

# The Emotional and Academic Consequences of Parental Conditional Regard: Comparing Conditional Positive Regard, Conditional Negative Regard, and Autonomy Support as Parenting Practices

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The authors conducted 2 studies of 9th-grade Israeli adolescents (169 in Study 1, 156 in Study 2) to compare the parenting practices of conditional positive regard, conditional negative regard, and autonomy support using data from multiple reporters. Two socialization domains were studied: emotion control and academics. Results were consistent with the self-determination theory model of internalization, which posits that (a) conditional negative regard predicts feelings of resentment toward parents, which then predict dysregulation of negative emotions and academic disengagement; (b) conditional positive regard predicts feelings of internal compulsion, which then predict suppressive regulation of negative emotions and grade-focused academic engagement; and (c) autonomy support predicts sense of choice, which then predicts integrated regulation of negative emotions and interest-focused academic engagement. These findings suggest that even parents' use of conditional positive regard as a socialization practice has adverse emotional and academic consequences, relative to autonomy support.

*Keywords:* parental conditional regard, autonomy support, emotion regulation, academic engagement

Parental conditional regard (PCR) as a socialization strategy has been discussed by psychologists for over half a century (e.g., Rogers, 1951; Sears, Maccoby, & Levin, 1957) and has been used by parents for far longer. This practice involves parents' providing more attention and affection than usual when their children enact desired behaviors or attributes and providing less attention and affection than usual when their children do not. Aronfreed (1968) and Gewirtz and Pelaez-Nogueras (1991) argued that PCR leads children to behave in ways their parents believe are good for them, whereas Rogers (1951) argued that PCR undermines self-esteem, exploration, and self-regulation. More recently, theorists have argued that PCR prompts contingent self-esteem and diminished psychological functioning (Assor, Roth, & Deci, 2004; Grolnick, Deci, & Ryan, 1997; Harter, 1993; Roth, 2008).

In the first direct study of PCR and its correlates, Assor et al. (2004) examined associations between college students' perceptions of their parents' use of conditional regard and their own internalization and behavioral enactment of parental expectations in four domains (*viz.*, academic, sport, prosocial, emotion control). Results indicated that PCR promoted feelings of internal compulsion to comply with parents' expectations, which led to enacting

the behaviors. Internal compulsion was the indicator of introjected internalization, which according to self-determination theory (Deci & Ryan, 1985, 2000; Niemiec, Ryan, & Deci, *in press*; Ryan & Deci, 2000) is a shallow and conflicted type of internalization (see also Niemiec, Ryan, & Brown, 2008). PCR was also associated with other negative outcomes such as guilt after failure, short-lived satisfaction after success, and feeling disapproved of by parents and resentment toward them. Roth (2008) examined the relations between young adults' perceptions of their parents' use of conditional regard and their own orientation toward prosocial behavior. In line with the findings of Assor et al. (2004), results indicated that PCR predicted introjected regulation, which then led to egoistic helping, whereby the prosocial behavior was enacted to boost the helper's self-esteem. Thus, Roth's findings showed that the negative consequences of PCR extend beyond both the type of internalization and the emotions that accompany behavioral enactment and include characteristics of the behavior itself. Together, these results suggest that the use of PCR may be alluring, but it also has associated costs.

Research on parental psychological control also suggests that PCR might yield emotional difficulties for their children (Barber, Stolz, & Olsen, 2005). Psychological control consists of three main components: guilt induction, shaming, and love withdrawal (which is one aspect of conditional regard). Research has related parents' psychological control to indices of children's ill-being, including depression, guilt, maladaptive perfectionism, and anxiety (Barber, 1996; Barber et al., 2005; Soenens et al., 2005). However, psychological control is quite different from PCR. First, love withdrawal is just one of the three components of psychological control, so the role played by love-withdrawal is unclear. Second, love withdrawal is a general parenting practice, whereas conditional regard as operationalized by Assor et al. (2004) is domain specific.

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Third, and most important, PCR includes both withdrawing attention and affection when the child fails to act as expected (referred to as *conditional negative regard*) and providing more attention and affection when the child does act as expected (referred to as *conditional positive regard*). Thus, while love withdrawal is similar to parental conditional negative regard (PCNR) in that both pertain to parents providing less affection than usual when the child fails to act as expected, it does not encompass parental conditional positive regard (PCPR). We believe it is important to examine PCPR separate from and in addition to PCNR.

### Limitations of Past Research on PCR and Objectives of the Present Research

The studies presented herein extend past research on PCR while addressing its limitations. First, Assor et al. (2004) did not differentiate positive from negative PCR, so in the present research PCPR and PCNR were treated as separate constructs, which allowed for a determination of whether the negative consequences of PCR result only from the punitive love withdrawal approach of PCNR or whether PCPR also contributes. Finding that PCPR has negative consequences would counter recommendations found in parenting books (e.g., Latham, 1994; Steinberg, 2004) and many parents' expectations that children benefit from receiving more attention and affection when they live up to parental standards. Second, past research did not test the hypothesis that the practices of PCR have an alternative, more desirable practice. Thus, we drew on self-determination theory (Deci & Ryan, 2000) to examine whether the use of autonomy-supportive practices promotes internalization and behavioral enactment without engendering the negative correlates found for PCR. Third, past research did not examine the quality of behavioral functioning in the domains in which children experienced PCR. Thus, although PCR may lead to enactment of parental expectations, the quality of the behavior may be shallow or constricted. For example, the study of adolescents experiencing PCR in the academic domain might be focused on tests and grades rather than on learning. We examined parental practices and adolescents' behavior quality. A fourth limitation was the reliance on college students' retrospective reports about their parents. The present research focused on 14–15 year olds' current reports. Finally, Assor et al. (2004) used only student self-reports, whereas the present research included teacher reports.

