



EMPIRICAL ARTICLE

Empathy across three generations: From maternal and peer support in adolescence to adult parenting and child outcomes

Jessica A. Stern | Natasha A. Bailey | Meghan A. Costello | Amanda F. Hellwig | Jennifer Mitchell | Joseph P. Allen

University of Virginia, Charlottesville, Virginia, USA

Correspondence

Jessica A. Stern, Department of Psychology, University of Virginia, P.O. Box 400400, Charlottesville, VA 22902, USA.

Email: js4qb@virginia.edu

Funding information

National Institute of Mental Health, Grant/Award Number: R01-MH58066; Eunice Kennedy Shriver National Institute of Child Health and Human Development, Grant/Award Number: 5R37HD058305-23, F32HD102119 and R01HD058305-16A1

Abstract

This study examined the development of empathic care across three generations in a sample of 184 adolescents in the United States (99 female, 85 male; 58% White, 29% African American, 8% mixed race/ethnicity, 5% other groups), followed from their family of origin at age 13 into their parenting years (through their mid-30s). Mothers' empathic support toward adolescents at age 13 predicted teens' empathy for close friends across adolescence (13–19 years). Participants' empathic support for friends in late adolescence predicted more supportive parenting behavior in adulthood, which in turn was associated with their children's empathy at age 3–8 years. Results suggest that individuals “pay forward” the empathic care they receive from parents, and that skills developed in adolescent friendships may inform later parenting.

Empathy—the capacity to identify others' needs and emotions, and to provide supportive care that meets those needs—is central to the formation and maintenance of close relationships. Parents' empathy is associated with children's secure attachment and self-regulation (Borelli et al., 2021; Oppenheim et al., 2001; Stern et al., 2015). In adolescence, empathy and prosocial behavior toward peers are associated with higher-quality friendships (see Portt et al., 2020), characterized by greater closeness and more effective conflict management (Chow et al., 2013). Adolescents' self-reported empathy has been linked to peer-reported romantic desirability (Bower et al., 2015) and friendship satisfaction (Meuwese et al., 2017), suggesting that empathic behavior may be socially rewarded and reinforced by one's peers. Moreover, empathic capacities in adolescence have been shown to prospectively predict increased life satisfaction 2 years later (Son & Padilla-Walker, 2020) and enhanced social functioning well into adulthood (Allemand et al., 2015).

Developmental theory and research view empathy as a multidimensional construct, including (1) *cognitive* capacities such as perspective-taking, identifying

others' emotions, and understanding their experiences; (2) *emotional* tendencies to feel concern for others' welfare and to resonate with their emotions (while remaining well-regulated and other-focused; Decety, 2015; Eisenberg, 2000, 2018); and (3) empathy-related prosocial behaviors, such as providing help, support, or comfort when needed (Eisenberg, 2018). From an evolutionary perspective, the cognitive, affective, and behavioral dimensions of empathy are thought to be central components of the mammalian *caregiving system* (MacLean, 1985), which functions to provide protection, care, and safety to ensure the survival of offspring (Bowlby, 1969/1982), but which also facilitates bonding in one's broader social group (Hrdy, 2009). From this perspective, one's first experiences of empathic care likely come from adult caregivers, who serve as primary socialization agents supporting children's emerging capacity for empathy, which may carry forward into later adult caregiving—thus contributing to intergenerational cycles of empathic care (Eisenberg et al., 1991, 1992; Stern, 2016).

In the present paper, we take a closer look at the transmission of empathy across three generations from a

Abbreviations: FIML, full information maximum likelihood; G, generation; ICC, intraclass correlation coefficient.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2024 The Authors. *Child Development* published by Wiley Periodicals LLC on behalf of Society for Research in Child Development.

developmental perspective. We focus on adolescence as a sensitive period for the development of the social brain (Blakemore, 2008), during which models of empathic caregiving acquired in the home environment may be further refined and elaborated through close relationships with peers (Allen et al., 2023; Stern et al., 2021). We then present empirical evidence that empathic capacities developed in adolescent peer relationships may be a critical but unexamined mechanism linking experiences of parental care to caregiving behavior in the next generation.

Intergenerational transmission of empathic care

Previous research has shown positive associations between parents' and children's empathy. A series of studies by Eisenberg, Fabes, and colleagues revealed links between multiple measures of parents' empathy toward others and young children's empathy-related responses to video clips of strangers (Eisenberg et al., 1991, 1992; Fabes et al., 1990). In adolescence, researchers have found concurrent associations between mothers' and adolescents' self-reported empathic concern and perspective-taking (Hawk et al., 2013). Further, mothers' perspective-taking positively predicted adolescent perspective-taking over a 4-year period for girls, but not for boys (van Lissa et al., 2014). Similarly, a cross-sectional study of Belgian adolescents and their mothers found significant links between mother and teen self-reported empathy, which were partly mediated by teen-reported maternal support; moreover, adolescent perspective-taking predicted teen-reported friendship quality, mediating the link between maternal support and adolescent friendship quality (Soenens et al., 2007). All measures were assessed at a single time point, however, thus limiting the conclusions that can be drawn regarding mediation.

Notably, one meta-analytic review reported mixed findings regarding the association between parents' and children's empathy, with a mean correlation of only .07 for mothers and $-.01$ for fathers (Strayer & Roberts, 2004). Moreover, the majority of research on the intergenerational transmission of empathy specifically in adolescence (a) has relied exclusively on self-report, (b) has examined empathy within a relatively narrow time period, (c) has focused only on two generations, (d) has not explored parents' empathy *for their child* specifically, and (e) has not yet measured teens' empathy during observed interactions with peers or close friends. The present paper aims to address these gaps by drawing on a multimethod, 25-year longitudinal study of adolescents, their parents, close friends, and later in development, their own offspring.

Developing caregiving capacities in adolescence

Previous research has explored the contributions of genetics (Abramson et al., 2020, 2023), parental

socialization (Eisenberg et al., 2015), and attachment (Stern & Cassidy, 2018) to the development of empathy in adolescence. A less-explored possibility is that experiences of empathic care from parents may give children a core relational skillset that allows them to forge and maintain positive relationships with peers (as suggested by Soenens et al., 2007). These peer relationships, in turn, may provide a critical context in which to *practice* giving and receiving care in adolescence (Costello et al., 2023; Stern et al., 2021), with potential downstream consequences for adult relationships (Loeb et al., 2021). In this way, models of caregiving experienced within the parent–child relationship (i.e., a vertical relationship characterized primarily by empathic care *from parent to child*) may become generalized beyond the family and honed within friendships with peers (i.e., horizontal relationships characterized by *mutual* seeking and provision of empathic care). This ontogenetic account aligns with phylogenetic perspectives, which suggest that empathy evolved to motivate parental care of offspring (Bowlby, 1969/1982; George & Solomon, 2008) and then generalized to other members of one's social group (Decety et al., 2012; MacLean, 1985). We refer to this as the *peer-caregiving* model and provide a preliminary test of this possible pathway in the present study, while acknowledging that genetics, socialization, and attachment undoubtedly play important roles as well.

