Published in final edited form as:

Soc Dev. 2009 November 1; 18(4): 785–797. doi:10.1111/j.1467-9507.2008.00518.x.

Relations of Parent-Youth Interactive Exchanges to Adolescent Socioemotional Development

Rachel L. Hutt,

The Pennsylvania State University

Qi Wang, and

Cornell University

Gary W. Evans

Cornell University

Abstract

This study examined the relations of parent-youth agreement and disagreement during a joint problem-solving task and multi-methodological indices of socioemotional outcomes in adolescents (Mean age = 13). One hundred and sixty seven parents and their adolescent children participated. Each parent-youth pair played the interactive game Jenga, and their interactions were analyzed for frequency of elaborations (agreement during three or more conversational turns) and negotiations (disagreement during three or more conversational turns). Elaborations during parent-youth interactions were related to less negative classroom behavior, better self-regulation, and more task persistence in youth. Findings are discussed in light of the importance of parent-youth interaction and youth autonomy in adolescent socioemotional development.

Keywords

parent-youth relations; adolescence; communication; outcomes

Parent-youth interactions play significant roles in adolescent socioemotional development. Although many different aspects of these interactions have been studied, one characteristic that has largely been neglected is parent-youth agreement and disagreement during ongoing activities. In this study we addressed this issue by examining the patterns of elaborations and negotiations between parents and their adolescent children during a joint problem-solving task. Elaborations refer to situations in which two parties agree and expand on an idea in an extended conversation (at least three turns). They occur in situations when the parent or youth initiates a conversation or suggests an idea, the other party agrees to it, and the initiator reconfirms it. This form of interaction often denotes engagement, encouragement, and facilitation between parent and youth. In contrast, negotiations refer to conversations where two parties disagree on an idea in an extended conversation with at least three turns and often entail disapproval, conflict, and negation between parent and youth.

Elaborations and negotiations are likely related to other important constructs (e.g., conflict, support) that have been shown to affect adolescent socioemotional development. The purpose of the present study is to examine parent-youth elaborations and negotiations in relation to multiple measures of adolescent socioemotional development.

Parent-Child Conflict, Engagement, and Agreement

Elaborations and negotiations have been investigated with preschool children (Cervantes, 2002; Fivush, 1989; Fivush, Haden, & Reese, 2006; Fivush & Wang, 2005), and their potential implications for adolescent development are intriguing and warrant consideration. For example, when parent-child dyads had more responsive turn-taking styles, the children exhibited more responsive communication with peers in preschool (Black & Logan, 1995). Furthermore, mothers' elaborations on rules during interactions predicted preschool children's language and cognitive skills (Gralinski & Kopp, 1993). These findings highlight the contribution that elaborations and responsive parent-child interactions may have for younger children's socioemotional and cognitive development. Although the examination of responsive turn-taking and elaborations has not been directly extended to parent-youth interaction during adolescence, several strands of evidence suggest that these interactive exchanges might be important during this age period.

Research concerning parental support and warmth during adolescence may be related to parent-youth elaborations given that parents and youth who agree with each other may be seen as showing mutual support in joint tasks. High levels of parental support have been related to less problematic behaviors later in adolescence (Amato & Fowler, 2002). Parent-youth agreement may also be related to family protection factors, such as family cohesion, social support, and moral orientation, which predicted youth adaptability, social skills, and leadership in adolescents (Prevatt, 2003).

Constructs related to negotiations have also been studied in adolescence, including conflict, disapproval, and control. For example, during family interactions, parental control, characterized by disengagement, enmeshment, and inhibition of youth autonomy, was related to elevated internalizing and externalizing symptoms in adolescents (Barber, Olsen, & Shagle, 1994). Furthermore, a negative parent-youth emotional climate and parental efforts to force behavioral compliance were related to adolescents' externalizing problems, suggesting that parental psychological intrusiveness may create a trajectory for difficulties in adjustment and relationships (Buehler, Benson, & Gerard, 2006). Collectively, this research has suggested that parent-youth interactions with high levels of negotiations may contribute to adverse socioemotional outcomes in adolescents.

Another area of research related to the potential relevance of elaborations and negotiations in adolescent development is the work on parenting styles. Authoritative parenting is characterized by low conflict, high warmth, and parental engagement (Baumrind, 1966), similar to the constructs included in elaborations. Adolescent juvenile offenders with authoritative parents were more psychosocially mature, performed better academically, had less internal distress, were less likely to engage in deviant behaviors, and were generally better adjusted, compared with juvenile offenders with more authoritarian or permissive parents (Steinberg, Blatt-Eisengart, & Cauffman, 2006; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Conceivably, parent-youth interactions that include low levels of conflict and high levels of warmth and engagement will support better socioemotional outcomes in adolescents.