Using SDT, we hypothesized that PCPR would be associated with less negative outcomes than PCNR but more than autonomy support. These predictions were based on SDT's model of internalization during the process of socialization, which we outline below.

### The Self-Determination Theory Model of Internalization

SDT distinguishes among *amotivation*, *controlled motivation*, and *autonomous motivation*, which we argue are associated with the socialization strategies of PCNR, PCPR, and autonomy support, respectively.

*Amotivation* refers to a lack of motivation and results from not valuing an activity, not expecting the activity to yield a desired outcome, or not feeling competent to do it. Assor, Kaplan, Kanat-Maymon, and Roth (2005) found that feelings of resentment to-

ward socializing agents were associated with amotivation and led to disengagement and poor performance.

*Controlled motivation* refers to doing a behavior with a sense of pressure or compulsion and includes two subtypes. *External regulation* concerns behavior being controlled by external reward and punishment contingencies. Little internalization occurs so the behavior persists only when the controlling person (e.g., the parent) is present. *Introjected regulation* involves children taking in the value and regulation of parentally expected behaviors but not accepting them as their own. With this superficial type of internalization, children apply to themselves the contingencies of approval or worth that had previously been applied by others. Introjected regulation is accompanied by feeling inner compulsion, based in the children's self-esteem being contingent upon enacting specific behaviors. The motivation to do the behaviors is thus controlled even though the regulation is now within the children. Research has indicated that controlled motivation, reflected in feeling pressure to do specific behaviors, leads to constricted and shallow behavioral functioning and performance (e.g., Assor, Cohen-Melayev, Kaplan, & Friedman, 2005; Assor, Kaplan, et al., 2005; Grolnick & Ryan, 1989). The pressure leads to a narrow focus and poor quality behavior.

*Autonomous motivation* refers to acting with a sense of volition and choice and has three subtypes: *identified*, *integrated*, and *intrinsic*. With *identified regulation*, the child has identified with the importance of an activity for him- or herself and does the behavior quite autonomously. When an identification has been reciprocally assimilated with other aspects of the child's self, the regulation becomes *integrated* and is experienced as deeply internalized and autonomous. *Intrinsic motivation* involves doing an activity because the activity itself is interesting. Because the child is willing to do the activity out of interest, internalization is not needed. Autonomous motivation, reflected in feelings of choice, leads to more exploratory and flexible modes of behavior (e.g., Assor, Cohen-Melayev, et al., 2005; Roth, 2008; Roth, Assor, Kaplan, & Kanat-Maymon, 2007) because the experience of choice allows the child the freedom to adopt a more open and flexible stance. SDT distinguishes between controlling versus autonomy-supportive socializing contexts that lead to introjected regulation versus integration.

### SDT and the Motivational Effects of PCNR, PCPR, and Autonomy Support

Using SDT, we argue that each parenting practice discussed herein promotes a specific type of motivation and affective experience in children, which leads to a corresponding mode of behavioral functioning. Figure 1 presents the general scheme guiding our predictions about the differential relations of the socialization strategies of PCNR, PCPR, and autonomy support to children's motivation, affective experiences, and behavioral functioning.

PCNR involves parents' withdrawal of attention and affection when their children do not comply with expectations and was predicted to foster amotivation and feelings of resentment toward parents because it is experienced as highly controlling and punitive—and thus uncaring, disaffirming, and coercive. It arouses resentment and leads to lack of enactment of the behaviors parents expect or to dysregulation of the emotions parents want controlled. This suggests that the feelings of rejection and resentment ob-

Parental practice	Motivation and affective experience	Behavioral functioning
PCNR	Amotivation; resentment toward parents	Lack of action; dysregulation
PCPR	Controlled motivation; feelings of internal compulsion (an index of introjection)	Constricted, pressured behavior
PAS	Autonomous motivation; experience of choice (an index of identification)	Exploration and curiosity

Figure 1. The expected relations of parental socialization practices (PCNR, PCPR, and parental autonomy support) to children’s motivation, affective experience, and behavioral functioning. PCNR = parental conditional negative regard; PCPR = parental conditional positive regard; PAS = parental autonomy support.

served by Assor et al. (2004) would have been primarily a function of PCNR. We predicted, then, that PCNR would lead to amotivation because of the feelings of resentment toward the coercive and potentially rejecting parent, which would in turn lead to poor enactment of the parent’s desired behaviors. In line with this prediction Chapman and Zahn-Waxler (1982) found that love withdrawal was related to avoidance of the socializing agents.