The caregiving system has roots in early ontogeny, with young children showing rudimentary empathic tendencies by the second year of life (Vaish & Hepach, 2020). But more advanced caregiving capacities may not come online until adolescence—a period marked by rapid changes in the developing social brain (Blakemore, 2008; Crone & Achterberg, 2022), increasing autonomy from parents, and heightened sensitivity to peer influence (Allen et al., 2022; Allen & Tan, 2016). Researchers have recently suggested that gaining “caregiving competence” is a critical developmental task of adolescence that forecasts adult social functioning across multiple domains (Allen et al., 2023). For example, competence at providing emotional support to friends in adolescence has been shown to predict supportive behavior in adult romantic relationships, over and above supportiveness in adolescent romantic relationships (Costello et al., 2023). Adolescents' capacity for empathy specifically has been shown to predict social competence more than two decades later (Allemand et al., 2015).

Theory and research point to a clear relation between caregiving processes in adolescent friendships and long-term romantic relationship functioning (e.g., Allen et al., 2020; Costello et al., 2023; Furman, 1999), but less is known about whether adolescent friendships play a role in building caregiving capacities that translate to another key type of adult relationship: *parenting*. Specifically, it is possible that caregiving capacities initially experienced in the home and then developed further in mutually responsive relationships with peers during adolescence will cascade forward to promote empathic care toward

one's own offspring in adulthood. Particularly within close friendships, responding to friends' emotional and instrumental needs with understanding, support, and emotional attunement may strengthen the “muscle” of empathic care in ways that prepare adolescents for the future task of parental caregiving. Teens' ability to provide empathic care in a future parenting role may, in turn, contribute to empathy in their children. This idea, however, has never been tested empirically.

The present study

The present investigation draws on a 25-year longitudinal study of adolescents' social development to examine how individual differences in empathic care are transmitted across three generations (G). Building on previous two-generation models, we test long-term associations between parents' (G1) and adolescents' (G2) empathy, and between adolescents' empathy and their own children's (G3) empathy. Moving beyond previous self-report measures, we leverage observations of dyadic interactions to measure parents' empathic care toward teens, as well as teens' empathic care toward close friends, observed annually over a 7-year period. As a starting point, we focus on mothers' empathic care for teens (due to data availability and alignment with previous research) but acknowledge the importance of fathers as an area for future work. Extending the research on the central importance of peers for adolescent social development (Allen et al., 2022), we provide an initial test of the *peer-caregiving* model by examining the potential link between adolescents' empathic care in close friendships and their later caregiving behavior toward their own children. Although the lack of long-term research in this area necessarily renders this study as somewhat exploratory, three specific hypotheses were assessed:

Hypothesis 1. Mothers' empathic support for adolescents (G1) will predict teens' capacity to provide similar empathic care to their close friends across adolescence (G2, ages 13–19).

Hypothesis 2. The capacity to provide empathic support to close friends in late adolescence (ages 17–19) will predict more supportive parenting behavior in response to children's distress.

Hypothesis 3. More supportive, and less nonsupportive, parental responses to children's distress will be associated with children's empathic behavior toward others (G3). Given that the G3 variables were available only at one timepoint for a subset of the sample, tests of this hypothesis are regarded as exploratory.

METHOD

Participants

This report draws from an ongoing longitudinal investigation of adolescent social development in familial and peer contexts, beginning in 1998. Adolescents were originally recruited from the seventh and eighth grades of a public middle school drawing from suburban and urban populations in the mid-Atlantic United States. Of students who were eligible to participate, 63% agreed to participate either as target participants or as peers who participated in interaction tasks with the target teen. Students who had already served as close peer informants in the study were not eligible to serve as primary participants.

A final sample of 184 adolescents (99 females, 85 males) and their parents was first assessed at age 13 and reassessed annually. The sample was demographically diverse and representative of the community from which it was drawn: 107 adolescents (58%) identified as white, 53 (29%) as African American, 15 (8%) as of mixed race or ethnicity, and 9 (5%) as being from other identity groups. Adolescents' parents reported a median family income in the \$40,000–\$59,999 range at the initial assessment.

This study utilizes observational data collected at age 13 ($M=13.35$, $SD=0.64$), 14 ($M=14.27$, $SD=0.77$), 15 ($M=15.21$, $SD=0.81$), 16 ($M=16.35$, $SD=0.87$), 17 ($M=17.32$, $SD=0.88$), 18 ($M=18.38$, $SD=1.04$), and 19 ($M=19.66$, $SD=1.07$). Each year, target adolescents nominated their closest friend to be included with them in the study. Close friends were defined as “people you know well, spend time with, and whom you talk to about things that happen in your life.” Friends were same-gender peers, close in age to participants (i.e., their ages differed by less than a month from target adolescents, on average). Close friends reported that they had known participants for an average of 4.01–7.66 years ($SD=2.90$ – 5.17) across the various assessment periods, with later ages characterized by longer mean friendship durations.

Beginning in early adulthood, researchers tracked which participants had biological children. A total of 74 participants (40% of the original sample) had at least one child by the time of the present analyses. When children were between the ages of 3 and 8 years ($M=4.98$, $SD=1.01$), target participants ($M_{\text{age}}=30.53$, $SD=3.66$; range: 22.62–37.70) were invited to complete a set of questionnaires assessing parenting and child development.

Missing data

Data were missing for two reasons: (a) attrition of G2 participants and (b) the fact that not all G2 participants who remained in the sample had children (G3). Analyses were conducted to examine each type of missing data.

Attrition of G2 participants

Mean retention rates between annual assessments were high (95%). Of the 184 G2 participants who participated in the initial assessment, 160 (87%) participated in at least one close peer assessment in late adolescence (ages 17–19). There were no significant differences in baseline characteristics (gender, family income, maternal or adolescent empathy at the initial assessment) between participants who dropped out and those who remained in the study through late adolescence.

Availability of G3 child data

Of the 74 G2 participants who reported having children, 70 consented to provide data on at least one child when they were between the ages of 3 and 8 years. In total, data were available for $N=114$ children (G3). G2 participants, who provided G3 child data, were more likely to be female (i.e., mothers), $\chi^2(1, N=184)=8.09, p=.004$; all other comparisons were nonsignificant.

To address missing data in longitudinal analyses, full information maximum likelihood (FIML) was used with analyses, including all variables that were linked to future missing data (i.e., where data were not missing completely at random). These procedures have been found to yield least biased estimates when all available data are used for longitudinal analyses (vs. listwise deletion of missing data; Arbuckle, 1996; Mueller & Hancock, 2010). Thus, the full sample of 184 was included in analyses of G1–G2 empathy. Following previous research with 3-generation data (e.g., Bailey et al., 2009; Blake et al., 2023), G2–G3 analyses were conducted separately, focusing on the subsample of 70 G2 participants for whom child data were available, yielding a total $N=114$ children for analyses of G3.

Procedure

All procedures were approved by the university's ethics review board. Adolescents and their peers provided informed assent, and their parents provided informed consent before each interview session. Once participants reached age 18, they provided informed consent. In the initial introduction and throughout each session, confidentiality was explained to all family members, and adolescents were told that their parents would not be informed of any of the answers they provided. A Confidentiality Certificate, issued by the U.S. Department of Health and Human Services, protected all data from subpoena by federal, state, and local courts. Participants were compensated and, when necessary, transportation and childcare were provided to participating families. Observations of mother–teen and teen–peer interactions took place in-person, in structured laboratory sessions.

Questionnaires regarding young children (G3) were sent to participants in the form of a paper packet by mail and as a survey link via email, to be completed by the participant at home.