In contrast, authoritarian and permissive parenting styles, characterized by mixed levels of warmth and engagement, are related to negative outcomes in children. Compared to adolescents with authoritative parents, adolescents with authoritarian parents lacked self-confidence and had higher levels of internalizing problems, whereas those with permissive (indulgent) parents were more disengaged from school, suffered poorer school performance and had more deviant behaviors and school misconduct (Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg et al., 1994). These findings suggest that parenting styles

embodying several characteristics of negotiations tend to be associated with adverse socioemotional outcomes in youth.

In summary, extant research suggests that parental warmth and support facilitate conflict resolution and foster positive developmental outcomes in children and adolescents, whereas parental disapproval, control, and conflict are associated with parent-youth tension and negative developmental outcomes. Elaborations and negotiations may be the more concrete, behavioral manifestations of measures like parenting style, and may reflect the mechanisms underlying concepts such as parental support and warmth or lack thereof. It is therefore important to examine parent-youth ongoing interactions and the actual behaviors that transpire during these interactions. Such research will allow us to better understand different parenting styles that convey apparent influences during different developmental stages.

Youth Socioemotional Outcomes

Performance in many developmental domains during adolescence has been related to parent-youth interactions involving conflict, engagement, and control. One such domain, a critical component of youth competence, is classroom behavior. Conflict, control, and lack of family cohesion were all negatively associated with youths' sociability with peers and compliance with school rules (Adams, Ryan, Ketschis, & Keating, 2000). Ineffective parental discipline was positively related to child antisocial behavior in 6th grade, and parental ineffective discipline in 6th grade also predicted less school engagement in 7th grade (DeBaryshe, Patterson, & Capaldi, 1993). Furthermore, family assessments of high organization during a task were related to lower youth externalizing school behaviors (Johnson, Cowan, & Cowan, 1999). The patterns of parent-youth control, conflict, and engagement that influence youth classroom behavior share similarities with elaborations and negotiations examined in the current study. By elaborating, parents and youth engage in more positive and supportive interactions, which may extend to the classroom, where youth can have a better understanding of this type of interaction with respect to teamwork and patience. In particular, abstract thinking may be used in elaborations when parents grant youth independence and choice in playing a game, and patience may be learned during the activity of turn-taking. In contrast, parent-youth interactions characterized by negotiations and disagreement may not facilitate the necessary skills for cooperation and patience, which may translate to adolescents' disruptive behavior in the classroom as a result.

Another important domain related to parent-youth interaction is self-regulation, defined as autonomy and competence (Grolnick & Ryan, 1989). Parental autonomy or granting (i.e., valuing child autonomy, autonomous discipline and motivation, and nondirectiveness) and parental support predicted children's self-regulation in grades 3 through 6 (Grolnick & Ryan, 1989), and the level of parental involvement was positively associated with youth self-regulation in high school (Purdie, Carroll, & Roche, 2004). Specific parenting behaviors thus contribute to the development of youth self-regulation (McCabe, Cunningham, & Brooks-Gunn, 2004). Similarly, parent-youth elaborative interactions in a joint task may facilitate youth self-regulation, given that elaborations often entail parental support of youth autonomy, parental involvement, and nurturant parenting. Little research has examined the effect of conflict and parental control on youth self-regulation. Yet it is possible that if the youth and parent frequently disagree with each other's ideas, as in negotiations, the youth may not receive positive reinforcement necessary to promote the development of self-regulation.

One aspect of youth socioemotional competence that has yet to be fully examined in the context of parent-youth interaction is learned helplessness. Learned helplessness refers to "a failure in coping due to perceptions of uncontrollability" (Cohen, Evans, Stokols, & Krantz,

1986, p. 68). Diener and Dweck (1978, 1980) examined causal attributions in relation to learned helplessness. Youth who attributed failure to lack of ability or other uncontrollable factors showed deterioration in performance, whereas youth who attributed failure to lack of effort did not decline in performance. In addition, performance goals with an emphasis on outcome diminished self-efficacy and led to less task persistence, whereas learning goals with an emphasis on understanding and growth led to more persistence in both the laboratory and real world learning contexts (e.g. classroom) (Grant & Dweck, 2003).

Several studies have suggested relations between parent-youth interaction and learned helplessness. Greater exposure to cumulative risk, indexed by several parenting components such as family separation and family turmoil, led to more learned helplessness among 9-year-olds (Evans, 2003). Parent-youth interaction often associated with these risk situations, such as conflict, stress, and lack of warmth, may contribute to the lack of task persistence during various activities. In addition, youth who received positive feedback from parents on their effort were less likely to show performance decrements (Grant & Dweck, 2003). During parent-youth elaborative interactions youth tend to receive positive reinforcement for their ideas and effort, and thus may perform better on tasks that require persistence. Furthermore, they may come to develop a sense of competence and mastery that may be projected into future activities. In contrast, when parents frequently show disapproval or negate the youth's ideas and actions, as in negotiations, the youth may feel discouraged and may be more vulnerable to learned helplessness.