PCPR incorporates an implicit promise of affection when children comply with parental expectations, so it is likely to be experienced as somewhat supportive. Thus, PCPR is expected to promote some internalization of parental expectations. Still, the children will not experience autonomous motivation because they have to comply with parental expectations to maintain parental love. This thwarting of autonomy is expected to promote controlled (i.e., introjected) motivation rather than autonomous motivation, but PCPR is still less threatening and intrusive than PCNR, and thus we expected that it would result in controlled motivation rather than amotivation.

The type of controlled motivation that PCPR is expected to promote is introjected regulation. Thus, we hypothesized that PCPR would lead to introjected internalization of parental demands because the conditional positive regard used by parents to control behavior sets the stage for the children to use conditional self-worth to control their own behavior (Deci & Ryan, 1995). This conditional self-worth creates a feeling of *internal compulsion*, which is the phenomenological hallmark of introjected regulation (Assor et al., 2004). The feeling of internal compulsion and pressure is expected to make the behavior *constricted* and less open to learning opportunities or experiences that do not necessarily lead to the attainment of others’ appreciation.

Substantial research has shown that controlling practices, including praise that implies evaluation (Ryan, 1982) or implicates the person’s worth (Dweck, 1999), has negative effects, including making behaviors less flexible, less intrinsically motivated, and of poorer quality than is so for autonomously motivated behaviors (Benware & Deci, 1984; Kamins & Dweck, 1999).

Parental autonomy support, the practice of parents working to promote their values by taking the children’s perspective and providing a rationale and intrinsic value demonstration, was hypothesized to promote identified or integrated internalization of

parental expectations because parents are conveying their expectations in ways that allow a sense of choice about behavioral enactment. Specifically, parental perspective taking and acknowledging children’s feelings allows the children to feel close to the parents and have a sense of volition when enacting the parents’ expectations. The rationale and intrinsic value demonstration support children’s sense of autonomy with regard to the desired behaviors by helping the children understand the value of the behaviors for themselves. The sense of choice and lack of internal pressure enable children to act in nonconstricted and exploratory ways, responding to available information in a curious and non-defensive way. Thus, we predicted that parental autonomy support would foster autonomous motivation, expressed as a sense of choice regarding behavioral enactment, and this would lead to within-domain exploration and interested *behavioral functioning*.

In this research, our predictions about PCNR, PCPR, and autonomy support were tested in two domains considered to be central for socialization: emotion regulation and academics. Thus, using both domains contributes to the generalization of the research findings.

### SDT and Modes of Emotion Regulation

SDT proposes that emotion regulation takes three forms: dysregulation, suppressive regulation, and emotional integration (Ryan, Deci, Grolnick, & La Guardia, 2006). Dysregulation involves children’s experiencing emotions but not being able to regulate those emotions (Ryan et al., 2006). That is, the behavioral tendencies inherent in the emotions (e.g., James, 1890) will be expressed without the children’s intention (Deci, 1980). Suppressing regulation involves avoiding or minimizing the experience of negative emotions. The concept of suppressive regulation is close to that of emotion suppression (e.g., Gross & John, 2003), which has been found to have negative psychological, physiological, and interpersonal consequences. According to Ryan et al. (2006), suppressed emotions have been implicated in various forms of psychopathology. Finally, emotional integration involves a differentiated awareness of one’s emotional states and the capacity to use this sensitivity to regulate behavior “choicefully.” Integration is essential for optimal emotion regulation because it allows exploration and experience, rather than suppression or stifling, of emotions (e.g., Rogers, 1961), and it allows children choice about how to express their emotions. Children are thus able to explore their emotions without being overwhelmed by them so they can use the emotions autonomously as a guide for adaptive behavior.

There are noteworthy similarities between emotional integration and ego resiliency, which Block and Block (1980) characterized as a balance between *overcontrol* and *undercontrol*. Certainly, neither perspective would consider either dysregulation or suppressive regulation as representing optimal self-regulation of emotions. Eisenberg, Hofer, and Vaughan (2007) described ego resiliency and *effortful control*, as highly related and overlapping. Effortful control is the ability to voluntarily focus and shift attention to inhibit dominant responses or to initiate subdominant ones (Rothbart & Bates, 2006; Spinrad et al., 2007). According to SDT, however, emotional integration is not viewed in terms of the right amount of control but rather as the development of processes and structures that allow regulation through choice rather than through

control, and that is accompanied by the experiences of volition and choice, without pressure or demand.

Assor, Roth, Israeli, Freed, and Deci (2007), Roth and Assor (2003), and Eilat, Assor, and Roth (2006) showed that adolescents and adults differentiate among the three modes of emotion regulation and that the scales assessing those modes have construct validity. Roth and Assor (2003) found that suppressive regulation and dysregulation of fear and sadness related negatively to recognition of emotions in others, whereas emotional integration related positively to recognition. They also found that dysregulation and suppressive regulation related negatively to intimacy in close relationships, whereas emotional integration related positively to intimacy.