Measures

Mothers' empathic care for teens (observed at age 13)

Parents and adolescents were observed in a 6-minute dyadic interaction in the Supportive Behavior Task (Allen et al., 2001), in which teens asked their parent for help with a “problem they were having that they could use some advice or support about.” Parents' supportive behaviors toward the target teen were coded using the Supportive Behavior Task Coding System (Allen et al., 2001).

Following previous research (Stern et al., 2021), four core dimensions of empathy were averaged to create a composite maternal empathy score for analyses: *mothers' emotional support provision*, *instrumental support provision*, *emotional engagement*, and *accurate identification of the teen's problem* (described below). All interactions were double-coded by independent coders and then averaged across coders to enhance reliability (intraclass correlation coefficient [ICC]=.89).

Emotional support provision describes the degree to which the parent understands and supports the feelings raised by their adolescent, through processes such as expressing understanding, naming the teen's emotion, eliciting further emotion, or making a commitment to be emotionally available. Scores range from 0 (no attempt to emotionally support) to 4 (clear recognition of emotional distress, attempts to draw the speaker out, and clear expressions of warmth, concern, and sympathy throughout most of the interaction).

Instrumental support provision reflects the degree to which the parent provides help to address their adolescent's presented problem. Behaviors indicative of instrumental support given include recognizing that a problem exists, offering plans for how to solve the problem, keeping the conversation directed toward a solution, and making a commitment to help find a solution to the problem. Scores range from 0 (no instrumental planning of how to solve the problem) to 4 (clear attempts and commitment to find a solution to the problem and consistent incorporation of the person's needs throughout most of the interaction).

Emotional engagement captures the extent to which the parent appears to be connected and emotionally engaged with their adolescent and is assessed independently of the support topic discussed. Engagement reflects how closely the parent is attending to what their adolescent is saying by following up on what the teen says, leaving them time to talk, asking questions about the topic, and demonstrating active listening. Scores

range from 0 (shows no or very few signs of interest in what the other person is saying, body posture generally turned away, little or no eye contact) to 4 (clearly focused on and responsive to the other person during the majority of the interaction, demonstrates real connection and interest).

Interpretation of the teen's problem focuses on the extent to which the parent appears to accurately recognize and understand the concern(s) raised by their adolescent. Scores range from 0 (clearly and strikingly does not interpret or understand the fundamental problem correctly) to 4 (clearly understands and fully appreciates what the problem is and demonstrates this either directly or indirectly through suggestions and responses).

Teens' empathic care for close friends (observed at ages 13–19)

Adolescents also were observed in the same Supportive Behavior Task (Allen et al., 2001) with their nominated closest friend at ages 13, 14, 15, 16, 17, 18, and 19. In this version of the task, the target teen was asked to provide their friend with help in response to their friend's self-selected problem, and the teen's own supportive behavior was coded using the Supportive Behavior Task Coding System (Allen et al., 2001). All interactions were double-coded by independent coders and then averaged across coders to enhance reliability.

At each time point, the same four dimensions were coded and then averaged to derive a score for adolescents' empathic support for peers: *emotional support provision*, *instrumental support provision*, *emotional engagement*, and *interpretation of the peer's problem*. ICCs for the total empathy score at each of the seven time points (ages 13–19) ranged from .67 to .84, in the “good” to “excellent” range for this statistic (Cicchetti & Sparrow, 1981).

Parental responses to child distress (participant self-report about behavior toward child at ages 3–8)

Participants with young children reported on their parenting behavior using the Coping with Children's Negative Emotions Scale (Fabes et al., 2002). In this measure, parents read 12 hypothetical scenarios in which their child expresses a negative emotion (e.g., “my child loses some prized possession and reacts with tears”). For each scenario, parents rate how likely they would be to respond in each of six different ways on a scale from 1 (*very unlikely*) to 7 (*very likely*). Responses are averaged to create six subscales of parental responses in two broad domains: (1) *supportive* parental responses to child distress (comprising subscales of emotion-focused responses, problem-focused responses, and expressive encouragement) and (2) *nonsupportive* parental

responses to child distress (comprising subscales of punitive responses, minimization responses, and personal distress). Cronbach's alpha in the present sample was .96 for supportive responses and .98 for non-supportive responses.

Child empathy (target participants' parent report about child behavior at ages 3–8)

Participants with young children completed the Social Skills Improvement System–Rating Scales (Gresham & Elliott, 2008), a 79-item parent-report measure assessing children's developing social skills and behavior. Participants rate how often their child has demonstrated specific behaviors in the last 2 months, using a 4-point frequency scale from 0 (*never*) to 3 (*almost always*). The measure includes 6 items assessing children's empathy, including “tries to understand how others feel” and “tries to comfort others.” Cronbach's alpha for the empathy subscale was .87.

RESULTS

Preliminary analyses

We first examined distributional properties of the data and simple correlations among variables of interest. Descriptive statistics and Pearson correlations are summarized in Table 1. Maternal empathy toward teens at age 13 was positively related to adolescents' empathy toward close friends in middle and late adolescence. Supportive parental responses to child distress in adulthood were positively associated with empathic care for close friends in middle and late adolescence, whereas nonsupportive parental responses were not significantly related to empathy in adolescence (though coefficients were negative). Child empathy was positively associated with supportive parental responses to child distress (see Table 1 for coefficients).

Adolescents' empathy for close friends showed moderate test–retest stability between subsequent years (r s: .19–.51; mean r = .32), which likely reflects not only measurement error but also developmental change over time and the presence of different friendships at different ages.

Principal analyses

Analyses were conducted in MPlus Version 7 (Muthén & Muthén, 1998–2017), using FIML to handle missing data. Adolescent gender and family income (calculated as a percentage of the federal poverty line) were included as a priori covariates. Results are described below and summarized in Tables 2 and 3.

TABLE 1 Descriptive statistics and bivariate correlations among study variables for the three generations: mother (G1), teen (G2), and child (G3).

	Covariates		G1		G2								G3
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Tn gender (13)	-												
2. Family income (13)	-.14	-											
3. Mom empathy (13)	.05	.35**	-										
4. Tn empathy (13)	.17*	.07	.22**	-									
5. Tn empathy (14)	.35**	.05	.10	.40**	-								
6. Tn empathy (15)	.36**	.10	.21*	.26**	.31**	-							
7. Tn empathy (16)	.17*	.28**	.29**	.31**	.30**	.41**	-						
8. Tn empathy (17)	.24**	.13	.18*	.22*	.40**	.51**	.51**	-					
9. Tn empathy (18)	-.02	.15	.14	.07	.15	.32**	.17	.23*	-				
10. Tn empathy (19)	.09	.07	.21*	.30**	.14	.36**	.25*	.19	.19	-			
11. Supp responses (22–37)	.24*	.14	.21*	.11	.23	.27	.14	.13	.17	.33*	-		
12. Non-supp responses (22–37)	-.14	-.16	-.15	.17	-.06	-.29	-.05	.02	-.17	-.03	-.29**	-	
13. Child empathy (3–8)	.10	.13	.06	-.07	.05	.05	-.11	-.16	.02	.17	.40**	-.19*	-
<i>N</i>	184	183	168	165	154	134	139	142	129	106	114	114	112
<i>M</i>	0.54	2.82	2.42	2.11	2.30	2.40	2.31	2.30	2.33	2.42	67.39	27.80	14.15
<i>SD</i>	0.50	1.43	0.75	0.55	0.53	0.53	0.54	0.52	0.59	0.54	10.55	6.52	3.42

Note: Age of assessment is indicated in parentheses. G=generation; Mom empathy=mothers' observed empathic care for teen; Tn empathy=adolescents' observed empathic care for nominated closest friend; Supp responses=supportive parental responses to child distress (mean of problem-focused responses, emotion-focused responses, and expressive encouragement); Nonsupp responses=nonsupportive parental responses to child distress (mean of punitive responses, minimizing responses, and personal distress). Family income is calculated as a percentage of the federal poverty line; teen gender is coded such that 1=male, 2=female. Data for supportive responses, nonsupportive responses, and child empathy are at the child (G3) level.

