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Do Parents Show Interpersonally Oriented Socialization Practices for Adolescents' Negative Emotions? Through the Lens of Chinese Families

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This research proposes a new framework called interpersonally oriented parental emotion socialization (inter-PES) practices to address parental socialization of adolescents' interpersonal emotional processing. This framework captures parents' interpersonal perspectives when their adolescent children experience negative emotions resulting from social interactions. In Study 1, parents (n = 925; 84.54% females; M_{age} = 39.86 years, SD = 4.37) recalled their PES practices. Content analysis of parents' narratives showed four components of inter-PES: *perspective-taking, positive attributions to others, negative attributions to others*, and *concern for others.* In Study 2, parents (n = 536; 57.98% females; M_{age} = 42.84 years, SD = 4.01) evaluated their own parenting behaviors on a newly developed scale to measure the four components mentioned above. Factor analysis supported the four-factor structure. Moreover, the four subscales demonstrated good reliabilities. In Study 3, adolescents (n = 864; 45.97% females; M_{age} = 14.50 years, SD = 0.77) reported their perceived maternal inter-PES using the same scale, and factor analysis again confirmed the four-factor structure. Study 3 also showed that the four components of inter-PES reported by adolescents were related to their perceptions of other commonly assessed maternal parenting variables and self-reported socioemotional development. Overall, this research develops a new tool for studying inter-PES and reveals new avenues for future research on how parents' interpersonal perspectives during emotional socialization may relate to adolescents' socioemotional outcomes.

Keywords: parental emotion socialization, interpersonal, negative emotions, adolescents

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Extensive research has highlighted that adolescents experience an increase in negative emotional states compared with children and adults in terms of both frequency and intensity (Frost et al., 2015; Spear, 2009). Parents often have daily conversations with adolescents about negative emotions and distressing situations that adolescents have experienced or are experiencing (Jones et al., 2014). Parenting emotion socialization (PES) practices during such conversations are crucial for adolescents' socioemotional development (Eisenberg, 2020; Eisenberg et al., 1998). For instance, parents can directly teach adolescents or indirectly model the appropriate emotional skills or behaviors (Lougheed et al., 2020). As a result, in recent years, developmental psychologists, educators, and family therapists have advocated increased attention to PES practices, especially when adolescents experience negative emotions.

Of note, adolescents' emotional distress is frequently triggered by social interactions, such as conflicts with peers or teachers (O'Neill et al., 2021). In such situations, adolescents not only need to manage their own emotions but also need to interpret and respond to the emotions and actions of others. These necessary skills and abilities are critical for adolescents to effectively manage their emotional experiences, resolve conflicts, and maintain healthy

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relationships (Booker & Dunsmore, 2017). Despite the extensive literature on PES, most work has focused on PES practices that target adolescents' intrapersonal emotion processing, such as parents' supportive/unsupportive responses that influence adolescents' own emotional experiences and regulation. However, few well-established theories and frameworks comprehensively address PES practices that guide adolescents in the development of key attributes necessary for social interactions during episodes of negative emotions, such as understanding others' mental states, making attributions, and responding supportively during emotionally charged interactions.

The present research aimed to fill this gap by introducing a framework that encompasses the core components of interpersonally oriented PES (inter-PES) practices for adolescents' negative emotions. This framework is designed to shed light on the parental socialization processes that enhance adolescents' interpersonal emotion processing. To provide empirical support for this framework, we conducted a content analysis of parental narratives, developed an instrument to assess the dimensions of inter-PES, and finally evaluated the relationships that inter-PES had with other parenting behaviors and adolescent outcomes.

PES

Caregivers play a key role in scaffolding the children's emotional development (Paley & Hajal, 2022). Since the 1990s, PES has been proposed to emphasize the processes through which parents socialize their children about emotions (Eisenberg et al., 1998). PES encompasses a wide range of parental behaviors and interactions with children, involving both direct teaching and indirect modeling of emotional knowledge and behaviors through parent–child interactions (Eisenberg, 2020; Morris et al., 2007). During adolescence, an essential aspect of PES is parental responses (i.e., reactions) to adolescents' negative emotions (Fabes et al., 2002), which can alter adolescents' emotional experiences, demonstrate how to manage negative emotions, facilitate adolescents' understanding of emotions, and so on. Over time, these parental responses can impact the development of emotional regulation skills and overall socioemotional adjustment in adolescents (Miller-Slough et al., 2023).

Indeed, parental responses to adolescents' negative emotions align with the prevailing concept of interpersonal emotion regulation and can be seen as a family-level manifestation of this regulation (Barthel et al., 2018; Petrova & Gross, 2023). Recognizing that most emotions and emotion regulation processes occur in social contexts, researchers have increasingly emphasized the importance of interpersonal emotion regulation, which refers to how individuals use social interactions to regulate their own or another person's emotions (Rimé, 2007; Williams et al., 2018). Interpersonal emotion regulation can be either intrinsic, where individuals regulate their own emotions through social interactions, or extrinsic, where they help regulate others' emotions (Zaki & Williams, 2013). If parents are regarded as the agents, parental responses to children's negative emotions—where they actively engage in behaviors or strategies to influence their children's emotional states—can be classified as extrinsic interpersonal emotion regulation of parents. These parental responses, underscoring the interactive and relational aspects of emotional regulation within families, provide a unique understanding of interpersonal emotion regulation from the perspective of socialization.

Socializing Adolescents' Intrapersonal and Interpersonal Emotional Processing

Consistent with adaptive and maladaptive emotion regulation strategies, the extant theoretical framework on parental responses to adolescents' negative emotions specifically emphasizes supportive and nonsupportive parental responses (Fabes et al., 2002). Supportive parental responses are those that facilitate adolescents' socioemotional adjustment, such as problem solving, comforting, or encouraging emotional expression, whereas nonsupportive parental responses interfere with adolescents' emotional regulation, such as showing parental distress or punishing adolescents (Miller-Slough et al., 2023; Zeman et al., 2012). Notably, if we regard adolescents as the agents, the extant literature on supportive/nonsupportive parental responses has overwhelmingly focused on how parents provide guidance and support to their adolescents to improve adolescents' *intrapersonal emotional processes*. In other words, this body of research emphasizes how parents' behaviors can help adolescents to regulate their own emotions, to become more self-aware of their emotional states, and to develop effective coping mechanisms.

Adolescents' emotional distress often arises from social interactions, such as negative interactions with peers and teachers (O'Neill et al., 2021). In such situations, their emotional processing is not only intrapersonal/self-oriented (e.g., learning to express, understand, and regulate their own emotions) but also interpersonal/other-oriented, which may include inferring others' emotions and actions, attributing others' motivations and intentions, and evaluating the possible consequences of own actions. These interpersonal emotional processes are closely related to extant concepts, such as *affective social competence* describing complementary processes of sending, receiving, and experiencing emotions in dynamic interactions (Camras & Halberstadt, 2017; Halberstadt et al., 2001), *empathy* entailing understanding another person's perspective and emotions and showing sorrow or concern for the other (Chrysikou & Thompson, 2016; Cuff et al., 2016), and *social information processing* (SIP) describing how mental operations impact behavioral responding in social situations (Crick & Dodge, 1994; Lemerise & Arsenio, 2000).