### Types of Parenting and Modes of Emotion Regulation

Controlling parenting that pressures children to ignore their negative feelings is associated with suppression and dysregulation of emotions (e.g., Grolnick, Kurowski, McMenemy, Rivkin, & Bridges, 1998; Nachmias, Gunnar, Mangelesdorf, Parritz, & Buss, 1996). Because PCR is experienced as controlling, we expected PCR to be associated with children's nonoptimal emotion regulation, with the positive and negative types of PCR having different sequelae. Consistent with Figure 1, PCNR (i.e., withdrawing affection if children do not suppress negative emotions) was expected to arouse resentment, with this additional negative emotion undermining children's capacity to suppress their negative emotions. As a result, PCNR was hypothesized to lead to dysregulation of negative emotions, as mediated by feelings of resentment. In contrast, PCPR was hypothesized to lead children to feel internally compelled to suppress negative emotions. Perhaps, if the negative emotions were too intense, the children would display some dysregulation, but suppression was hypothesized to be the primary result of PCPR.

Finally, we hypothesized that parents' autonomy support with regard to negative emotions would lead to an integrative style of regulating the emotions, mediated by a sense of choice. Autonomy support requires parents to take the children's perspective and legitimize their negative emotions (e.g., Gottman, Katz, & Hooven, 1997; Grolnick, Bridges, & Connell, 1996). At those times that parents believe that, for the child's own sake, it would be better not to express negative emotion, parents would provide a meaningful rationale while showing understanding for the child's inclination to express the emotion. Research by Calkins (1997) supported our reasoning by showing that maternal styles that were affectionate and encouraging without being overly controlling or restrictive were associated with children's effective emotion regulation.

### Parenting Practices and Behavioral Functioning in the Academic Domain

SDT suggests that the three types of motivation also lead to three distinct types of academic functioning. Resentment and amotivation were expected to lead to a lack of investment in school work. Indeed, Assor, Kaplan, et al. (2005) found that amotivation and feelings of anxiety and resentment predicted poor academic engagement in elementary students. Controlled (i.e., introjected) motivation was expected to lead to a rigid focus on those school

achievements expected to yield approval and regard from parents and others. Thus, introjected regulation is likely to promote pressured, grade-focused studying with no interest in learning information that is not directly related to their grade. This type of achievement is related to *performance goals* as defined by achievement goal theorists (e.g., Kaplan & Maehr, 2007). It involves a rigid focus on grades as normative indicators of good performance. Finally, autonomous motivation was expected to lead to engagement that is characterized by curiosity and interest in exploring material regardless of its connection to tests. Studies have related teacher and parent autonomy support to students' autonomous engagement and enjoyment of learning (e.g., Benware & Deci, 1984; Grolnick & Ryan, 1989; Roth et al., 2007).

Consistent with our general predictions concerning the relations of the three parenting approaches to children's motivational experiences and behavioral functioning, we hypothesized that PCNR would lead to feelings of resentment, which would then lead to a lack of academic engagement; that PCPR would lead to feelings of internal compulsion, which would in turn promote grade-focused engagement; and that autonomy support would lead to a sense of choice, which would then lead to interest-focused academic engagement.

Our hypotheses concerning the differential correlates of the three parenting practices were examined in two studies. Both used adolescents' and teachers' reports and were focused on the domains of emotion regulation and academics. In Study 1, we explored the differential associations of PCNR and PCPR to behavioral functioning, as mediated by motivational experiences, whereas in Study 2, we contrasted the relation of PCPR and parental autonomy support to behavioral functioning, also as mediated by motivational experiences.

### Study 1

Study 1 examined the differential relations of PCPR and PCNR to various outcomes. We hypothesized that PCPR would predict a suppressive mode of anger and fear regulation (examined separately), as mediated by feelings of internal compulsion (i.e., introjected regulation), whereas PCNR would predict dysregulation of anger and fear, as mediated by resentment toward parents. We focused specifically on anger and fear regulation because negative emotions are the most common target of emotion regulation efforts and are a central concern in emotion regulation research (John & Gross, 2007). We also hypothesized that PCPR would predict grade-focused academic engagement, as mediated by feelings of internal compulsion, whereas PCNR would predict a lack of engagement in school, as mediated by resentment toward parents. We assessed PCPR and PCNR using adolescents' perceptions of their mothers and fathers and assessed adolescents' academic engagement using teachers' reports.

### Method

#### *Participants and Procedure*

Participants were 169 ninth-grade students (58% girls, 42% boys) and their primary teachers from six classes in two Israeli schools serving middle-class and lower middle-class families. The mean age of the participants was 14.7 years. We focused on 14–15

year olds because research on the development of self-understanding (e.g., Damon & Hart, 1988; Harter, 1998) has indicated that by the age of 15, most adolescents are capable of describing those types of psychological processes assessed in the present research. As was required by the Israeli Ministry of Education, active informed consent was obtained from the adolescents, and passive informed consent was required from parents. The latter procedure entailed parents' receipt of a letter from the researcher providing information about the purposes of the study and its method; parents were asked to complete a form if they did not wish their child to participate in the study. Only 2% of the parents did not allow their children to participate in the study. This research was approved by the Ben-Gurion University institutional review board and by the Israeli Ministry of Education. Parental consent was gained according the guidelines of the Ministry of Education, and all parents of those children included in the study approved their children's participation.