Purpose of the Present Study

The purpose of the present study was to evaluate the influences of parent-youth elaborations and negotiations during a joint problem-solving task on multi-methodological measures of socioemotional outcomes in a sample of young adolescents. We observed the specific elements of elaborations and negotiations during parent-youth interactions, as opposed to using the more common self-reported ratings of parenting style or social support. This enabled us to elucidate the bi-directional processes of parent-youth interactions. In addition, we used teachers' ratings of youth behavioral problems and difficulties with self-regulation. This eliminated possible biases created by asking parents to report on both their own behavior and that of their children. Furthermore, the youth outcome measures included a behavioral index of learned helplessness indicated by the youths' task persistence. Finally, for the measure of learned helplessness, we collected data at two time points, when the adolescents were at age 13 and 17 years.

We hypothesized that elaborations in parent-youth interactions in a joint task would be related to less negative classroom behavior, better self-regulation, and greater task persistence among young adolescents. In contrast, greater negotiations between parents and youth were expected to be related to more negative youth outcomes, including more negative classroom behavior, less self-regulation, and less task persistence.

Method

Participants

One-hundred and sixty seven mothers and their adolescent children (51 % female) were observed in their homes, when the children were on average 13.1 years of age. For one of the outcome measures, learned helplessness, longitudinal data were also obtained four years later, when youth were on average 17.5 years of age. Families were recruited in rural, upstate New York counties from public schools, New York State Co-Operative Extension programs, and various anti-poverty programs. Only one youth per household participated. This study is part of a larger project on rural populations examining the influence of poverty,

cumulative risk exposure and children's socioemotional and stress outcomes (Evans, 2003; Evans & English, 2002; Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Sixty percent of families had two parents living in the home, while the rest were one parent families. The population was 90.2% Caucasian, with 30% of the parents holding a college degree. The mean income to needs ratio was 2.37. This ratio is an annually adjusted, per capita index, comparing household income with federal estimates of minimally required expenditures for food and shelter. An income-to-needs ratio of 1 is the U.S. government definition of poverty.

Procedure

The main data collection for the current study took place when the youths were on average 13 years old (Time 1). For the measures of learned helplessness indicated by task persistence, data were also collected four years later (Time 2). At Time 1, two researchers visited the home and worked independently with the target youth and his/her mother, gathering a variety of data for the larger study. For the current study, the researchers video-recorded parent-youth interactions during an interactive game and assessed the youth's task persistence. In addition, the youth's English teacher received a questionnaire following the home visit, which contained the measures of youth negative classroom behavior and self-regulation. English teachers of 38 youths did not participate, which resulted in a smaller sample size for negative classroom behavior and self-regulation measures. The Time 2 measure of task persistence was also completed in the participants' home approximately 4 to 5 years later. Twenty-two families did not participate at Time 2 because they either moved or were unreachable.

Parent-youth interaction—During the Time 1 data collection, interviewers videotaped the mother-youth pair participating in the game of Jenga for 15 minutes. The Jenga game consisted of 54 precision wooden blocks built up with three blocks to a row, with each row facing the opposite direction. Mother-youth pairs were instructed to take turns and work together as a team to make the tower as high as they could. Interviewers left the room during the game.

The conversation between the pairs during the game was coded from the videotapes, with a coding scheme adapted from Fivush (1989) and Fivush and Wang (2005). The original coding scheme was used with preschool children and also included variables that examined exchanges with fewer than three conversational turns. To appropriately reflect the linguistic and cognitive levels of the current sample, we focused on those conversations with at least three turns. This also allowed us to highlight the degree of agreement or disagreement in the parent-youth interaction. Statements were separated by propositions (i.e., subject-verb constructs) as the coding unit. For instance, "Take that piece" is one proposition, and "Be careful, you are going to knock it over" is two propositions. Each exchange with 3 or more conversational turns was classified as either an *elaboration* when the mother and youth agreed with each other. (e.g., "Should I take this piece?" "Yes take that piece." "Ok I will."), or a *negotiation* when the mother and youth disagreed with each other at least once in 3 conversational turns. (e.g., "How about that one?" "No, if you take that the tower will fall." "No it won't.", or "Ok."). Either the youth or the mother could start the conversation. Coding was done in 2.5 minute blocks. Each block had a total number of elaborations and negotiations and the frequencies of elaborations and negotiations across six blocks were averaged to describe the entire interaction. Trained research assistants, who were blind to the hypotheses of the study, coded the data. Reliability was assessed for 20 participants, with a correlation of $r = .70$ for elaborations and $r = .83$ for negotiations.

