Future studies should also aim to expand informant perspectives, possibly incorporating peer reports or behavioural observations to triangulate findings and enrich the understanding of empathic functioning in real-world contexts.

3. Conclusion

To conclude, while the present study highlights the nuanced and at times paradoxical role of empathy—particularly its affective dimension—in pre-adolescent mental health, it also provides a foundation for more targeted, developmentally informed interventions aimed at supporting emotional well-being during this pivotal period of development. By demonstrating that affective empathy is associated with greater self-reported internalising problems, the findings call attention to the emotional cost of high empathic sensitivity in young individuals, particularly in the absence of well-developed emotional regulation strategies.

The study further reinforces the importance of distinguishing between cognitive and affective components of empathy, both theoretically and in applied settings. While cognitive empathy appears to serve a more adaptive function without a direct link to internalising symptoms, affective empathy—if left unmanaged—may increase emotional burden and susceptibility to distress. This distinction is crucial for developing nuanced prevention and intervention programmes that support not only prosocial behaviour but also emotional resilience.

Moreover, the results highlight the relevance of gender in understanding empathy and psychological vulnerability. Although no significant moderating effect was found, girls' higher levels of affective empathy and internalising problems suggest that gender-informed approaches may be warranted when designing mental health supports in schools and clinical contexts.

Overall, this study contributes to the growing body of research that challenges the assumption that empathy is universally beneficial and instead positions it as a complex, multifaceted construct with both protective and risk-enhancing features. Future work should continue to explore how different empathy profiles interact with individual and contextual factors to shape emotional outcomes, paving the way for more tailored and effective mental health strategies in youth populations.

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