Research assistants with special permission to work with children administered the students' questionnaires when teachers were not present in the classroom. Participants completed the questionnaires in two consecutive sessions, which were separated by 1 hr. In the first session, participants reported on their feelings of internal compulsion and their emotion regulation in the two domains. In the second session, they reported on their perceptions of their mothers' and fathers' use of domain-specific PCPR and PCNR and their feelings toward their parents. Students' responses were made on a 6-point Likert-type scale, ranging from 1 (*not true at all*) to 6 (*very true*). Research assistants administered the teachers' questionnaires and collected them in sealed envelopes 1 week later. Teachers' responses were made on a 5-point Likert-type scale, ranging from 1 (*never*) to 5 (*most of the time*).

### Measures

*Perceptions of positive and negative parental conditional regard.* The scales were adapted from the PCR measure developed by Assor et al. (2004), modified to allow for the distinction between PCPR and PCNR. Conditional regard was assessed for emotion regulation and academic engagement. The emotion regulation domain was applied to both fear and anger, yielding three subscales each for positive and negative PCR and for mothers and fathers. Perceptions of PCPR and PCNR for anger and fear scales included 8 items for mothers and 8 for fathers, with each having 5 items for PCNR and 3 for PCPR. A sample item for PCNR is "If I show my fear, my mother will express less warmth toward me for a while." A sample item for PCPR is "If I am afraid but do not express my fear, my mother will express more love for me."

Construct validity was examined with factor analyses, alpha coefficients, and correlations among subscales. Four factor analyses with varimax rotation were performed: one for father fear items, one for father anger items, one for mother fear items, and one for mother anger items. Results showed that participants clearly distinguished between PCNR and PCPR with respect to both anger and fear. Each analysis revealed the two appropriate factors, with eigenvalues from 2.3 to 4.3, all factor loadings being above .53, and the two factors accounting for more than half the variance in each analysis. Cronbach's alphas ranged from .75 to .86 for anger and from .76 to .93 for fear.

The perceptions of PCPR and PCNR scales for the academic domain included 10 items for mothers and 10 for fathers, with 5 for PCNR and 5 for PCPR. A sample item for PCNR is "If I do poorly in school, my mother will ignore me for a while." A sample for PCPR is "I feel that when I'm studying hard, my mother appreciates me much more than usual." Factor analyses were performed separately for father and mother items with varimax rotation. Participants clearly distinguished between PCNR and PCPR. Two factors were extracted with eigenvalues ranging from 3.5 to 5.6. Every item loaded on the appropriate factor, and the loadings were all unique, above .61, and together accounted for more than 64% of the variance. Cronbach's alphas ranged from .84 to .92. The correlations for PCNR and PCPR ranged from .36 to .62, and are included in Table 1.

For additional construct validity purposes, we conducted a pilot study using adolescents' reports of their perceptions of their mothers' use of PCPR, PCNR, and psychological control. Psychological control was assessed using Barber's (1996) measure, which is an adaptation of Schaefer's (1965) Children's Reports of Parental Behavior Inventory (CRPBI). The findings of the pilot study revealed that although psychological control, PCNR, and PCPR shared some variance, it was possible to distinguish among the three constructs (Assor et al., 2007).

*Introjected regulation (controlled motivation).* This was assessed as feelings of internal compulsion to perform behaviors that were instrumental for receiving conditional regard. The measure was taken from Assor et al. (2004), but the emotion regulation scale was elaborated to have one scale for anger and one for fear. There were 4 items for the academic domain ("Sometimes I feel that my need to study hard controls me and leads me to give up things I really want to do") and 6 items for suppression of anger and fear, 3 for each emotion ("I feel like there is something inside me that, in a way, drives and compels me to suppress my anger and not show it"). Cronbach's alphas in the current sample were .67, .77, and .76 for academics, anger, and fear, respectively.

*Resentment toward parents.* This 3-item scale was based on Assor et al. (2004), but items were stated in the present tense. A sample item is "I often feel resentment toward my mother." The reliability for this measure was .78 and .85 for mothers and fathers, respectively.

*Emotion regulation: Dysregulation and suppressive regulation.* These were adapted from Roth and Assor (2003). The scale for fear regulation has four items for each mode of regulation, whereas the anger scale has three items for the suppressive mode and four for dysregulation. Sample items are "When I'm afraid or feel anxious I can't concentrate on other things I have to do" for dysregulation; and "Usually, I ignore my fears" for suppression. Factor analyses clearly showed one factor for dysregulation and one for suppression within each emotion. Eigenvalues ranged from 2.3 to 3.1; each item loaded appropriately, with high and unique loadings above .60, and more than 59% of the variance accounted for in each emotion. Cronbach's alphas for anger were .68 and .83 for suppression and dysregulation, respectively, and for fear were .68 and .85 for suppression and dysregulation. Correlations are included in Table 1. Construct validation research conducted on the three measures of anger and anxiety regulation provided ample evi-