Distinguishing Intrapersonally Oriented PES From Inter-PES

From the perspective of emotion socialization, parents should play crucial roles in scaffolding adolescents' interpersonal emotion processing when adolescents experience negative emotions in social contexts. To account for the different aspects of PES, we operationalized parental practices that may foster adolescents' interpersonal emotional processing as inter-PES and classified the aforementioned parental supportive and nonsupportive responses to adolescents' negative emotions as *intrapersonally oriented* PES.

Despite the lack of comprehensive theoretical frameworks on inter-PES practices, some studies have demonstrated such practices and highlighted the significant role of culture in the salience of inter-PES practices. Especially, parents from interdependent cultural contexts valuing relations and group harmony (e.g., Chinese

societies) tend to socialize their children to be sensitive to social interactions during emotional events, compared with parents from independent cultural contexts valuing self-autonomy (e.g., most Western societies). For example, Wang (2001) observed that during mother–child discussions about emotional events, both Chinese and Euro-American mothers prompted their children to consider others' feelings, but Chinese mothers displayed a greater concern for others' emotions. Also, Chinese culture is more likely to emphasize a social theme for emotional events, attributing a character's emotions to interpersonal interactions (e.g., being visited by a friend), whereas Euro-American culture is more likely to emphasize a personal theme, linking emotions to specific objects or events (e.g., winning a prize; Ding et al., 2021; Fivush & Wang, 2005).

During adolescence, individuals encounter substantial social transitions, such as evolving parent–child dynamics, peer influences, and the adoption of new social roles (Bailen et al., 2019). These changes require adolescents to significantly enhance their interpersonal emotional processing, including emotional awareness, communication skills, and management abilities across diverse social contexts (Booker & Dunsmore, 2017). Also, adolescence is a period marked by improved cognitive development (Steinberg, 2005). Research on social cognition, for example, shows that adolescents' perceptions of others grow increasingly abstract, differentiated, and complex (Dumontheil, 2014; Eisenberg & Morris, 2004; Nook et al., 2020). The greater cognitive capacities that children develop as they enter adolescence allow for them to develop more advanced socioemotional abilities and skills, especially with adult scaffolding (Booker & Dunsmore, 2017). Therefore, we argue that as children enter adolescence, parents should provide more intricate emotional guidance to their adolescent offspring, for instance, emphasizing not only *intrapersonal* emotional processes but also *interpersonal*-oriented ones, such as recognizing and interpreting social cues and responding appropriately in social situations. Thus, understanding the nature of inter-PES is critical to effectively supporting the complex socioemotional and cognitive growth that occurs during this critical period.

A Theoretical Framework to Describe Inter-PES for Adolescents' Negative Emotions

Given the above content, we propose it is necessary to provide a comprehensive framework to describe how parents guide and teach adolescents from an interpersonal perspective when adolescents experience negative emotions in social interaction. In emotional events, social interactions may impact various cognitive and behavioral processes. According to Parkinson (1996), the social roles of emotions can be understood by examining their occurrence and impacts. SIP theory (Crick & Dodge, 1994), therefore, provides a suitable foundation for understanding how parents can effectively engage in inter-PES practices when their adolescents experience negative emotions. SIP theory was first proposed to outline the cognitive processes involved in social interactions (Crick & Dodge, 1994), with later researchers expanding upon this model to integrate emotion processes and cognition, offering a more comprehensive understanding of the processes involved when an individual makes sense of and acts in social situations (Lemerise & Arsenio, 2000). Regardless, SIP proposes that during social interaction, individuals should encode, interpret, evaluate, and respond to social cues (Crick & Dodge, 1994). Building on this, the present research proposes that the inter-PES framework may comprise three key components.

The first is *perspective-taking*, which involves parents guiding adolescents to understand and be attentive to the feelings, thoughts, and behaviors of others. Perspective-taking enhances the accurate encoding of social cues, allowing individuals to recognize that others may have different interpretations of the world than their own (Epley et al., 2004). This aligns with the initial steps of SIP, where individuals encode and interpret social information, ensuring a more comprehensive understanding of the social environment (Crick & Dodge, 1994). Past literature indicates that during parent–child communications about emotions, parents can facilitate their children's cognitive process of perspective-taking. For example, parents may encourage their children to be mindful of others' emotions by asking questions like "Dad got mad, didn't he?" Moreover, parents also attributed emotions to story characters during storytelling to promote children's awareness and consideration of others' emotions (Wang, 2001).

The second is *attributions to others,* which involves how parents interpret the intentions, responsibilities, or motivations of others when discussing their adolescent children's negative emotions. This aligns with the mental representation stage of SIP, where individuals interpret others' behaviors and intentions (Crick & Dodge, 1994). Attributional processes are crucial during emotional events that involve interpersonal interactions, as they help individuals determine the cause of their emotional experiences (Neumann, 2000; Smith et al., 1993). For instance, a person may feel angry toward someone if they believe that this person caused a negative outcome for them (Smith & Ellsworth, 1985). A qualitative study described parenting behaviors of making attributions to others (Wingard, 2022). For instance, the daughter was upset because some girls at school taunted her, and the mother responded by saying, "You see that Emily is being not nice, it's not you."

The third is *concern for others*, which pertains to parental guidance for children to avoid having a negative influence on others. This aligns with the response generation and evaluation stages of SIP, where individuals choose and evaluate potential responses (Crick & Dodge, 1994). Negative emotions and emotion-related behaviors can impact others, such as causing others to feel threatened or intimidated, which can further lead to defensiveness or even aggression in response (Lewis, 2000; van der Schalk et al., 2011). Therefore, the ability to empathize with others' needs may enable individuals to understand and respond to others' emotions, leading to meaningful and positive interactions (Belacchi & Farina, 2012). Parents can play a crucial role in guiding their children to be mindful of how their emotions and behaviors can affect others. For instance, previous research has shown that parents often guide their children in this regard, for instance, "I tell my child not to shout so loudly because he/she will disturb the other clients" or "I tell my child that hurt Toby's feelings" (Denham et al., 2007; Gentzler et al., 2015).

Inter-PES aligns with SIP theory by outlining how parents can support adolescents in encoding, interpreting, and responding to social cues during emotionally charged situations. Notably, we conceptualize inter-PES as a critical parenting construct and a specific dimension of PES because it involves the strategies and approaches that parents use within the family dynamics to influence and guide their adolescents' development. By situating

inter-PES within emotion socialization, we highlight the importance of the family environment in shaping adolescents' socioemotional competencies.