Abbreviation: G, generation.

* $p < .05$; ** $p < .01$.

Hypothesis 1

To test intergenerational patterns of empathy from G1 to G2, we conducted a set of linear growth models. First, to characterize the overall trajectory of adolescents' empathic care for friends from ages 13 to 19, an unconditional growth model was run with scores at each of the seven assessment points (see Table 2, Model 1). The average slope was significant and positive, suggesting small increases in adolescents' empathic support for friends over time. There was significant variance in the intercept ($p < .001$), but not the slope ($p = .283$), suggesting individual differences in adolescents' initial levels of empathic support, but invariance in their developmental trajectory from age 13 to 19.

Second, mothers' observed empathic support for teens at age 13, along with covariates (adolescent gender and family income), were entered as time-invariant predictors and allowed to covary (Table 2, Model 2). No predictors were significantly associated with the slope; thus, the model was trimmed to omit the nonsignificant paths. In the final model, mothers' empathic support was significantly positively associated with the intercept of teens' empathy, centered at age 13, providing support for Hypothesis 1. In addition, teen gender was associated with the intercept, such that girls showed higher initial levels of empathic support for friends than boys.

Family income was unrelated to the intercept for teen empathy.

In a third step, G2 parenting behaviors (supportive and nonsupportive responses to child distress) were regressed on the intercept and slope of adolescents' empathy, accounting for mothers' empathic support at age 13, adolescent gender, and family income. The intercept for adolescent empathy was centered at age 19 to focus on late adolescence. Once again, there were no significant associations with the slope, so these paths were trimmed from the final model (Table 2, Model 3). Mothers' empathic support at age 13 was positively associated with the intercept for adolescent empathy for close friends at age 19. Moreover, the intercept for adolescent empathy at age 19 was positively associated with supportive parental responses to child distress in adulthood, but not with nonsupportive responses.

Hypotheses 2 and 3

To test intergenerational patterns of empathy from G2 to G3 (Hypotheses 2 and 3), an unconfated multilevel path model with G3 children nested within G2 parent participants was used to separate the *within* and *between* components of the model (Table 3; see Preacher et al., 2010 for details and statistical code). Multilevel models reduce type I error by accounting for the nonindependence of

TABLE 2 Growth models of G2 adolescent empathy for close friends, observed annually from ages 13 to 19 ($N=184$).

Parameter	<i>b</i>	SE	<i>p</i>
Model 1: Unconditional model of Tn empathy (13–19)			
Means			
Intercept of Tn empathy (centered at age 13)	2.23	0.04	<.001
Slope of Tn empathy (13–19)	0.03	0.01	.002
Variances			
Intercept of Tn empathy (centered at age 13)	0.12	0.03	<.001
Slope of Tn empathy (13–19)	0.00	0.00	.238
Intercept <i>with</i> slope	−0.01	0.01	.153
Model 2: Mom empathy (13) predicting Tn empathy (13–19)			
Intercept of Tn empathy (centered at age 13) <i>on</i>			
Mom empathy (13)	0.10	0.05	.046
Tn gender	0.30	0.07	<.001
Family income (13)	0.03	0.03	.275
Slope of Tn empathy (13–19) <i>on</i>			
Mom empathy (13)	-	-	-
Tn gender	-	-	-
Family income (13)	-	-	-
Mom empathy (13) <i>with</i> Tn gender	0.02	0.03	.407
Mom empathy (13) <i>with</i> family income (13)	0.39	0.09	<.001
Tn gender <i>with</i> family income (13)	−0.10	0.05	.054
Model 3: Slope and intercept of Tn empathy predicting parenting (22–37)			
Intercept of Tn empathy (centered at age 19) <i>on</i>			
Mom empathy (13)	0.12	0.05	.013
Tn gender	0.15	0.07	.032
Family income (13)	0.04	0.03	.144
Supp responses (22–37) <i>on</i>			
Intercept of Tn empathy (centered at age 19)	18.00	6.09	.003
Slope of Tn empathy (13–19)	-	-	-
Non-supp responses (22–37) <i>on</i>			
Intercept of Tn empathy (centered at age 19)	−3.25	3.48	.351
Slope of Tn empathy (13–19)	-	-	-
Mom empathy (13) <i>with</i> Tn gender	0.02	0.03	.397
Mom empathy (13) <i>with</i> family income (13)	0.39	0.09	<.001
Tn gender <i>with</i> family income (13)	−0.10	0.05	.054
Supp <i>with</i> nonsupp responses (22–37)	−13.41	7.58	<.001

Note: Age of assessment is indicated in parentheses. Dashes indicate nonsignificant paths that were trimmed from the final model. Mom empathy=mothers' observed empathic care for teen; Tn empathy=adolescents' observed empathic care for nominated closest friend; Supp responses=supportive parental responses to child distress (mean of problem-focused responses, emotion-focused responses, and expressive encouragement); Nonsupp responses=nonsupportive parental responses to child distress (mean of punitive responses, minimizing responses, and personal distress). Boldface indicates significant paths, $p<.05$.

observations (e.g., siblings living in the same household; Aarts et al., 2014) and can disentangle child-specific (within-family) versus family-wide (between-family) effects (e.g., Jenkins et al., 2009). This approach maximizes statistical power by including *all* children in the relevant age range within a family (e.g., in cases where a G2 parent participant had more than one child) without erroneously inflating the model *df*. Participants' empathic care for close friends in late adolescence (aggregated across

ages 17–19 to capture multiple observations of empathic support during this developmental period) was entered as the predictor, participants' self-reported supportive and non-supportive responses to their children's distress were entered together as intermediary variables, and child empathy was entered as the focal outcome; participant gender and family income were again included as covariates. Parental supportive and nonsupportive responses to distress were allowed to covary.

TABLE 3 Multilevel path model of G2 adolescent empathy to G3 child empathy ($N=114$).