Table 1  
*Descriptive Statistics and Correlations of the Variables in Study 1*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
Anger regulation											
1. Mothers' PCPR	2.00	1.06	—								
2. Mothers' PCNR	1.46	0.72	.36**	—							
3. Fathers' PCPR	2.08	1.06	.73**	.31**	—						
4. Fathers' PCNR	1.55	0.79	.49**	.65**	.51**	—					
5. Resent mothers	2.92	1.17	.11†	.41**	.03	.31**	—				
6. Resent fathers	2.75	1.27	.07	.22**	.07	.39**	.50**	—			
7. Internal compulsion	2.77	1.15	.25**	.21**	.30**	.12†	.16*	.27**	—		
8. Dysregulation	3.42	1.12	.23**	.30**	.16*	.26**	.28**	.24**	.37**	—	
9. Supp. reg.	2.85	1.04	.29**	.09	.27**	.17*	.03	.08	.35**	.24**	—
Fear regulation											
1. Mothers' PCPR	1.47	0.73	—								
2. Mothers' PCNR	1.21	0.47	.62**	—							
3. Fathers' PCPR	1.68	0.92	.55**	.48**	—						
4. Fathers' PCNR	1.35	0.71	.58**	.66**	.62**	—					
5. Resent mothers	2.92	1.17	.11	.25**	.16*	.16*	—				
6. Resent fathers	2.75	1.27	.12†	.19*	.24**	.33**	.50**	—			
7. Internal compulsion	2.83	1.23	.31**	.21**	.37**	.29**	.14*	.25**	—		
8. Dysregulation	3.13	1.12	.28**	.26**	.28**	.24**	.21**	.22**	.46**	—	
9. Supp. reg.	3.14	0.97	.29**	.16*	.21**	.18*	.15*	.25**	.50**	.22**	—
Academic engagement											
1. Mothers' PCPR	2.45	1.25	—								
2. Mothers' PCNR	1.38	0.64	.53**	—							
3. Fathers' PCPR	2.57	1.41	.65**	.33**	—						
4. Fathers' PCNR	1.38	0.67	.46**	.59**	.52**	—					
5. Resent mothers	2.92	1.17	.30**	.33**	.31**	.30**	—				
6. Resent fathers	2.75	1.27	.17*	.15*	.30**	.35**	.50**	—			
7. Internal compulsion	3.76	1.03	.25**	.12 <sup>+</sup>	.27**	.17*	.27**	.26**	—		
8. Lack of engagement	2.53	1.2	.02	.17*	.05	.16*	.19*	.17*	.11	—	
9. Grade-focused	2.25	0.75	.16*	.10	.20**	.12 <sup>+</sup>	.17*	.15*	.19*	.09	—

Note. PCPR = parental conditional positive regard; PCNR = parental conditional negative regard; Supp. reg. = suppressive regulation.

†  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

dence for their discriminant, convergent, and construct validity (Eilott et al., 2006).

*Teachers' reports of students' modes of academic engagement.* These scales were modified from Assor, Kaplan, et al. (2005). Three items assess grade-focused engagement. A sample item is "This child often argues for better grades without any attempt to benefit from his/her mistakes." Two items assessed disengagement. A sample item is "This child does not invest anything in studying." Factor analyses with varimax rotation revealed separate factors for each mode of academic engagement, and eigenvalues ranged from 2.0 to 3.2, all factor loadings were above .59, and the two factors accounted for more than 60% of the variance. Cronbach's alphas were .62 and .85 for grade-focused engagement and disengagement, respectively. Because participants were nested within six classrooms and two schools, it was important to test for class and school effects. To do so, we computed the intraclass correlation (ICC) using hierarchical linear modeling (HLM), Version 6.02. The ICC was not significant for either measure rated by teachers.

*Social desirability.* We used the 15-item Crowne and Marlowe (1964) Social Desirability Scale to control for students' tendency to not report honestly. A sample item is "No matter who I'm talking to, I am always a good listener." The reliability for this measure was .82.

## Results

### Plan of Analysis

First, we computed correlations among all study variables. Second, we used structural equation modeling (SEM) with latent variables to examine simultaneously the hypothesized relations of PCNR and PCPR to adolescents' motivation, affective experience, and behavioral enactment. Separate SEM analyses were conducted using adolescents' perceptions of each parent in each domain (viz., anger control, fear control, academics), for a total of six analyses. Third, we compared the relative fit of partial mediation and full mediation models to test for mediation.

### Preliminary Analyses

Table 1 presents descriptive statistics and correlations among the study variables in each domain (gender differences appear in the Appendix). Social desirability (not presented in the table) correlated with resentment toward parents ( $r = -.29, p < .01$  for mothers;  $r = -.24, p < .01$  for fathers), so we removed its variance from resentment. As expected, correlations between PCPR and suppressive regulation of emotions, grade-focused academic engagement, and internal compulsion were positive and of higher magnitude than those correlations with PCNR. In 13 of the

18 cases, correlations between PCNR and dysregulation of emotions, academic disengagement, and resentment toward parents were of higher magnitude than those correlations with PCPR. Those other 5 correlations were either equal or of slightly lower magnitude. In all, only 9 of the 24 correlations between PCPR and PCNR were significantly different (on the basis of  $r$  to  $z$  transformations). However, the critical test of our hypotheses regarding the different outcomes of the two parental practices is the examination of the PCPR and PCNR outcomes simultaneously with SEM.