The Present Research

Across all cultures, parents employ various strategies to socialize their children, aiming to prepare them to become capable and responsible adults who can thrive in society (Phinney et al., 2000). However, parental expectations and practices can vary between cultures emphasizing independence (e.g., personal achievement, individual goal pursuit, and free choice) and those valuing interdependence (e.g., social harmony, the duty to groups, and concern for others). As previously noted, interdependent cultures place a stronger emphasis on socializing children to be sensitive to social interactions than do independent cultures (Wang, 2013). Accordingly, this research aimed to explore how parents employ inter-PES in response to their adolescents' negative emotions in Chinese families. Chinese culture is known for its collectivistic and interdependent values, prioritizing social harmony and group relationships (Wang, 2013), which makes it an ideal context to study how parents employ inter-PES in response to their adolescents' negative emotions.

Three studies were conducted to identify the main components of inter-PES, develop a scale to evaluate these components, and further investigate the relationships between inter-PES and other parenting variables and adolescent outcomes in Chinese families.

Study 1: Qualitative Study of Inter-PES via Parent Reports

Qualitative studies provide a way for researchers to gain an in-depth understanding of the native meanings and characteristics of a phenomenon and to generate authentic conceptions of the phenomenon from those directly involved (Leung & Shek, 2011; Underwood & Teresi, 2002). To this end, we gathered firsthand narratives from parents about how they responded to their adolescents when adolescents experienced negative emotions during social interactions, with two objectives: (a) to identify the presence of the proposed components and (b) to generate the initial item pool for further questionnaire development.

Method

Participants and Procedure

Parents who had children in adolescence (n = 925; 84.54% females; M_{age} = 39.86 years, SD = 4.37) were recruited from urban areas in southern China. Most parents were married (96.32%), and almost half (43.67%) had completed a bachelor's degree or higher. Around 21.73% of the parents had only one child, 61.62% had two children, and the rest had three or more children in their families. Parents with multiple children were instructed to focus on interactions with only one child between the ages of 10 and 18 years old. The targeted adolescents had a M_{age} of 14.03 years (SD = 1.68), and 53.85% of them were females.

The study utilized the popular online platform in China, "Tencent Questionnaire," to administer the questionnaire to parents. The online questionnaire was delivered through WeChat, a popular social media and messaging platform in China. The questionnaire began by collecting demographic information, followed by an open-ended question asking parents to describe how they typically respond to their child experiencing emotional distress due to social interactions (e.g., conflict with peers, criticism from teachers, or exclusion from classmates). Parents were instructed to provide a detailed response of at least 100 words.

Transparency and Openness

The materials for data collection were in Chinese. Ethical approval for this study was obtained from the research ethics committee of the first author's university (Sun Yat-Sen University). Informed consent was obtained from parent participants. All materials, data, and analysis codes used in the study are available upon request.

Analytic Strategy

Two graduate psychology students were trained as coders to analyze parental narratives using MAXQDA software. The coding process involved three steps. In the first step, the two coders screened the data to identify if there were invalid responses. Parent responses to the open-ended question that were less than 50 words in length or that were completely not related to the topic were considered invalid and would be removed from the final analysis. In the second step, the coders were trained on the coding scheme, being provided with definitions and examples of each coding dimension. In the third step, the coders independently applied the coding scheme to the parental narratives and marked "1" on the coding sheet whenever they identified a codable instance. The coders' agreement was closely monitored during the coding process by the first author, and any significant discrepancies were discussed and resolved. The level of agreement among the coders was assessed using the κ coefficient in SPSS.

Results and Discussion

A total of 13 responses were identified as invalid and removed from the final analysis. The final analysis included 912 responses. Of note, two coders found early on that when parents talked about emotional events with a child, they tended to attribute responsibility or intentionality to others in both positive and negative ways. Positive attributions emphasized the benign motives of others, while negative attributions involved blaming or criticizing others for causing negative emotions. We thus expanded the assumed three components of inter-PES to four, incorporating the two types of attributions. The coders finally coded four themes related to inter-PES: *perspective-taking, positive attributions to others, negative attributions to others*, and *concern for others*. The κ coefficients for the four dimensions ranged from .80 to .95.

Narrative examples for the four dimensions are shown in Table S2 of Supplemental Material. About 10.09% of parents mentioned *perspective-taking*, 29.82% mentioned *positive attributions to others*, 15.13% mentioned *negative attributions to others*, and 1.97% *mentioned concern for others*. Overall, this study confirmed the existence of four components of inter-PES. Based on the definitions of dimensions and parental narratives, a total of 26 initial items were developed to assess the four theoretical dimensions.

Study 2: Quantitative Study of Inter-PES via Parent Report: Factor Structure and Reliability

The goal of Study 2 was to investigate the factor structure of parental-reported inter-PES and determine appropriate items for scale development using factor analyses and test the reliability of the scale.

Method

Participants and Procedure

A new group of parents (n = 536; 57.98% females; M_{age} = 42.84 years, SD = 4.01) was recruited through middle schools from urban areas in southern China. Of the parents, 65.96% had a bachelor's degree or higher, and the majority (92.84%) were married. Their children's ages ranged from 13 to 16 years (53.62% females; M_{age} = 14.66 years, SD = 0.56). Invitation letters, consent forms, and the online survey link were delivered to parents through school teachers. The online survey was conducted via "Wenjuanxing," a popular survey platform in China.

Transparency and Openness

The materials for data collection were in Chinese. Ethical approval for this study was obtained from the research ethics committee of the first author's university (Sun Yat-Sen University). Informed consent was obtained from parent participants. All materials, data, and analysis codes used in the study are available upon request.

Measures

Inter-PES Scale (Parent Version). A total of 26 initial items were created to assess *perspective-taking* (six items), *attribution of others* (five items for negative attributions and six items for positive attributions), and *concern for others* (nine items). Instructions for filling out the questionnaire and examples of items are shown in Table S1 of Supplemental Material. Each item was rated from 1 (*not at all like me*) to 7 (*very much like me*).

Analytic Strategy

Data Checking and Cleaning. Preliminary data checks were conducted before data analysis. Respondents who consistently selected the same response option (e.g., "very much like me") across all scale items were flagged as invalid using the long-string analysis method and subsequently removed from the data set (Costa & McCrae, 2008; Curran, 2016).

Exploratory Factor Analysis and Confirmatory Factor Analysis. The sample was randomly divided into two subsamples, with the first used for exploratory factor analysis (EFA) and the second used for confirmatory factor analysis (CFA). EFA was performed using SPSS, employing principal axis factoring and oblique rotation. The following criteria were used to determine the number of factors and items retained. First, we would retain factors with eigenvalues larger than 1. Second, we would retain factors with summed commonalities of over 60% (Hair et al., 2006). Third, we would only retain factors that can be interpreted in a meaningful way (Worthington & Whittaker, 2006). Last, following past literature (Worthington & Whittaker, 2006; Yong & Pearce, 2013), problematic items were dropped when their item-factor loadings were less than .32 or had high cross-loadings. An item was considered to have a high cross-loading if its second-highest factor loading was within .15 (absolute value) of its highest factor loading.