Negative classroom behavior—The measure of negative classroom behavior was taken at Time 1. English teachers rated the youths using a questionnaire that assessed different types of aggressive and disruptive behaviors (Coie, 1990). Because all students were required to take English, the subject of the teachers was kept consistent among the youths. Teachers rated 13 questions about the youth on a scale of 1 (= Never) to 5 (= Almost always) (e.g. starting fights with peers or acting immature). This scale has been previously validated (Coie, 1990) and shows excellent internal reliability for this sample ($\alpha = .94$). The mean rating across the 13 questions was used for analysis, with a possible score range of 1 to 5. Lower scores indicated better classroom behavior, while higher scores indicated more negative classroom behavior.

Self-regulation—Also at Time 1, self-regulation was rated by the youth's English teacher for attention regulation and emotion regulation (e.g. exhibiting self control when frustrated) (Humphrey, 1982). The measure contains 8 questions that are answered using a response scale of 1 (= Never) to 5 (= Almost always). It has been previously validated (Humphrey, 1982) and has excellent internal reliability for this sample ($\alpha = .92$). Teachers were asked to evaluate the youths in comparison to other youths of the same age in their classes. The sum of the individual items for each youth was used for analysis, with a possible score range of 8 to 40. Higher scores indicated better self-regulation.

Task persistence—Task persistence was assessed in the home at both Time 1 and Time 2. At Time 1, the youth was shown a picture of an abstract design (tangram) and asked to duplicate it. A fairly easy practice puzzle was first introduced to ensure that the youth understood the task. The first test puzzle was theoretically solvable, but no adolescent or college student could do so based on pilot testing. Youths were given 15 minutes to solve this puzzle and the time spent trying was recorded in seconds. Youths were told that they should work until they could solve it or felt that they couldn't do it, and then they could move on to the next puzzle, which was actually solvable. For ethical reasons we made sure that each youth successfully completed the second puzzle. This behavioral protocol is sensitive to individual differences in control-related beliefs, chronic exposure to uncontrollable stressors, and experimental manipulations of perceived control (Cohen, 1980; Cohen et al., 1986; Evans, 2001; Glass & Singer, 1972). The same procedure was used at Time 2, with a different type of puzzle task. We used the task persistence protocol from Glass and Singer (1972) where the youth was given complex geometric line drawings and asked to retrace without lifting his or her pencil or going over any line twice. Again we made sure that the youth successfully solved the second test puzzle after fruitlessly attempting to solve the first. The time spent trying to solve the initial, insoluble puzzle (maximum 20 minutes for Time 2) was recorded in seconds and used as the index of task persistence.

To summarize, task persistence was assessed at Times 1 (13 years old) and 2 (17 years old) and self-regulation and negative classroom behavior were only assessed at Time 1. The predictor variables, that is, elaborations and negotiations in parent-youth interactions, were assessed at Time 1.

Results

Ranges, means and standard deviations of principal variables are listed in Table 1 and the zero-order correlation matrix is depicted in Table 2. Income-to-needs ratio was positively related to the number of elaborations as well as all four outcome measures. Thus, wealthier families engaged in more elaborations during the Jenga game and had children with more positive outcomes on all measures. Also, as can be seen in Table 2 compared with females (dummy coded as 1), males (dummy coded as 0) showed more negative classroom behaviors

and had greater difficulties with self-regulation. Elaborations and negotiations were negatively correlated ($r = -.21$). In addition, all four outcomes were significantly associated with each other, whereby higher levels of negative classroom behavior were associated with lower levels of self-regulation and less task persistence, and self-regulation and task persistence were positively correlated. Consistent with our prediction, more elaborations during parent-youth interaction were negatively correlated with negative classroom behaviors and positively related to higher levels of self-regulation and task persistence, whereas greater engagement in negotiations was associated with more youth negative classroom behavior and poorer self-regulation. Thus, the use of elaborations was related to better socioemotional outcomes for adolescents, whereas the use of negotiations was related to poorer outcomes in terms of classroom behavior and self-regulation.