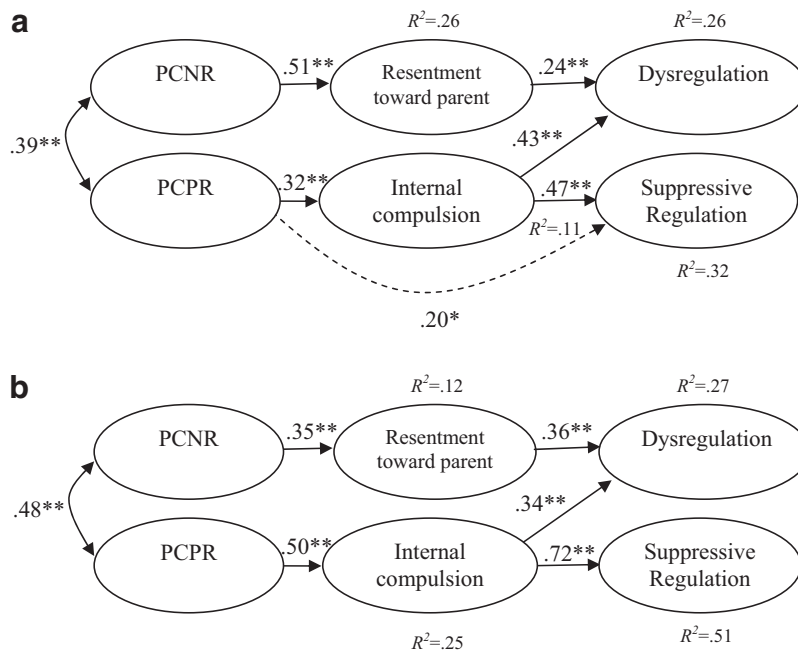
*Primary Analyses*

We used AMOS 5.0 (Arbuckle & Wothke, 2003) with maximum likelihood estimation to test simultaneously the hypotheses that PCPR would predict suppressive emotion regulation and grade-focused academic engagement, as mediated by feelings of internal compulsion, whereas PCNR would predict dysregulation of emotions and academic disengagement, as mediated by resentment toward parents. We created latent constructs using items as indicators in all analyses. Model fit to the data was assessed using the ratio of chi square to degrees of freedom ( $\chi^2/df$ ), incremental fit index (IFI; Bollen, 1989), comparative fit index (CFI; Bentler, 1990), and root-mean-square error of approximation (RMSEA; Browne and Cudeck, 1993). Acceptable fit is indicated by a chi square/degrees of freedom ratio less than 2 (Carmines & McIver, 1981), IFI and CFI equal to or greater than .90, and RMSEA less than .08 (Browne & Cudeck, 1993; Hoyle, 1995).

*Emotion regulation.* Results are presented in Figures 2 and 3 for anger and fear, respectively. In each figure, results for mothers

appear in the top panel and results for fathers appear in the bottom panel. As shown, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. Although not hypothesized, a strong correlation between internal compulsion and dysregulation of emotions emerged (see Table 1) so we included this path in the SEM analyses. Thus, dysregulation of emotions was predicted by both internal compulsion and resentment toward parents. The fit indices were adequate. Specifically, for the model examining conditional regard from mothers in the anger regulation domain,  $\chi^2(183, N = 169) = 307.5, p < .01; \chi^2/df = 1.68; CFI = .90; IFI = .91; RMSEA = .06$ . For the model examining conditional regard from fathers in the anger regulation domain,  $\chi^2(183, N = 169) = 287.7, p < .01; \chi^2/df = 1.57; CFI = .91; IFI = .91; RMSEA = .06$ . For the model examining conditional regard from mothers in the fear regulation domain,  $\chi^2(203, N = 169) = 368.1, p < .01; \chi^2/df = 1.81; CFI = .90; IFI = .90; RMSEA = .07$ . For the model examining conditional regard from fathers in the fear regulation domain,  $\chi^2(203, N = 169) = 350.0, p < .01; \chi^2/df = 1.72; CFI = .91; IFI = .92; RMSEA = .06$ .

Next, we tested whether the indirect paths were significant using Sobel's (1982) test. In the anger regulation domain, the indirect path from PCPR to suppressive regulation through internal compulsion was significant for both mothers ( $z = 2.63, p < .01$ ) and fathers ( $z = 3.5, p < .01$ ), as was the indirect path from PCPR to dysregulation through internal compulsion for both mothers ( $z = 2.57, p < .01$ ) and fathers ( $z = 2.69, p < .01$ ). Likewise, the indirect path from PCNR to dysregulation through resentment toward parents was significant for both mothers ( $z = 2.39, p <$



*Figure 2.* Panel a: Perceptions of mothers' conditional positive and negative regard as predictors of children's anger regulation modes. Panel b: Perceptions of fathers' conditional positive and negative regard as predictors of children's anger regulation modes. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCNR = parental conditional negative regard; PCPR = parental conditional positive regard. \*  $p < .05$ . \*\*  $p < .01$ .