To test the factor structure identified in EFA, CFA was performed using the robust maximum likelihood estimator in Mplus. Following the recommendation of (Hu & Bentler, 1999), comparative fit index (CFI) $\geq$ .90, Tucker–Lewis index (TLI) $\geq$ .90, standardized root-mean-square residual (SRMR) $\leq$ .10, and root-mean-square error of approximation (RMSEA) $\leq$ .08 signal adequate model fit. If any items had factor loadings lower than .40 (absolute value) in the CFA, they were removed (Stevens, 2001). Another round of EFA and CFA would then be conducted to ensure that removing these items did not alter the factor structure, intercorrelations, communalities, loadings, or cross-loadings of the remaining items (Worthington & Whittaker, 2006) while still satisfying the original criteria.

Reliability and Factor Correlations. After identifying factors and items through EFA and CFA, the reliability of each subscale was assessed. Methodologists have raised concerns about using Cronbach's α as a measure of reliability, suggesting that McDonald's omega (ω) may be a more accurate alternative in many situations (Cho & Kim, 2015; Peters, 2014). The ω was thus evaluated using SPSS in this research to assess reliability. According to prior literature (Nájera Catalán, 2019), an ω score of .80 or higher is considered acceptable. Interfactor correlations were computed in SPSS. Using the recommendation by Cohen (1988), we interpreted significant correlation coefficients ($ps < .05$) as weak (less than or equal to .30), medium (.30–.50), and strong (larger than .50) in this article.

Results

The proportion of invalid responses was 13.43%, leaving 477 valid samples for final analysis. EFA was conducted with a sample size of 238, and CFA was conducted with a sample size of 239.

The EFA results identified three factors with initial eigenvalues of 7.79, 2.96, and 1.01, respectively, explaining 61.99% of the cumulative variance. Unexpectedly, the items designed to measure *perspective-taking* and *positive attributions to others* loaded on factor 1, whereas the items proposed to measure *negative attributions to others* and *concern for others* loaded on the second and third factors, respectively. The factor loadings of each item ranged from .47 to .95 (see Table 1). As stated by Worthington and Whittaker (2006), no matter how solid the statistical evidence is, researchers must consider theoretical relevance when extracting factors. For our proposed theoretical framework, it is unreasonable to allow the items assessing *positive attributions to others* to stay with items assessing *perspective-taking*. Therefore, we tested both the three-factor model and the four-factor model in CFA. In the three-factor model, factor 1 consisted of items assessing *perspective-taking* and *positive attributions to others*, factor 2 included items assessing *negative attributions to others,* and factor 3 included items assessing *concern for others.* In contrast, the four-factor model had distinct factors for *perspective-taking*, *positive attributions to others*, *negative attributions to others*, and *concern for others*. The fit of the three-factor model did not meet the desired standards (df = 149, S-Bχ^2 = 303.01, $p < .001$, Akaike information criterion (AIC) = 12228.66, Bayesian information criterion (BIC) = 12437.25, RMSEA = .07, CFI = .90,

Table 1
Items and Factor Loadings of the Scale Assessing Inter-PES Regarding Adolescents' Negative Emotions Based on EFA and CFA

	Factor													
	Study 2: EFA Parent report			Study 2: CFA Parent report 3-factor model			Study 2: CFA Parent report 4-factor model				Study 3: CFA Adolescent report 4-factor model			
Item	PT and PA	NA	CPAE	PT and PA	NA	CPAE	PT	PA	NA	CPAE	PT	PA	NA	CPAE
1	.95			.67			.71				.88			
2	.47			.50			.52				.76			
3	.75			.77			.77				.88			
4	.86			.67			.73				.86			
5	.64			.73			.76				.83			
6	.64			.66				.66				.83		
7	.70			.78				.79				.88		
8	.65			.80				.82				.83		
9	.57			.72				.71				.83		
10	.69			.76				.77				.89		
11	−.30	.66			.54				.53				.67	
12		.74			.75				.75				.81	
13		.75			.65				.65				.81	
14		.65			.71				.71				.73	
15		.79			.82				.82				.78	
16			.72			.85				.86				.88
17			.81			.74				.73				.82
18			.91			.83				.83				.84
19			.56			.70				.70				.87

Note. Factor loadings are only displayed for items with loadings >.25 on their expected factors. The items in the scale of parents' version were identical to the items in the scale of adolescents' version except that different pronouns were used (e.g., "I/me" in the parents' version and "My mother" in the adolescents' version). PT = perspective-taking; PA = positive attributions to others; NA = negative attributions to others; CPAE = concern about the potential adverse effects on others; inter-PES = interpersonally oriented parental emotion socialization; EFA = exploratory factor analysis; CFA = confirmatory factor analysis.

TLI = .89, SRMR = .06). The four-factor model reached an acceptable model fit (df = 146, S-Bχ^2 = 286.91, $p < .001$, AIC = 12211.20, BIC = 12430.21, RMSEA = .06, CFI = .91, TLI = .90, SRMR = .06) and was hence retained. Table 1 shows the factor loadings of each item for the three-factor and four-factor models. Overall, the results of CFA showed that the four-factor model is appropriate for the inter-PES scale.

Nineteen items were retained for the inter-PES, which can be found in Table S1 of the Supplemental Material. The ω of the four subscales ranged from .83 to .88, indicating acceptable reliability for each subscale. The means, standard deviations, and correlations of the four subscales are in Table 2. The results showed strong and positive correlations among *perspective-taking*, *positive attributions to others,* and *concern for others* (ps < .05), all of which had weak and positive associations *with negative attribution of others* (ps < .05).

Discussion

The study identified four key components that represent inter-PES, which are *perspective-taking*, *positive attributions to others*, *negative attributions to others*, and *concern for others*. Furthermore, the parent-reported inter-PES scale, which consists of 19 items assessing these components, demonstrated good reliability and construct validity based on EFA and CFA.