Parameter	<i>b</i>	SE	<i>p</i>
Within-family level ($N=114$ children)			
Child empathy (3–8) on			
Supp responses (22–37)	0.06	0.04	.089
Nonsupp responses (22–37)	−0.25	0.07	<.001
Child age	−0.24	0.27	.362
Supp responses (22–37) with nonsupp responses (22–37)	−5.38	3.68	.144
Supp responses (22–37) with child age	0.13	0.38	.723
Nonsupp responses (22–37) with child age	0.39	0.27	.153
Between-family level ($N=70$ families)			
Supp responses (22–37) on			
Tn empathy (17–19)	10.66	4.06	.009
Tn gender	3.19	2.48	.198
Family income (13)	0.17	0.70	.805
Non-supp responses (22–37) on			
Tn empathy (17–19)	−2.82	2.18	.196
Tn gender	−0.29	1.54	.851
Family income (13)	−0.10	0.44	.825
Child empathy (3–8) on			
Supp responses (22–37)	0.13	0.04	.001
Non-supp responses (22–37)	0.02	0.06	.771
Tn empathy (17–19)	0.47	1.19	.691
Tn empathy (17–19) with Tn gender	0.02	0.02	.455
Tn empathy (17–19) with family income (13)	0.15	0.06	.014

Note: G=generation. Age of assessment is indicated in parentheses. Tn empathy=adolescents' observed empathic care for nominated closest friend; Supp responses=supportive parental responses to child distress (mean of problem-focused responses, emotion-focused responses, and expressive encouragement); Nonsupp responses=nonsupportive parental responses to child distress (mean of punitive responses, minimizing responses, and personal distress). Boldface indicates significant paths, $p<.05$. Abbreviation: G, generation.

Child age was included as an additional level 1 covariate, given that parenting behavior and children's empathy change as children age (Eisenberg, 2018). Results are summarized in Table 3. Regarding covariates, parental responses to child distress did not differ between mothers and fathers. Participants from higher-income families of origin showed greater empathy for close friends at ages 17–19, but there were no income-related differences in parenting or child outcomes. Child age was not significantly related to parenting behavior or child empathy in the present sample.

At the *between-subjects* level, G2 empathy for close friends at ages 17–19 predicted more supportive (but not nonsupportive) parental responses to child distress in adulthood. In turn, supportive (but not nonsupportive) parental responses to distress were associated with

greater empathy in their young children (G3). At the *within-subjects* level, nonsupportive parental responses to an individual child's distress were associated with that child's lower empathy; in contrast, supportive responses to a child's distress were marginally associated with that child's greater empathy, but this did not reach significance. Thus, parents' use of relatively more nonsupportive responses toward a specific child appeared to be more relevant to variation in children's empathy within a family, whereas parents' overall use of more supportive responses toward their children generally was more relevant to between-family variation in children's empathy. Regarding our central hypotheses, the between-subjects indirect path from G2 empathic care for friends in adolescence to G3 children's empathy via G2 supportive parental responses was significant (estimate = 1.39, 95% CI [0.01, 2.77], $p=.048$), whereas the indirect path via nonsupportive responses was not (estimate = −0.05, 95% CI [−0.33, 0.24], $p=.76$) (see Figure 1).

DISCUSSION

The present study is among the first to examine patterns of empathic care across three generations using a multi-method, prospective, longitudinal design spanning ages 13 to 32; we focused specifically on processes in adolescence as a critical period for empathic development (Allemand et al., 2015). Findings revealed that maternal empathic care during interactions with teens at age 13 was associated with teens' own empathic care for close friends across adolescence (ages 13–19). Furthermore, empathic care for friends in late adolescence emerged as a novel predictor of supportive parenting behavior in adulthood. At the between-subjects level, participants' supportive—but not nonsupportive—parental responses to young children's distress were associated with greater child empathy. We discuss each of these findings below and outline limitations of the current study and avenues for future research.

Paying it forward: Mothers' empathy for teens predicts teens' empathy for friends

In line with Hypothesis 1, mothers' empathic care toward their teens, observed in a dyadic support task at age 13, positively predicted teens' empathic care toward their closest friends in a similar task, administered annually across adolescence. Thus, teens who had first-hand experiences of receiving empathic care from parents (i.e., emotional engagement, understanding of the problem, instrumental support, and emotional support) were better able to “pay forward” a similar profile of empathic care to support their best friends. This aligns with, and extends, previous work showing that secure attachment at age 14 predicts greater empathy

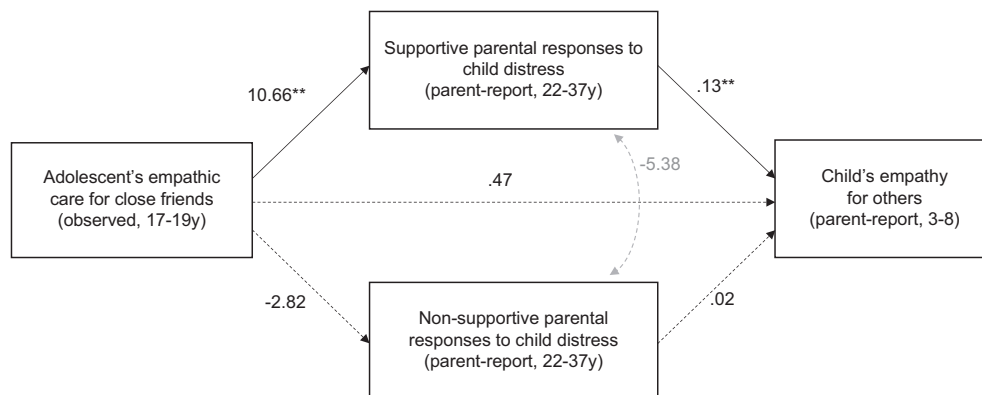


FIGURE 1 Path model of intergenerational patterns of empathic care from adolescents to their children (G2–G3). Solid lines indicate significant paths; dashed lines indicate non-significant paths; curved line indicates that predictors were allowed to covary. Numeric path labels are unstandardized coefficients for the between-subjects effects, controlling for participant gender and family income (for simplicity, covariates are not shown; see Table 3 for estimates). ** $p < .01$.

for close friends across ages 16–18 and provides support for the interpretation that experiences of parental empathy likely undergird the effects of secure attachment on empathic development (Stern et al., 2021). Findings also align with previous cross-sectional research demonstrating positive associations between parents' and teens' self-reported empathic concern and perspective-taking (Hawk et al., 2013)—associations that are partially mediated by parents' supportive caregiving behavior (Soenens et al., 2007). Notably, the present analyses extend this research beyond self-reports, illuminating the effects of parental empathy on teens' *observed* interactions with some of the most important social partners of adolescence: close peers.

Adolescents' observed empathic care toward close friends showed moderate stability across adolescence, as observed in test–retest correlations from one year to the next. This individual stability is notable, given the frequent changes in adolescents' nominated closest peer across assessments. It suggests that the capacity to provide empathic care to close others shows a degree of trait-like stability across different social contexts, rather than solely being relationship-specific. The “trait” interpretation aligns with research showing stability in adolescents' self-reported empathy over a 3-year period (Davis & Franzoi, 1991). Alternatively, perhaps teens with particular social skills (like empathy) tend to select or attract close friends with similar social skills (i.e., homophily within social networks; Kossinets & Watts, 2009), such that most of their friendships are characterized by similar levels of mutual responsiveness and reciprocity of support. Indeed, evidence shows that adolescents tend to befriend peers with similar levels of empathy (Miklikowska et al., 2022).

It is also worth noting that in contrast to popular myths of the self-focused or “uncaring” adolescent, average scores for teens' empathic care did not dip or decline across the study period; indeed, mean empathy scores showed slight increases across the seven

assessment points from age 13 to 19, in line with previous work across shorter time periods (see Meeus, 2016). Although adolescents' overall levels of empathic support for friends showed significant individual differences (intercept variance), their developmental trajectories did not (slope invariance), suggesting similar rates of modest growth in empathic abilities in the present sample. Thus, G1 mothers' empathic support was positively associated with overall levels of G2 adolescents' empathic support—when intercepts were examined at both age 13 and age 19—but not with change over time.