Regression analyses were performed next to examine the effect of each parent-youth exchange variable on youth outcomes, controlling for income-to-needs ratio and gender. Separate regression analyses were conducted for each outcome variable for elaborations and negotiations, respectively. Table 3 reports the hierarchical regression results, showing the income and gender controls (step 1 and step 2) and then either the effect of the elaborations or negotiations (step 3), with the controls in the model. F values for each of these steps are for both the overall model (column 2) and for the increment in R square (column 5). The use of elaborations was related to less negative classroom behavior, better self-regulation, and more task persistence both concurrently at Time 1 and prospectively at Time 2. Note that effects of elaborations and negotiations on Time 2 task persistence were tested independent of Time 1 task persistence. The use of negotiations, in contrast, was related to greater negative classroom behavior and less self-regulation. Negotiation use was not significantly related to task persistence concurrently or longitudinally.

To examine the relative importance of elaborations and negotiations for youth socioemotional outcomes, the same models as run in Table 3 were repeated except both elaborations and negotiations were entered simultaneously in the last step. In Table 3 only one of the parent-youth exchange variables was in the model at the last step. For the second set of analyses, both variables were in the model together at step 3. All effects remained equally significant except for the associations between elaborations and self-regulation ($\beta = .13$) and between negotiations and negative classroom behavior ($\beta = .13$). Thus, these analyses again revealed significant effects of elaborations on negative classroom behavior ($\beta = -.31, p < .001$), and on task persistence at both time points ($\beta = .21, p < .05$ at T1, and $\beta = .21, p < .01$ at T2). The use of negotiations showed an independent effect on self-regulation ($\beta = -.26, p < .01$).

Discussion

The present study was the first to examine the relations of elaborations and negotiations in parent-youth interaction to adolescent development. The findings revealed significant relations between each of these parent-youth exchanges and adolescent classroom behavior, self-regulation, and task persistence. Moreover, unlike past work on parenting that has primarily relied on self-reports, the present study measured overt parent-youth behaviors during an interactive game that elicited joint problem solving, and examined multiple developmental outcomes.

As predicted, the use of negotiations in parent-youth interactions was related to higher teacher ratings of negative classroom behavior, consistent with prior findings that parental control and low support negatively affect classroom behavior (Adams et al., 2000; Debaryshe et al., 1993; Johnson et al., 1999). In contrast, more parent-youth elaborations were related to lower teacher ratings of negative youth classroom behavior. By elaborating,

parents and youths engage in more dynamic interactions, agreeing with and building upon ideas of one another. These findings highlight the importance of parent-youth interactions in affecting aspects of the youth's life beyond the immediate family context.

With respect to youth self-regulation, the use of negotiations was related to lower teacher ratings of self-regulation in school, whereas the use of elaborations was related to higher ratings of self-regulation. These results may reflect the role of autonomy and competence as important components of self-regulation. Grolnick and Ryan (1989) suggest that a sense of personal competence is reflected in the youth's understanding and belief of his or her own control over learning and achievement. If the youth and parent frequently disagree with each other's ideas, the youth may not receive sufficient encouragement necessary to foster this sense of perceived control in learning. In contrast, elaborating and building upon mutual ideas between the parent and youth may encourage youth autonomy, promote the youth's perceived control and autonomy in learning and achievement, and further facilitate the development of self-regulation in the classroom. The relation between parent-youth elaborations and youth self-regulation is consistent with previous research accenting the importance of nurturant, involved parenting to promote adolescent self-regulation (Brody & Ge, 2001; Grolnick & Ryan, 1989).

Perhaps our most interesting finding is that more parent-youth elaborations were directly related to higher levels of task persistence in adolescents both concurrently and prospectively. The lack of task persistence is an important indicator of learned helplessness, and, to our knowledge, it has not been examined previously in relation to parent-youth interactions. When parents take the time to encourage and enhance the youth's ideas and actions, they may be fostering the development of learning motivation. This may be further accomplished by helping the youth develop a sense of mastery and confidence to persist in the face of challenges (Peterson, Maier, & Seligman, 1993). The present findings call for attention to the relation of supportive, confirming parent-youth interactions to the etiology of competence and mastery in the developing youth.

Elaborations and negotiations exhibited a moderate negative correlation, suggesting that they are not entirely independent dimensions. This might explain why some effects were no longer significant after both dimensions were entered simultaneously into the regression models. Nonetheless, the patterns of results of the two sets of regression analyses were consistent overall. Prior research has shown that elaborations and negotiations are related to factors such as child cultural background, gender, and cognitive skills (Fivush, 1989; Fivush & Wang, 2005). We showed the apparent socioemotional sequels of these parent-youth exchanges. Interestingly, elaborations appeared to have stronger associations with task persistence and negative classroom behavior, whereas negotiations seemed more critical in disrupting the development of self-regulation, at least among adolescents.