Study 3: Examining the Validity and Reliability of Inter-PES via Adolescent Reports

This study had four objectives. First, we aimed to evaluate whether the inter-PES scale, originally developed based on parent reports, was also a valid tool for measuring adolescents' perceptions of parenting behaviors. Both parent-perceived and adolescent-

Table 2
Means, Standard Deviations, and Correlations of Inter-PES Regarding Adolescents' Negative Emotions in Study 2

Dimension	*M*	*SD*	1	2	3	4
1. Perspective-taking	5.22	0.85	—			
2. Positive attributions to others	5.15	0.89	.78***	—		
3. Negative attributions to others	3.84	1.15	.21***	.18**	—	
4. Concern about the potential adverse effects on others	5.29	0.98	.68***	.74***	.13**	—

Note. Inter-PES = interpersonally oriented parental emotion socialization.
** $p < .01$. *** $p < .001$.

perceived parenting behaviors are important because they can provide unique perspectives on parenting practices (Gentile et al., 2012; Pelegrina et al., 2003). Thus, examining adolescent-perceived parenting behaviors, not only parent-perceived, is crucial for a comprehensive understanding of inter-PES. To reduce participants' burden of filling out a lengthy survey, this study concentrates solely on adolescents' perceived maternal inter-PES. We specifically explore negative emotions in mother–adolescent dyads, as mothers are often the primary caregivers (Ponciano, 2010).

Second, we aimed to establish the validity of the inter-PES scale by examining its associations with other frequently studied parenting variables and adolescent outcomes. Parenting includes many components that interact with each other in a complex and transactional system of family socialization (Zheng et al., 2017). Thus, we hypothesized significant associations between adolescents' reported inter-PES and other theoretically related parenting behaviors, such as mothers' supportive/nonsupportive responses to adolescents' negative emotions, as well as mothers' autonomy support and psychological control. Parental supportive and nonsupportive responses to adolescents' negative emotions are among the most studied PES behaviors (Eisenberg, 2020; Morris et al., 2007). While supportive responses have been linked to positive outcomes, nonsupportive responses have been related to socioemotional problems in adolescents (Raval & Walker, 2019; Yeo et al., 2020). In addition, establishing a sense of autonomy and independence is a crucial developmental task during adolescence, making parental autonomy and psychological control critical to adolescent development (Mageau et al., 2015; Soenens et al., 2007). Parental autonomy support, which encourages independence and expression of opinion, is associated with adolescents' positive well-being, whereas parental psychological control, which involves manipulative tactics, can be harmful (Wang et al., 2007).

For adolescents' socioemotional outcomes, we measured adolescents' depression because it is an essential indicator of emotional well-being. We also measured cognitive reappraisal and cognitive empathy due to their integral role in adolescents' cognitive development. Cognitive reappraisal refers to the ability to regulate emotions by changing how one thinks about a situation (Gross, 2002), and cognitive empathy refers to the ability to understand and interpret the thoughts, feelings, and perspectives of others, which is closely related to perspective-taking (Reniers et al., 2011). Additionally, we measured affective empathy and social withdrawal because they reflect adolescents' ability to adjust to and navigate social interactions. Affective empathy refers to the capacity to share and respond to others' emotional experiences (Vossen et al., 2015), while social withdrawal represents shyness and social disinterest in social interactions (B.-B. Chen & Santo, 2016).

Prior research in social psychology and developmental psychology suggests that perspective-taking, making positive attributions to others, and concern for others can facilitate emotion regulation, reduce egocentric biases, and promote prosocial behavior (Crick & Dodge, 1994; Epley et al., 2004; Hastings et al., 2000; Neumann, 2000; Ruby & Decety, 2004). We thus hypothesized that inter-PES components, including *perspective-taking, positive attributions to others,* and *concern for others,* should be positively associated with adolescents' socioemotional adjustment. Blaming others can alleviate negative emotions (Niven et al., 2009), yet induce anger toward others harms social interactions (Kuppens & Van Mechelen, 2007; Weiner, 2010). Thus, we hypothesized that *negative attributions to others* would be associated with reduced depression but increased social avoidance. We made no specific hypotheses about the relationship between *negative attributions to others* of inter-PES and adolescents' cognitive reappraisal and cognitive empathy.

Finally, we seek to clarify the unique contributions of inter-PES above and beyond the impacts of other parenting variables in predicting adolescents' socioemotional functioning. However, the traditional regression analysis may not suffice due to the potential multicollinearities among predictor variables (Johnson, 2000; Tonidandel & LeBreton, 2011). We thus employed the relative importance analysis (Johnson, 2000; Tonidandel & LeBreton, 2011), which enables us to appropriately determine the relative contributions of three groups of parenting variables in predicting adolescents' socioemotional functioning.

Method

Participants and Procedure

Adolescents aged from 11 to 18 years old (n = 864; 45.97% females; M_{age} = 14.50 years, SD = 0.77) were recruited from three middle schools located in a southern city in China. Their mothers' average age was 42.08 years old (SD = 4.61). Over half of their mothers (71.87%) had a bachelor's degree or higher and were married (94.30%).

Transparency and Openness

The materials for data collection were in Chinese. Ethical approval for this study was obtained from the research ethics committee of the first author's university (Sun Yat-Sen University). Both informed parental consent and child assent were obtained from adolescent participants. All materials, data, and analysis codes used in the study are available upon request.

Measures

Inter-PES. The inter-PES consisted of 19 items and was adapted from the parent version developed in Study 2 by changing pronouns. For example, the original item "I discuss with my child what other people think or do" was adapted to "My mother discusses with me what other people think or do."

Maternal Response to Adolescents' Negative Emotions. Coping With Children's Negative Emotions Scale (Fabes et al., 2002) was used to assess maternal supportive and nonsupportive responses to adolescents' negative emotions. Following prior research conducted in China (Ding et al., 2022; Han et al., 2015), the composite score of *supportive responses* was computed by averaging scores on subscales evaluating problem-focused responses, emotion-focused responses, and expressive encouragement (27 items, e.g., the parent listens to the child talk about her/his feelings); the composite score of *nonsupportive responses* was calculated by averaging scores on subscales evaluating punitive responses and emotional distress responses (18 items; e.g., the parent gets angry at the child for not being more in control of things). Participants rated each item from 1 (*very unlikely*) to 7 (*very likely*). The reliability (ω) of subscales accessing supportive responses and nonsupportive responses was .97 and .94, respectively.

Maternal Autonomy Support and Psychological Control. Maternal autonomy was measured using the eight-item scale (e.g., "My

mother allows me to make choices whenever possible"), and maternal psychological control was evaluated using the 10-item scale (e.g., "My parents tell me of all the sacrifices they have made for me") used by Wang et al. (2007). For both scales, adolescents rated items from 1 (*not at all true*) to 7 (*very true*). These two scales have been documented to have good reliability and high validity in Chinese adolescents (Wang et al., 2007). In this study, the reliability (ω) for maternal autonomy support was .93 and for maternal psychological control was .91, respectively. The composite scores for maternal autonomy support and psychological control were computed by averaging their corresponding items.

Adolescents' Depression. The Center for Epidemiological Studies Depression (Kohout et al., 1993) was used to evaluate adolescents' depression. The scale includes 10 items (e.g., I felt depressed), with each item being rated from 1 (*rarely*) to 7 (*almost always*). The scale has been documented to have good reliability and high validity in Chinese adolescents (S. H. Chen et al., 2015). In this study, the reliability (ω) of this scale was .82. A composite score was computed by averaging the 10 items.