Adolescent friendships as a context for developing caregiving skills

Moreover, experiences in close adolescent friendships may refine interpersonal competencies that help accomplish the developmental tasks of early adulthood, such as forging romantic relationships (Allen et al., 2020; Costello et al., 2023; Furman, 1999), honing caregiving skills (Allen et al., 2023), and, as suggested in the present study, becoming a parent. We found partial support for Hypothesis 2, demonstrating that adolescents' empathy for close friends in late adolescence predicted later parenting behavior, specifically supportive responses to their children's negative emotions. Given that empathic care for close friends showed moderate stability from year to year (despite changes in the close peer across assessments), it is likely that empathy is a trait-like capacity that generalizes across relationships and thus may extend from peers to progeny. Further, the unique skills encompassed in our assessment of empathic care for peers have important parallels to parental supportive responses to children's distress—including attempting to help solve others' problems, taking others' perspective, providing emotional support and comfort, and validating others' emotions. An additional possibility is that the investment of empathic care in adolescent close friendships

builds adolescents' social capital in ways that, in their childrearing years, pay dividends in the form of stronger social support networks and cooperative caregiving (Hrdy, 2009).

Results build upon previous work linking support processes in adolescent friendships to support competencies in adult relationships with romantic partners (Costello et al., 2023) by extending the reach of friendship support to predict parenting of the next generation. Notably, cross-generational links in caregiving processes involve structural shifts in relational dynamics—from *seeking and receiving* support from a vertical relationship with one's parents to *providing* as well as receiving support within a horizontal, egalitarian relationship with close friends, to purely *providing* support to children in a vertical relationship in which the individual now has more power and responsibility. Thus, the egalitarian structure of adolescent close friendships may provide a unique opportunity to practice autonomous, emotionally regulated, empathic caregiving before taking on the more challenging role of parenting.

Exploratory findings revealed that supportive parental responses to children's distress were concurrently associated with parent reports of children's empathy, providing preliminary evidence of empathy transmission to the third generation. Findings align with theoretical perspectives that parents' positive emotion socialization—particularly their sensitive and empathic responses to children's distress—serves as a model for children's supportive responses to others, in part by fostering secure parent–child relationships and emotion regulation capacities (Eisenberg, 2000; Shaver et al., 2016; Spinrad & Gal, 2018). The present findings are also consistent with previous research linking mothers' supportive responses to distress to young children's development of prosocial behavior from 30 to 42 months (Eisenberg et al., 2019), as well as research demonstrating the specificity of parental responsiveness to distress as a predictor of children's empathy at ages 6–8 (Davidov & Grusec, 2006). Interestingly, no links were observed between nonsupportive parental responses (including punishment and minimization of the child's emotion) and children's empathy. Thus, our exploratory findings revealed an indirect path from one generation's empathic support for peers in late adolescence to the next generation's empathy in childhood via positive parenting behavior—specifically parents' supportive responses to their children's emotional distress.

Strengths, limitations, and future directions

Strengths of the study include being among the first examinations of empathy across three generations, the prospective longitudinal design spanning more than

two decades, the use of observational methods across seven time points in adolescence and emerging adulthood, and the consideration of adolescent close friendships as novel predictors of parental caregiving capacity. However, findings should be considered in light of the study's limitations. First, although our sample was representative of the mid-Atlantic U.S. city from which it was drawn, generalizability to other cultures and contexts may be limited. Similarly, the small sample size, particularly for analyses of second-generation parenting and third-generation empathy, highlight the need for replication in larger, more diverse samples. Future work should integrate measures of culture and context to illuminate key moderators of the observed pathways (see Stern et al., 2022). Moreover, the present G1 sample was comprised solely of mother–adolescent dyads; thus, a key direction for future work is to examine the unique and interactive roles of fathers and other caregivers.

Second, assessments of G2 parenting behavior and G3 child empathy both relied on questionnaires completed by the target participant at the same time point, which raises potential issues of reporter bias, direction of effects, and shared method variance. Thus, these findings should be regarded as exploratory and warrant replication in longitudinal studies examining parenting and child empathy over time, to test mediation and the direction of effects. On the other hand, it is notable that no significant results emerged for nonsupportive parental responses, which should be subject to the same potential biases, though in the opposite direction. Future work should conduct assessments at multiple time points in early childhood, ideally incorporating observational or biological measures.

Third, previous research shows a clear genetic contribution to empathy (Abramson et al., 2020), which was not accounted for in the present study; future work should examine the joint contributions of genetics and the social environment to the development of empathy at different stages of development. It is possible, for example, that the social environment plays a relatively stronger role in adolescence (due to heightened neural plasticity; Blakemore, 2008), but that genetics become increasingly important in adulthood.

Finally, a key direction for future research is to examine moderators of the observed associations between mother–teen, teen–peer, and parent–child empathy. As suggested previously, pathways may differ by gender, racial-ethnic identity, culture and context, and genotype. Most importantly, it is possible that certain protective factors may interrupt intergenerational patterns of low empathy that may contribute to cycles of abuse and adversity. A particularly rich avenue for research with practical applications will be to examine potential buffering effects of positive relationships with friends, romantic partners, or coparents in adulthood that may compensate for negative relationships with parents in adolescence.

CONCLUSION

Individual differences in empathic care are consequential for relationship functioning in families, in close friendships, and in the wider social world. The present findings provide the first long-term longitudinal evidence for the transmission of empathic care across three generations: from mother to teen to child. We observed concordance between mother–adolescent (G1–G2) and parent–child (G2–G3) empathy, replicating previous work, while integrating observational assessments of empathic care across seven time points in adolescence and emerging adulthood. Moreover, findings suggest that interactions with close friends in adolescence may provide a “training ground” in which teens can practice providing care and paying forward the empathy they have experienced from parents. This aligns with the proposed *peer-caregiving model* of empathic development, in which mutually supportive relationships with peers—particularly during adolescence—may strengthen caregiving skills relevant to future parenting.

ACKNOWLEDGMENTS

We are grateful to the families who participated in this study and to the multiple generations of research assistants, project coordinators, and graduate students who contributed to its success. Research reported in this publication was supported by the National Institute of Mental Health under Award Number R01-MH58066 and by the Eunice Kennedy Shriver National Institute of Child Health and Human Development under Award Numbers F32HD102119, 5R37HD058305-23, and R01HD058305-16A1. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The analyses were not preregistered, and the data and analytic code and materials necessary to reproduce the analyses presented here are not publicly accessible, due to restrictions protecting the confidentiality of participants' data.

ORCID

Jessica A. Stern  <https://orcid.org/0000-0003-1357-724X>

Meghan A. Costello  <https://orcid.org/0000-0002-9520-4676>

Amanda F. Hellwig  <https://orcid.org/0000-0002-8054-1426>

Joseph P. Allen  <https://orcid.org/0000-0002-2328-059X>

REFERENCES

Aarts, E., Verhage, M., Veenliet, J. V., Dolan, C. V., & van der Sluis, S. (2014). A solution to dependency: Using multilevel analysis

to accommodate nested data. *Nature Neuroscience*, 17, 491–496.