The current findings suggest the importance of examining the bi-directional influences between parents and youths during joint activities and their implications for developmental outcomes. Bi-directionality in dyadic interactions has been found in very young children. For instance, during memory sharing, the more memory responses 3-year-old children provided, the more engaging and elaborative their mothers were both concurrently and at later time points, which further facilitated children's developing memory skills (Wang, 2007). Similarly, socially competent preschool children and their mothers were more positive in their exchanges and little parental control had to be initiated, whereas anxious and aggressive children had less positive interactions with their mothers and mothers exhibited more control (Dumas, LaFreniere, & Serketich, 1995). Additionally, mutually responsive interactions between mothers and infants were related to child compliance and

enjoyment as well as the child's future moral conduct and cognition (Kochanska, Forman, Aksan, & Dunbar, 2005).

Future research examining parent-youth interactions in other cultural contexts is needed. Research has shown that ethnic minorities tend to place a greater emphasis on relatedness when disagreements arise than European Americans, who were more inclined to show autonomy (Phinney, Kim-Jo, Osorio, & Vilhjálmsdóttir, 2005). The present sample was predominantly Caucasian which limited the generalizability of the findings. In addition, research involving father-youth interactions is also needed in order to get a more complex picture of family dynamics. Prospective, longitudinal data will further strengthen the current findings regarding parent-youth exchanges in relation to classroom behavior and self-regulation in adolescents. Future studies should also examine parent-youth elaborations and negotiations in the context of other joint parent-youth tasks to determine if these findings apply to different types of activities. In particular, tasks affording different levels of parental and youth control can be incorporated to determine whether more control and assertion given to the youth will be related to greater task persistence and less learned helplessness. It will also be valuable to assess the degree of autonomy and efficacy youths experience when interacting with parents and others such as teachers and peers. These mastery-related experiences may explain the link between parent-youth elaborations and task persistence.

In conclusion, positive parent-youth interactions are an important aspect of adolescent mental health and well-being. Most research and theories on parent-youth relationships have focused on broad dimensions of parenting, such as parental warmth and control/autonomy. The current study showed that attention to more detailed characteristics of parent-youth interactions can be fruitful. Parent-youth agreement, support, and encouragement through the use of elaborations during interactions facilitated positive classroom behavior, self-regulation, and task persistence in adolescents, whereas parent-youth disapproval, conflict, and negation contributed to negative classroom behavior and low levels of self-regulation in adolescents. More research examining the effects of parent-youth interactions on task persistence and other measures of learned helplessness is warranted. Future work should also examine the influence of individual characteristics of parents and youths on interaction patterns and youths' socioemotional and cognitive development.

Acknowledgments

The authors are grateful to the many families who participated in this research. They thank Rachel Kutcher and Melissa Medoway for their assistance with coding as well as Yin Tong and Caroline Pemberton for their assistance in editing. Dr. Ginger Moore provided valuable guidance and feedback. This research was partially supported by W.T. Grant Foundation, the John D. and Catherine T. Mac Arthur Foundation Network on Socioeconomic Status and Health, the National Institute of Child Health and Human Development (1 F33 HD08473-01), the National Institute of Mental Health (1 F31 MH68089-01A1; R01-MH64661), and the Cornell University Agricultural Experiment Station (Project Nos. NYC 327404, 327407).

References

- Adams G, Ryan B, Ketsetzis M, Keating L. Rule compliance and peer sociability: A study of family processes, school-focused parent-child interactions, and children's classroom behavior. *Journal of Family Psychology*. 2000; 14(2):237–250. [PubMed: 10870292]
- Amato PR, Fowler F. Parenting practices, child adjustment, and family diversity. *Journal of Marriage and Family*. 2002; 64:703–716.
- Barber B, Olsen J, Shagle S. Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development*. 1994; 65:1120–1136. [PubMed: 7956469]
- Baumrind D. Effects of authoritative control on child behavior. *Child Development*. 1966; 37:887–907.