Adolescents' Cognitive Appraisal, Cognitive Empathy, and Affective Empathy. Cognitive appraisal was assessed using the five items (e.g., "I control my emotions by changing the way I think about the situation I am in") from the Emotion Regulation Questionnaire (Gross & John, 2003). Each item was rated from 1 (*strongly disagree*) to 7 (*strongly agree*). The Emotion Regulation Questionnaire has been documented to have good reliability and high validity in Chinese adolescents (Sai et al., 2016; Zhao & Zhao, 2015). In this study, the reliability (ω) was .83. In addition, two subscales of the Adolescent Measure of Empathy and Sympathy (Vossen et al., 2015) were used to assess (a) cognitive empathy (four items; e.g., "I can tell when a friend is angry even if he/she tries to hide it") and (b) affective empathy (four items; e.g., "When a friend is angry, I feel angry too"). Participants rated each item from 1 (*almost never*) to 5 (*almost always*). The scale has been documented to have good reliability and high validity in Chinese adolescents (Ding et al., 2021). In this study, the reliability (ω) for the two subscales was .88 and 74, respectively. Composite scores of the three constructs were computed by averaging their corresponding items.

Adolescents' Social Withdrawal. Adolescents' social withdrawal was evaluated using a six-item scale (e.g., "I often feel uncomfortable in a large group of people") used by previous Chinese studies (B.-B. Chen & Santo, 2016). Each item was rated from 1 (*strongly disagree*) to 7 (*strongly agree*). In this study, the reliability (ω) for this scale was .80. The composite score for social withdrawal was computed by averaging the six items.

Analytic Strategy

First, data checking and cleaning were conducted before the final analysis, following the same procedures as in Study 2. Then, CFA with maximum likelihood estimator and oblique target rotation was conducted in Mplus to evaluate the four-factor model of inter-PES in adolescents. Model fit and scale reliability were evaluated using the same methods introduced in Study 2. Furthermore, to establish the convergent validity of inter-PES, we examined its associations with parental responses to adolescents' negative emotions, parental autonomy support, and psychological control. We also assessed the criterion validity of inter-PES by examining its correlations with adolescents' socioemotional adjustment. The descriptive statistics of and correlations between evaluated variables were computed using SPSS.

Last, to determine the relative importance of inter-PES compared to other parenting variables in predicting children's socioemotional functioning, we conducted relative weight analyses using the relative weight analysis web tool (Tonidandel & LeBreton, 2015). Our focus was on two sets of outcomes: (a) raw relative weight (and its confidence interval): the proportion of variance in the outcome variable that is attributed to each predictor (the sum matches the total model R^2); (b) relative weight scaled: the percentage of predicted variance in the outcome variable attributed to each predictor (the sum is 100%; for a detailed explanation, see Tonidandel & LeBreton, 2015).

Results

The proportion of invalid responses was about 20.1%, leaving 684 valid samples for final analysis. Results of CFA showed good model fits for the four-factor structure of inter-PES ($df = 146$, S-Bχ^2 = 278.80, $p < .001$, AIC = 38557.09, BIC = 38842.36, RMSEA = .04, CFI = .97, TLI = .97, SRMR = .06). The factor loadings of items on their intended factors ranged from .73 to .89 (see Table 1). The ω of each subscale ranged from .87 to .93, indicating acceptable reliabilities. The four factors of inter-PES had moderate to strong correlations with each other ($ps < .05$).

The descriptive statistics of and correlations among the major assessed variables are shown in Table 3. The results showed that *perspective-taking*, *positive attributions to others,* and *concern for others* had medium to strong positive correlations with maternal supportive responses and autonomy support ($ps < .05$), had weak positive correlations with maternal nonsupportive responses ($ps < .05$), and had weak and negative correlations with maternal psychological control ($ps < .05$). Additionally, *negative attributions to others* had medium positive correlations with both maternal supportive and nonsupportive responses ($ps < .05$) and had weak positive correlations with mothers' autonomy support and psychological control ($ps < .05$).

Moreover, the results documented that *perspective-taking* and *positive attributions to others* had medium positive correlations with adolescents' cognitive reappraisal and cognitive empathy and had weak negative correlations with adolescents' depression and social withdrawal ($ps < .05$). *Negative attributions to others* had weak positive correlations with adolescents' depression, cognitive reappraisal, and cognitive empathy ($ps < .05$). *Concern for others* had a moderate positive correlation with adolescents' cognitive reappraisal, a weak positive correlation with adolescents' cognitive empathy, and a weak negative correlation with adolescents' social withdrawal ($ps < .05$).

The results of the relative importance analysis are shown in Table 4 (see relative weight rescaled [RS-RW]), among the three groups of parenting variables (i.e., inter-PES, supportive and nonsupportive responses to adolescents' negative emotions, autonomy support, and psychological control), inter-PES was the first important predictor of adolescents' cognitive empathy (RS-RW = 49.59%) and social withdrawal (RS-RW = 36.90%). It was also the second most important predictor of adolescents' cognitive reappraisal (RS-RW = 33.56%) and affective empathy (RS-RW = 20.51%).

Table 3
Means and Standard Deviations of and Correlations Among Assessed Variables in Study 3

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
Inter-PES															
1. Perspective-taking	5.07	1.35	—												
2. Positive attributions to others	5.09	1.35	.88***	—											
3. Negative attributions to others	4.11	1.47	.48***	.45***	—										
4. Concern about the potential adverse effects on others	5.04	1.39	.79***	.84***	.47***	—									
Maternal responses to adolescents' negative emotions															
5. Supportive	4.88	1.29	.71***	.72***	.40***	.60***	—								
6. Nonsupportive	3.56	1.28	.09*	.10**	.43***	.18***	.12***	—							
Maternal autonomy support and psychology control															
7. Autonomy support	4.82	1.34	.61***	.59***	.25***	.48***	.70***	−.12**	—						
8. Psychological control	3.55	1.30	−.12**	−.13**	.17***	−.02	−.24***	.51***	−.22***	—					
Adolescents' socioemotional adjustment															
9. Depression	3.09	0.98	−.13**	−.13***	.05	−.08	−.19***	.26***	−.27***	.25***	—				
10. Cognitive reappraisal	4.61	1.18	.39***	.35***	.24***	.36***	.37***	.15***	.43***	.20***	−.06	—			
11. Cognitive empathy	3.67	0.82	.19***	.19***	.12**	.16***	.17***	.14**	.14**	.06	.12**	.30***	—		
12. Affective empathy	3.13	0.74	.03	.06	.12**	.06	.10*	.20***	−.01	.07	.19***	.002	.29***	—	
13. Social withdrawal	3.25	1.21	−.22***	−.22***	−.03	−.21***	−.23***	.15***	−.27***	.15***	.53***	−.12**	−.03	.04	—

Note. Inter-PES = interpersonally oriented parental emotion socialization.
* $p < .05$. ** $p < .01$. *** $p < .001$.