<https://doi.org/10.1038/nn.3648>

Abramson, L., Eldar, E., Markovitch, N., & Knafo-Noam, A. (2023). The empathic personality profile: Using personality characteristics to reveal genetic, environmental, and developmental patterns of adolescents' empathy. *Journal of Personality*, 91, 753–772. <https://doi.org/10.1111/jopy.12772>

Abramson, L., Uzefovsky, F., Toccaceli, V., & Knafo-Noam, A. (2020). The genetic and environmental origins of emotional and cognitive empathy: Review and meta-analyses of twin studies. *Neuroscience & Biobehavioral Reviews*, 114, 113–133. <https://doi.org/10.1016/j.neubiorev.2020.03.023>

Allemand, M., Steiger, A. E., & Fend, H. A. (2015). Empathy development in adolescence predicts social competencies in adulthood. *Journal of Personality*, 83, 229–241. <https://doi.org/10.1111/jopy.12098>

Allen, J. P., Costello, M. A., Hellwig, A. F., Pettit, C., Stern, J. A., & Uchino, B. (2023). Adolescent caregiving success as a predictor of social functioning from age 13 to 33. *Child Development*, 94, 1610–1624. <https://doi.org/10.1111/cdev.13936>

Allen, J. P., Costello, M. A., Kansky, J., & Loeb, E. L. (2022). When friendships surpass parental relationships as predictors of long-term outcomes: Adolescent relationship qualities and adult psychosocial functioning. *Child Development*, 93, 760–777. <https://doi.org/10.1111/cdev.13713>

Allen, J. P., Hall, F. D., Insabella, G. M., Land, D. J., Marsh, P. A., & Porter, M. R. (2001). *Supportive behavior coding system*. University of Virginia.

Allen, J. P., Narr, R. K., Kansky, J., & Szewedo, D. E. (2020). Adolescent peer relationship qualities as predictors of long-term romantic life satisfaction. *Child Development*, 91, 327–340. <https://doi.org/10.1111/cdev.13193>

Allen, J. P., & Tan, J. S. (2016). The multiple facets of attachment in adolescence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed., pp. 399–415). Guilford.

Arbuckle, J. L. (1996). Full information estimation in the presence of incomplete data. In G. A. Marcoulides & R. E. Schumaker (Eds.), *Advanced structural equation modeling: Issues and techniques* (pp. 243–278). Erlbaum.

Bailey, J. A., Hill, K. G., Oesterle, S., & Hawkins, J. D. (2009). Parenting practices and problem behavior across three generations: Monitoring, harsh discipline, and drug use in the intergenerational transmission of externalizing behavior. *Developmental Psychology*, 45, 1214–1226. <https://doi.org/10.1037/a0016129>

Blake, A. J., Mackinnon, D. P., Waddell, J., & Chassin, L. (2023). Parent-child separation and intergenerational transmission of substance use and disorder: Testing across three generations. *Development and Psychopathology*, 36, 28–39. <https://doi.org/10.1017/S0954579422000876>

Blakemore, S.-J. (2008). The social brain in adolescence. *Nature Reviews Neuroscience*, 9, 267–277. <https://doi.org/10.1038/nrn2353>

Borelli, J. L., Stern, J. A., Smiley, P. A., Marvin, M. J., Pettit, C., & Samudio, M. (2021). Mentalization and empathy among parents of school-aged children: Charting the space between. *Emotion*, 21, 783–800. <https://doi.org/10.1037/emo0000747>

Bower, A. R., Nishina, A., Witkow, M. R., & Bellmore, A. (2015). Nice guys and gals finish last? Not in early adolescence when empathic, accepted, and popular peers are desirable. *Journal of Youth and Adolescence*, 44, 2275–2288. <https://doi.org/10.1007/s10964-015-0346-5>

Bowlby, J. (1982). *Attachment and loss: Vol. I. Attachment*. Basic Books. (Original work published 1969).

Chow, C. M., Ruhl, H., & Buhrmester, D. (2013). The mediating role of interpersonal competence between adolescents' empathy and friendship quality: A dyadic approach. *Journal of Adolescence*, 36, 191–200. <https://doi.org/10.1016/j.adolescence.2012.10.004>