- Black B, Logan A. Links between communication patterns in mother-child, father-child, and child-peer interactions and children's social status. *Child Development*. 1995; 66:255–271.
- Brody GH, Ge X. Linking parenting processes and self-regulation to psychological functioning and alcohol use during early adolescence. *Journal of Family Psychology*. 2001; 15:82–94. [PubMed: 11322087]
- Buehler C, Benson M, Gerard JM. Interparental hostility and early adolescent problem behavior: The mediating role of specific aspects of parenting. *Journal of Research on Adolescence*. 2006; 16:265–292.
- Cervantes C. Explanatory emotion talk in Mexican Immigrant and Mexican American families. *Hispanic Journal of Behavioral Sciences*. 2002; 24(2):138–163.
- Cohen S. Aftereffects of stress on human performance and social behavior.: A review of research and theory. *Psychological Bulletin*. 1980; 88:82–108. [PubMed: 7403392]
- Cohen, S.; Evans, GW.; Stokols, D.; Krantz, D. Behavior, health, and environmental stress. Plenum Press; New York: 1986.
- Coie, J. Teacher Checklist of Social Behavior. Duke; Durham, NC: 1990.
- DeBaryshe BD, Patterson GR, Capaldi DM. A performance model for academic achievement in early adolescent boys. *Developmental Psychology*. 1993; 29:795–804.
- Diener CI, Dweck CS. An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure. *Personality and Social Psychology*. 1978; 36(5):451–462.
- Diener CI, Dweck CS. An analysis of learned helplessness II. The processing of success. *Journal of Personality and Social Psychology*. 1980; 39(5):940–952. [PubMed: 7441483]
- Dumas JE, LaFreniere PJ, Serketich WJ. “Balance of power”: A transactional analysis of control in mother-child dyads involving socially competent, aggressive, and anxious children. *Journal of Abnormal Psychology*. 1995; 104(1):104–113. [PubMed: 7897032]
- Evans, GW. Environmental stress and health. In: Baum, A.; Revenson, T.; Singer, JE., editors. *Handbook of Health Psychology*. Erlbaum; Mahwah, NJ: 2001. p. 365–385.
- Evans GW. A multimethodological analysis of cumulative risk and allostatic load among rural children. *Developmental Psychology*. 2003; 39(5):924–933. [PubMed: 12952404]
- Evans GW, English K. The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development*. 2002; 73:1238–1248. [PubMed: 12146745]
- Evans GW, Gonnella C, Marcynyszyn LA, Gentile L, Salpekar N. The role of chaos in poverty and children's socioemotional adjustment. *Psychological Science*. 2005; 16(7):560–565. [PubMed: 16008790]
- Fivush R. Exploring gender differences in the emotional content of mother-child conversations about the past. *Gender Roles*. 1989; 20(11/12):675–691.
- Fivush R, Haden CA, Reese E. Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development*. 2006; 77(6):1568–1588. [PubMed: 17107447]
- Fivush R, Wang Q. Emotion talk in mother child conversations of the shared past: The effects of gender, culture, and event valence. *Journal of Cognition and Development*. 2005; 6(4):489–506.
- Glass, D.; Singer, J. Urban stress: Experiments on noise and social stressors. Academic Press; New York: 1972.
- Gralinski JH, Kopp CB. Everyday rules for behavior: Mothers' requests to young children. *Developmental Psychology*. 1993; 29(3):573–584.
- Grant H, Dweck CS. Clarifying achievement goals and their impact. *Journal of Personality and Social Psychology*. 2003; 85(3):541–553. [PubMed: 14498789]
- Grolnick W, Ryan R. Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology*. 1989; 81(2):143–154.
- Humphrey L. Children's and teacher's perspectives on children's self control. *Journal of Consulting and Clinical Psychology*. 1982; 50:624–633. [PubMed: 7142538]

- Johnson V, Cowan P, Cowan C. Children's classroom behavior: The unique contribution of family organization. *Journal of Family Psychology*. 1999; 13(3):355–371.
- Kochanska G, Forman DR, Aksan N, Dunbar SB. Pathways to conscience: Early mother-child mutually responsive orientation and children's moral emotion, conduct, and cognition. *Journal of Child Psychology and Psychiatry*. 2005; 46(1):19–34. [PubMed: 15660641]
- Lamborn D, Mounts N, Steinberg L, Dornbusch S. Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*. 1991; 62:1049–1065. [PubMed: 1756655]
- McCabe, L.; Cunningham, M.; Brooks-Gunn, J. The development of self-regulation in young children. Individual characteristics and environmental contexts. In: Baumeister, R.; Vohs, K., editors. *Handbook of self-regulation: Research, theory, and applications*. Guilford Press; New York: 2004.
- Peterson, C.; Maier, S.; Seligman, MEP. Learned helplessness: A theory for the age of personal control. Oxford University Press; New York: 1993. Learned helplessness and depression.
- Phinney JS, Kim-Jo T, Osorio S, Vilhjalmsson P. Autonomy and relatedness in adolescent-parent disagreements: Ethnic and developmental factors. *Journal of Adolescent Research*. 2005; 20(1):8–39.
- Prevatt FF. The contribution of parenting practices in a risk and resiliency model of children's adjustment. *British Journal of Developmental Psychology*. 2003; 21:469–480.
- Purdie N, Carroll A, Roche L. Parenting and adolescent self-regulation. *Journal of Adolescence*. 2004; 27:663–676. [PubMed: 15561309]
- Steinberg L, Blatt-Eisengart I, Cauffman E. Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful homes: A replication in a sample of serious juvenile offenders. *Journal of Research on Adolescents*. 2006; 16(1):47–58.
- Steinberg L, Lamborn SD, Darling N, Mounts NS, Dornbusch SM. Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*. 1994; 65:754–770. [PubMed: 8045165]
- Wang Q. "Remember when you got the big, big bulldozer?" Mother-child reminiscing over time and across cultures. *Social Cognition*. 2007; 25(4):455–471.