However, it contributed the least in predicting adolescents' depression (RS-RW = 12.41%).

Discussion

This study supported the four-factor structure of adolescent-reported inter-PES, with strong evidence of high reliability and validity. Adolescent-reported inter-PES was significantly related to adolescent-perceived maternal responses to adolescents' negative emotions as well as adolescent-perceived maternal autonomy and psychological control, indicating high convergent validity. Adolescents who reported higher levels of *perspective-taking*, *positive attributions to others*, and *concern for others* were more likely to report mothers showing more positive parenting behaviors, such as supportive responses to their negative emotions and autonomy support. Interestingly, the study also found that both adolescent-reported positive and negative parenting behaviors had significant positive correlations with their reported maternal *negative attributions to others*. This finding highlights the nuanced nature of *negative attributions to others*.

Moreover, this study has established the criterion validity of inter-PES through its significant associations with adolescents' socio-emotional outcomes. The results showed that adolescent-reported maternal *perspective-taking*, *positive attributions to others*, and *concern for others* tended to positively correlate with better adolescents' emotional, cognitive, and social adjustment. The possible reason may be that by using interpersonally oriented reasoning and focusing on others' needs, mothers may help their adolescents develop the ability to infer another person's thoughts and feelings and modify their behaviors accordingly.

This study has yielded unexpected results, demonstrating a positive association between adolescent-perceived maternal *negative attributions to others* and adolescents' cognitive appraisal, cognitive empathy, and affective empathy. One possible explanation is that when mothers guide adolescents to make negative attributions to others, adolescents may engage in the cognitive process of evaluating the situation, determining the cause of the negative event, and inferring others' motivations and emotions. Parental causal attributions may help adolescents understand and navigate emotional situations, thereby contributing to broader cognitive development. Additionally, for the link between adolescent-perceived maternal *negative attribution of others* and adolescents' affective empathy, a plausible explanation is that mothers' negative attribution of others may make adolescents feel supported and emphasized, as it can convey a sense of shared understanding and validation of adolescents' negative feelings or experiences. When adolescents receive validation and support for their negative feelings or experiences, they may be more likely to recognize and empathize with others experiencing similar situations.

The relative importance analysis facilitates understanding the relative importance of inter-PES and other parenting variables in predicting adolescents' socioemotional development. Among the three groups of parenting variables, inter-PES was an important factor in predicting adolescents' cognitive reappraisal, cognitive empathy, and social withdrawal, with a percentage of predicted variance larger than 30%. However, its contributions in predicting adolescents' depression and affective empathy were relatively low, with the percentages of predicted variance smaller than 20%. This indicates that, compared with other parenting variables, inter-PES is crucial to adolescents'

Table 4
Summary of Relative Weight Analysis for Inter-PES and Other Assessed Parenting Variables

Criterion variable	Predictor	RW	95% CI		RS-RW (%)	RS-RW (%) across three groups of parenting variable
			LL_{RW}	UL_{RW}		
Adolescents' depression ($R^2 = 0.1351$)	Perspective-taking	0.0047	0.002	0.0081	3.50	12.41
	Positive attributions to others	0.005	0.002	0.0093	3.71	
	Negative attributions to others	0.0045	0.0016	0.0121	3.29	
	Concern about the potential adverse effects on others	0.0026	0.0013	0.0036	1.91	
	Supportive responses	0.0137	0.0049	0.0315	10.14	41.31
	Nonsupportive responses	0.0421	0.0165	0.0756	31.17	
	Autonomy support	0.0342	0.0113	0.0687	25.33	46.28
	Psychology control	0.0283	0.0095	0.0606	20.95	
Adolescents' cognitive reappraisal ($R^2 = 0.3087$)	Perspective-taking	0.0417	0.0246	0.0676	13.51	34.11
	Positive attributions to others	0.0249	0.0156	0.0367	8.06	
	Negative attributions to others	0.0091	0.0032	0.0212	2.95	
	Concern about the potential adverse effects on others	0.0296	0.0143	0.0502	9.59	
	Supportive responses	0.0428	0.025	0.0696	13.88	17.05
	Nonsupportive responses	0.0098	0.0041	0.0221	3.17	
	Autonomy support	0.0936	0.0502	0.1487	30.32	48.84
	Psychology control	0.0572	0.0268	0.1051	18.52	
Adolescents' cognitive empathy ($R^2 = 0.0588$)	Perspective-taking	0.0111	0.0029	0.0266	18.82	49.59
	Positive attributions to others	0.0105	0.0027	0.023	17.84	
	Negative attributions to others	0.0026	0.0008	0.0071	4.38	
	Concern about the potential adverse effects on others	0.005	0.0008	0.0105	8.55	
	Supportive responses	0.0069	0.0016	0.0177	11.7	33.56
	Nonsupportive responses	0.0129	0.0018	0.0353	21.86	
	Autonomy support	0.0065	0.0012	0.0193	11.13	16.84
	Psychology control	0.0034	0.0007	0.0151	5.71	
Adolescents' affective empathy ($R^2 = 0.0503$)	Perspective-taking	0.002	0.0003	0.0041	3.89	20.51
	Positive attributions to others	0.0019	0.0004	0.0035	3.72	
	Negative attributions to others	0.005	0.0012	0.0213	9.92	
	Concern about the potential adverse effects on others	0.0015	0.0004	0.0026	2.98	
	Supportive responses	0.0074	0.0011	0.0247	14.77	69.05
	Nonsupportive responses	0.0273	0.0076	0.0635	54.28	
	Autonomy support	0.0021	0.0004	0.0057	4.15	10.44
	Psychology control	0.0032	0.0007	0.0094	6.29	
Adolescents' social withdrawal ($R^2 = 0.1083$)	Perspective-taking	0.0118	0.0037	0.0232	10.87	36.9
	Positive attributions to others	0.0099	0.0036	0.0178	9.16	
	Negative attributions to others	0.0027	0.0009	0.0039	2.52	
	Concern about the potential adverse effects on others	0.0155	0.004	0.0328	14.35	
	Supportive responses	0.0148	0.0049	0.0336	13.64	30.46
	Nonsupportive responses	0.0182	0.0034	0.0427	16.82	
	Autonomy support	0.0285	0.0099	0.0588	26.29	32.63
	Psychological control	0.0069	0.0015	0.0245	6.34	

Note. RW = raw relative weight; LL_{RW} = lower bound of the confidence interval (CI) around RW; UL_{RW} = upper bound of the confidence interval around RW (larger CIs indicate less precise estimates of effects); RS-RW = relative weight rescaled; Inter-PES = interpersonally oriented parental emotion socialization.

cognitive and social development but not so much for adolescents' emotional outcomes. Overall, these findings highlight the complex and multifaceted nature of parenting and its associations with adolescents' cognitive and socioemotional development.