- Cicchetti, D. V., & Sparrow, S. A. (1981). Developing criteria for establishing interrater reliability of specific items: Applications to assessment of adaptive behavior. *American Journal of Mental Deficiency, 86*, 127–137. <http://psycnet.apa.org/psycinfo/1982-00095-001>
- Costello, M. A., Allen, J. P., Womack, S., Loeb, E. L., y, J. A., & Pettit, C. (2023). Characterizing emotional support development: From adolescent best friendships to young adult romantic relationships. *Journal of Research on Adolescence, 33*, 389–403. <https://doi.org/10.1111/jora.12809>
- Crone, E. A., & Achterberg, M. (2022). Prosocial development in adolescence. *Current Opinion in Psychology, 44*, 220–225.
- Davidov, M., & Grusec, J. E. (2006). Untangling the links of parental responsiveness to distress and warmth to child outcomes. *Child Development, 77*(1), 44–58. <https://doi.org/10.1111/j.1467-8624.2006.00855.x>
- Davis, M. H., & Franzoi, S. L. (1991). Stability and change in adolescent self-consciousness and empathy. *Journal of Research in Personality, 25*, 70–87. [https://doi.org/10.1016/0092-6566\(91\)90006-C](https://doi.org/10.1016/0092-6566(91)90006-C)
- Decety, J. (2015). The neural pathways, development and functions of empathy. *Current Opinion in Behavioral Sciences, 3*, 1–6. <https://doi.org/10.1016/j.cobeha.2014.12.001>
- Decety, J., Norman, G. J., Berntson, G. G., & Cacioppo, J. T. (2012). A neurobehavioral evolutionary perspective on the mechanisms underlying empathy. *Progress in Neurobiology, 98*, 38–48. <https://doi.org/10.1016/j.pneurobio.2012.05.001>
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665–697. <https://doi.org/10.1146/annurev.psych.51.1.665>
- Eisenberg, N. (2018). Empathy-related responding and its relations to positive development. In N. Roughley & T. Schramme (Eds.), *Forms of fellow feeling: Empathy, sympathy, concern and moral agency* (pp. 165–183). Cambridge University Press. <https://doi.org/10.1017/9781316271698.007>
- Eisenberg, N., Fabes, R. A., Carlo, G., Troyer, D., Speer, A. L., Karbon, M., & Switzer, G. (1992). The relations of maternal practices and characteristics to children's vicarious emotional responsiveness. *Child Development, 63*, 583–602. <https://doi.org/10.1111/j.1467-8624.1992.tb01648.x>
- Eisenberg, N., Fabes, R. A., Schaller, M., Carlo, G., & Miller, P. A. (1991). The relations of parental characteristics and practices to children's vicarious emotional responding. *Child Development, 62*, 1393–1408. <https://doi.org/10.1111/j.1467-8624.1991.tb01613.x>
- Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2015). Prosocial development. In M. E. Lamb, C. Garcia Coll (Vol. Eds.), & R. M. Lerner (Series Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (7th ed., pp. 610–658). Wiley. <https://doi.org/10.1017/9781316271698.007>
- Eisenberg, N., Spinrad, T. L., Taylor, Z. E., & Liew, J. (2019). Relations of inhibition and emotion-related parenting to young children's prosocial and vicariously induced distress behavior. *Child Development, 90*(3), 846–858. <https://doi.org/10.1111/cdev.12934>
- Fabes, R. A., Eisenberg, N., & Miller, P. A. (1990). Maternal correlates of children's vicarious emotional responsiveness. *Developmental Psychology, 26*, 639–648. <https://doi.org/10.1037/0012-1649.26.4.639>
- Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review, 34*, 285–310. https://doi.org/10.1300/J002v34n03_05
- Furman, W. (1999). Friends and lovers: The role of peer relationships in adolescent romantic relationships. In W. A. Collins & B. Laursen (Eds.), *Relationships as developmental contexts* (pp. 133–154). Lawrence Erlbaum.
- George, C., & Solomon, J. (2008). The caregiving system: A behavioral systems approach to parenting. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 833–856). Guilford.
- Gresham, F., & Elliott, S. N. (2008). *Social skills improvement system (SSIS) rating scales*. SSIS Rating Scales.
- Hawk, S. T., Keijsers, L., Branje, S. J., Graaff, J. V. D., Wied, M. D., & Meeus, W. (2013). Examining the interpersonal reactivity index (IRI) among early and late adolescents and their mothers. *Journal of Personality Assessment, 95*, 96–106. <https://doi.org/10.1080/00223891.2012.696080>
- Hrdy, S. B. (2009). *Mothers and others: The evolutionary origins of mutual understanding*. Harvard University Press.
- Jenkins, J. M., Cheung, C., Frampton, K., Rasbash, J., Boyle, M. H., & Georgiades, K. (2009). The use of multilevel modeling for the investigation of family process. *International Journal of Developmental Science, 3*, 131–149. <https://doi.org/10.3233/DEV-2009-3204>
- Kossinets, G., & Watts, D. J. (2009). Origins of homophily in an evolving social network. *American Journal of Sociology, 115*, 405–450. <https://doi.org/10.1086/599247>
- Loeb, E. L., Stern, J. A., Costello, M. A., & Allen, J. P. (2021). With(out) a little help from my friends: Insecure attachment in adolescence, support-seeking, and adult negativity and hostility. *Attachment & Human Development, 23*, 624–642. <https://doi.org/10.1080/14616734.2020.1821722>
- MacLean, P. D. (1985). Brain evolution relating to family, play, and the separation call. *Archives of General Psychiatry, 42*, 405–417. <https://doi.org/10.1001/archpsyc.1985.01790270095011>
- Meeus, W. (2016). Adolescent psychosocial development: A review of longitudinal models and research. *Developmental Psychology, 52*, 1969–1993. <https://doi.org/10.1037/dev0000243>
- Meuwese, R., Cillessen, A. H. N., & Güroğlu, B. (2017). Friends in high places: A dyadic perspective on peer status as predictor of friendship quality and the mediating role of empathy and prosocial behavior. *Social Development, 26*, 503–519. <https://doi.org/10.1111/sode.12213>
- Miklikowska, M., Tilton-Weaver, L., & Burk, W. J. (2022). With a little help from my empathic friends: The role of peers in the development of empathy in adolescence. *Developmental Psychology, 58*, 1156–1162. <https://doi.org/10.1037/dev0001347>
- Mueller, R. O., & Hancock, G. R. (2010). Structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *The reviewer's guide to quantitative methods in the social sciences* (pp. 371–383). Routledge. <https://doi.org/10.4135/9781412995627.d38>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Oppenheim, D., Koren-Karie, N., & Sagi, A. (2001). Mothers' empathic understanding of their preschoolers' internal experience: Relations with early attachment. *International Journal of Behavioral Development, 25*, 16–26. <https://doi.org/10.1080/01650250042000096>
- Portt, E., Person, S., Person, B., Rawana, E., & Brownlee, K. (2020). Empathy and positive aspects of adolescent peer relationships: A scoping review. *Journal of Child and Family Studies, 29*, 2416–2433. <https://doi.org/10.1007/s10826-020-01753-x>
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods, 15*, 209–233. <https://doi.org/10.1037/a0020141>
- Shaver, P. R., Mikulincer, M., Gross, J. T., Stern, J. A., & Cassidy, J. (2016). A lifespan perspective on attachment and care for others: Empathy, altruism, and prosocial behavior. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (3rd ed., pp. 878–916). Guilford.
- Soenens, B., Duriez, B., Vansteenkiste, M., & Goossens, L. (2007). The intergenerational transmission of empathy-related responding in adolescence: The role of maternal support. *Personality and Social Psychology Bulletin, 33*, 299–311. <https://doi.org/10.1177/0146167206296300>
- Son, D., & Padilla-Walker, L. M. (2020). Happy helpers: A multidimensional and mixed-method approach to prosocial behavior



- and its effects on friendship quality, mental health, and well-being during adolescence. *Journal of Happiness Studies*, 21, 1705–1723. <https://doi.org/10.1007/s10902-019-00154-2>
- Spinrad, T. L., & Gal, D. E. (2018). Fostering prosocial behavior and empathy in young children. *Current Opinion in Psychology*, 20, 40–44. <https://doi.org/10.1016/j.copsyc.2017.08.004>
- Stern, J. A., Barbarin, O. A., & Cassidy, J. (2022). Working toward anti-racist perspectives in attachment theory, research, and practice. *Attachment & Human Development*, 24, 392–422. <https://doi.org/10.1080/14616734.2021.1976933>
- Stern, J. A., Borelli, J. L., & Smiley, P. A. (2015). Assessing parental empathy: A role for empathy in child attachment. *Attachment & Human Development*, 17, 1–22. <https://doi.org/10.1080/14616734.2014.969749>
- Stern, J. A. (2016). *Empathy in parents and children: Links to preschoolers' attachment and aggression* [Master's thesis]. University of Maryland. <https://doi.org/10.13016/M25C1C>
- Stern, J. A., & Cassidy, J. (2018). Empathy from infancy to adolescence: An attachment perspective on the development of individual differences. *Developmental Review*, 47, 1–22. <https://doi.org/10.1016/j.dr.2017.09.002>
- Stern, J. A., Costello, M. A., Kansky, J., Fowler, C., Loeb, E., & Allen, J. P. (2021). Here for you: Attachment and the growth of empathic support for friends in adolescence. *Child Development*, 92, e1326–e1341. <https://doi.org/10.1111/cdev.13630>
- Strayer, J., & Roberts, W. (2004). Children's anger, emotional expressiveness, and empathy: Relations with parents' empathy, emotional expressiveness, and parenting practices. *Social Development*, 13, 229–254. <https://doi.org/10.1111/j.1467-9507.2004.000265.x>
- Vaish, A., & Hepach, R. (2020). The development of prosocial emotions. *Emotion Review*, 12, 259–273. <https://doi.org/10.1177/1754073919885014>
- van Lissa, C. J., Hawk, S. T., de Wied, M., Koot, H. M., van Lier, P., & Meeus, W. (2014). The longitudinal interplay of affective and cognitive empathy within and between adolescents and mothers. *Developmental Psychology*, 50, 1219–1225. <https://doi.org/10.1037/a0035050>

How to cite this article: Stern, J. A., Bailey, N. A., Costello, M. A., Hellwig, A. F., Mitchell, J., & Allen, J. P. (2024). Empathy across three generations: From maternal and peer support in adolescence to adult parenting and child outcomes. *Child Development*, 95, 1628–1640. <https://doi.org/10.1111/cdev.14109>