Table 1

Ranges, Means and Standard Deviations of Principal Variables

Variable	N	Range	Mean	Standard Deviation
Elaborations	167	.17 - 5.83	2.13	0.50
Negotiations	167	0 - 3.50	0.63	0.65
Negative Classroom Behavior	130	1 - 5	1.70	0.72
Self Regulation	129	8 - 40	29.61	7.00
Learned Helplessness T1	167		503.80	292.97
Persistence in puzzle maximum		0 - 900 seconds		
Learned Helplessness T2	145		423.41	273.38
Persistence in puzzle maximum		0 - 900 seconds		

Table 2

Correlation Matrix of Principal Variables and Controls

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)Income to needs	-----	.00	.42**	-.07	-.28**	.27**	.17*	.27**
(2) Gender		-----	-.10	-.08	-.19*	.26**	.07	-.03
(3)Elaborations			-----	-.21**	-.38**	.27**	.23**	.37**
(4)Negotiations				-----	.23**	-.30**	-.05	-.11
(5)Negative Classroom Behavior					-----	-.72**	-.20**	-.20*
(6)Self Regulation						-----	.30**	.31**
(7)Learned Helplessness Time 1							-----	.23**
(8)Learned Helplessness Time 2								-----

Table 3

Regression Analyses of Parent-Youth Exchange Styles Predicting Youth Outcomes with Statistical Controls for Income and Gender and Elaborations and Negotiations Tested in Separate Models

Model	Regressor	R ²	F	df	R ²	F	df	B	SE B	β
Dependent Variable: Negative Classroom Behavior										
1	Income-to-needs	.08	10.56 ^{**}	(1, 129)	.078	10.56 ^{**}	(1,129)	-.14	.04	-.28 ^{**}
2	Child Gender	.11	8.27 [*]	(2, 128)	.04	5.60 [*]	(1, 128)	-.28	.12	-.20 [*]
3	Elaborations	.21	10.99 ^{***}	(3, 127)	.10	14.65 ^{***}	(1, 127)	-.20	.05	-.34 ^{***}
3	Negotiations	.11	7.46 ^{***}	(3,127)	.04	5.29 [*]	(1,127)	.22	.10	.19 [*]
Dependent Variable: Self Regulation										
1	Income-to-needs	.07	9.69 ^{**}	(1, 128)	.07	9.69 ^{**}	(1, 128)	1.33	.43	.27 [*]
2	Child Gender	.13	9.08 ^{***}	(2, 127)	.06	7.94 ^{**}	(1, 127)	3.27	1.16	.23 ^{**}
3	Elaborations	.15	7.59 ^{***}	(3,126)	.03	4.15 [*]	(1, 126)	1.06	.52	.19 [*]
3	Negotiations	.20	10.59 ^{***}	(3,126)	.08	12.03 ^{**}	(1,126)	-3.11	.90	-.28 ^{**}
Dependent Variable: Task Persistence T1										
1	Income-to-needs	.02	4.03	(1, 166)	.02	4.03 [*]	(1, 166)	31.60	15.74	.15 [*]
2	Child Gender	.02	2.05	(2, 165)	.00	.09	(1, 165)	13.28	44.94	.02
3	Elaborations	.06	3.45 [*]	(3,164)	.04	6.13 [*]	(1, 164)	49.95	20.17	.21 [*]
3	Negotiations	.03	1.45	(3,164)	.00	.27	(1,164)	-18.30	35.21	-.04
Dependent Variable: Task Persistence T2										
1	Task Persistence T1	.06	9.02 ^{**}	(1,144)	.06	9.02 ^{**}	(1,144)	.23	.076	.24 ^{**}
2	Income-to-needs	.17	14.94 ^{***}	(2, 143)	.11	19.68 ^{***}	(1, 143)	65.59	14.79	.34 ^{***}
3	Child Gender	.18	10.67 ^{***}	(3, 142)	.01	1.94	(1, 142)	-57.70	41.40	-.12
4	Elaborations	.22	9.92 ^{***}	(4,141)	.04	6.43 ^{**}	(1, 141)	47.91	18.90	.22 ^{**}
4	Negotiations	.15	8.49 ^{***}	(4,141)	.01	1.11	(1,141)	-37.42	35.48	-.08

*
p<.05

**
p<.01

p<.0001