General Discussion

Although PES has received considerable attention as a crucial parenting factor over the past decades, its complexities necessitate further investigation. This research adds to the existing literature on PES by shifting the focus from *intrapersonal* to *interpersonal* PES practices, which is especially important for collective cultures such as the Chinese ones. Specifically, four key components of inter-PES were identified: *perspective-taking, positive attributions to others, negative attributions to others*, and *concern for others*. This research provides valuable insights into the nature and dynamics of emotional interactions in parent–adolescent dyads.

A Focus on the Socialization of Interpersonal Emotional Processing

Emotions have traditionally been studied through an intrapersonal lens, focusing on an individual's ability to recognize, express,

and regulate their own emotions (Barthel et al., 2018). However, emotions are also shaped by how others think and behave, and how we respond emotionally to others influences how they respond to us (Marinetti et al., 2011). Therefore, newer models of emotions have highlighted the social dynamic nature or interpersonal features of emotions, where individuals undergo, express, and manage emotions in relation to others (Barthel et al., 2018; Zaki & Williams, 2013). Thus, a comprehensive understanding of emotional processes requires considering both *intrapersonal* and *interpersonal* aspects of emotions.

Adolescence is characterized by interpersonal challenges (Compas & Wagner, 2017). Therefore, developing the necessary affective social competence, or interpersonal emotional functioning, is critical to adolescents' overall adjustment (Booker & Dunsmore, 2017). Emotional attributions and competencies are acquired and cultivated through socialization, with parents being one of the earliest and most important influencers (Brand & Klimes-Dougan, 2010; Denham et al., 2007). Although research has extensively explored the role of parenting in shaping adolescents' abilities to recognize and regulate emotions, there is a dearth of knowledge regarding how PES practices influence the development of adolescents' interpersonal emotional processing. By examining parental responses to their adolescents' negative emotions in social interaction, this research identified four distinct dimensions in which parents foster adolescents' understanding and management of emotions within the context of interpersonal relationships.

Overall, our findings showed that the four components of inter-PES reported by adolescents are all relevant to their self-reported socioemotional adjustment. These findings suggest that interpersonally oriented socialization behaviors might have the potential to promote their adolescents' socioemotional development. However, this needs to be further examined using longitudinal data or intervention studies to confirm the long-term effects and establish causality. Moreover, this research indicates that *perspective-taking, positive attributions to others*, and *concern for others* may be more effective than *negative attributions to others* in promoting adolescents' adjustment because the former three components had stronger associations with adolescents' adjustment compared to *negative attributions to others*. In conclusion, our research sheds light on the importance of interpersonally oriented parenting practices. However, this is just the beginning of research in this area, and further studies are needed to explore other inter-PES components and their impact on adolescents' affective social competence.

Cultural Universality and Specificity

Research on emotion socialization, like other fields in psychology, has mostly come from relatively advantaged Western cultures, which limits the generalizability of the findings (Raval & Walker, 2019). The growing awareness of the complexities in culture and human development has led to an increasing call for a more comprehensive understanding of socialization across diverse cultural contexts (Cole & Tan, 2007). In this regard, the current research tested the theoretical framework of inter-PES in Chinese samples, deviating from the conventional approach of establishing theoretical frameworks of intrapersonally oriented PES in Western families. Despite that, the inter-PES framework should be applicable in diverse cultural contexts and not be limited to the Chinese culture. We have this anticipation because the core features described by inter-PES are universal psychological attributes, which have received much attention across different cultural contexts. As advocated by contemporary cross-cultural psychologists, each culture should contain elements of independence and interdependence to meet the varied and complex demands of social life (Brewer & Chen, 2007; Oyserman et al., 2002). Hence, the core components of interpersonal attributes in inter-PES are expected to be observed worldwide. Nonetheless, empirical studies are warranted to ensure the validity and reliability of inter-PES in other cultural contexts.

Still, it is quite possible to find cultural variations in the endorsement of and functional relevance of interpersonal PES. For example, prior literature indicates that parents in more interdependent cultures prioritize socializing their children's social abilities, while parents in a more independent culture prioritize supporting their children's autonomy and self-needs (Wang, 2001). Moreover, parental practices that foster interdependence during adolescence have been found to be associated with more adaptive behaviors in cultures that prioritize interdependence over independence (Benito-Gomez et al., 2020). Therefore, compared to families that prioritize independence, families emphasizing interdependence are likely to exhibit higher levels of *perspective-taking, positive attributions to others,* and *concern for the potential adverse influence on others* because these inter-PES behaviors are essential for maintaining harmonious relationships and promoting group cohesion. Such inter-PES behaviors may also be more likely to be adaptive in cultures that prioritize interdependence over independence. Conversely, as negative attributions could create conflicts and disrupt harmony, parents who value interdependence may be more likely to exhibit lower levels of *negative attributions to others* than those emphasizing independence. Furthermore, parental negative attributions to others might be more adaptive in cultures that emphasize independence than in cultures that highlight interdependence.

Limitations and General Directions for Future Research

Our findings should be viewed considering certain limitations, and future research should address these areas. First, while the findings support the associations between inter-PES and adolescent development, the direction of the relationship is not fully established. While parenting practices can significantly impact children's outcomes, children's characteristics can also serve as antecedents of parenting practices (Premo & Kiel, 2014). To test the directionality and causality, longitudinal or experimental studies are needed. Second, parents and children may have different perspectives and interpretations of parenting behaviors, with parents tending to perceive their parenting behaviors as more positive and supportive than children (Gaylord et al., 2003). Future research on the roles of inter-PES in adolescents' adjustment should incorporate parent reports to provide a more comprehensive view of their relations, as this research primarily relied on adolescents' perspectives. Also, mothers and fathers may use different child-rearing practices, and children in two-parent families experience home environments that blend both parents' influences (Simons & Conger, 2007). Since the present study only examined mothers' socialization practices, future research should consider how both mothers' and fathers' inter-PES relate to

adolescent development. Third, the current research has developed a scale assessing adolescents' general negative emotions. However, it may be beneficial to examine specific emotions, as parents may display different socialization practices depending on the particular emotions their adolescents are experiencing. Fourth, additional work is warranted to explore inter-PES in families with diverse cultural backgrounds. Future research can consider adapting the instrument developed in this research for use in other cultures to evaluate cultural universalities and specificities. Last, the goodness-of-fit model posits that developmental outcomes are shaped by combinations of environmental and children's factors (Dong et al., 2022). This suggests that effective parenting strategies for supporting socioemotional development should be tailored to each child's unique characteristics (Chronis-Tuscano et al., 2022). Future research should explore the interaction between children's characteristics (e.g., children's propensity to make positive/negative attributions about others) and inter-PES (e.g., parental tendencies in making positive/negative attributions) on child development.

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