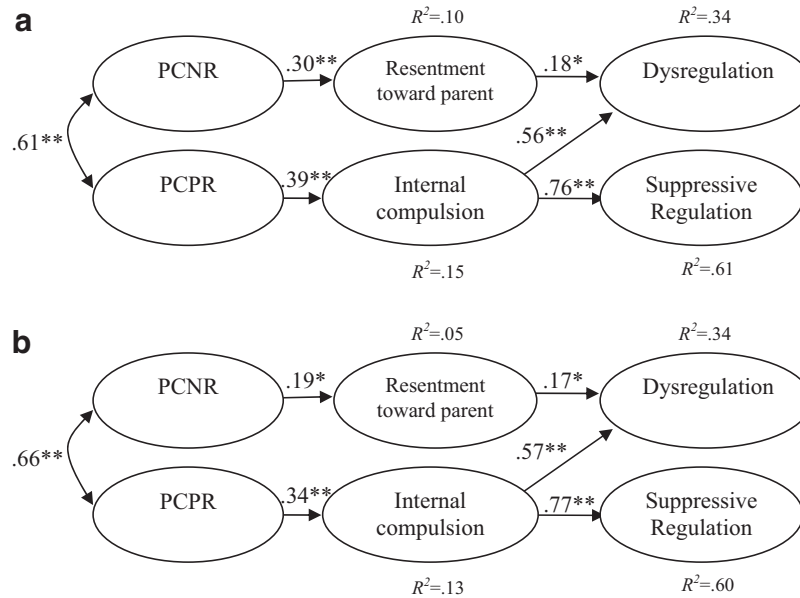


Figure 3. Panel a. Perceptions of mothers' conditional positive and negative regard as predictors of children's fear regulation modes. Panel b. Perceptions of fathers' conditional positive and negative regard as predictors of children's fear regulation modes. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCNR = parental conditional negative regard; PCPR = parental conditional positive regard. \*  $p < .05$ . \*\*  $p < .01$ .

.05) and fathers ( $z = 2.68, p < .01$ ). In the fear regulation domain, the indirect path from PCPR to suppressive regulation through internal compulsion was significant for both mothers ( $z = 3.45, p < .01$ ) and fathers ( $z = 3.31, p < .01$ ), as was the indirect path from PCPR to dysregulation through internal compulsion for both mothers ( $z = 3.30, p < .01$ ) and fathers ( $z = 3.17, p < .01$ ). Likewise, the indirect path from PCNR to dysregulation through resentment toward parents was significant for both mothers ( $z = 2.04, p < .05$ ) and fathers ( $z = 1.99, p < .05$ ).

**Academic engagement.** Results for mothers and fathers appear in top and bottom panels of Figure 4, respectively. As shown, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. The fit indices were adequate. Specifically, for the model examining conditional regard from mothers,  $\chi^2(204, N = 169) = 289.7, p < .01; \chi^2/df = 1.42$ ; CFI = .94; IFI = .94; RMSEA = .05. For the model examining conditional regard from fathers,  $\chi^2(204, N = 169) = 290.6, p < .01; \chi^2/df = 1.43$ ; CFI = .94; IFI = .95; RMSEA = .05.

Next, we tested whether the indirect paths were significant using Sobel's (1982) test. The indirect path from PCPR to grade-focused engagement through internal compulsion was significant for both mothers ( $z = 2.07, p < .05$ ) and fathers ( $z = 2.27, p < .05$ ), as was the indirect path from PCNR to disengagement through resentment toward parents for both mothers ( $z = 2.06, p < .05$ ) and fathers ( $z = 2.18, p < .05$ ).

**Comparing the relative fit of partial- and full-mediation models.** To compare the goodness-of-fit of nested models, we added each direct path from PCPR and PCNR to the outcomes separately and compared the model fit with the fit of the model with only indirect paths. Results suggested that in only one case (i.e., perceptions of mothers' PCPR to suppressive regulation of anger) a direct path

significantly improved model fit,  $\chi^2(1, N = 169) = 3.97, p < .05$ , which is depicted as a dashed line in Figure 2a. Full-mediation models were preferred in all other cases.

**Gender of the respondent.** Finally, to ascertain whether gender of the respondent affected the relations, we conducted two sets of regression analyses in which each of the three dependent variables was regressed onto either PCPR or PCNR and then onto gender and a term reflecting the interaction of the conditional regard variable and gender. The gender interaction was not significant in any of the six equations, thus suggesting that the relations of PCNR and PCPR to the variables indicative of introjection, resentment, and behavior were not moderated by gender of the child.

### Summary of Results

Consistent with the hypotheses, results show that PCPR predicted feelings of internal compulsion (an indicator of introjection), which in turn predicted suppression of negative emotions and grade-focused engagement, while PCNR predicted resentment toward parents, which in turn undermined the capacity to regulate emotion and school engagement. When SEM was used to examine the consequences of PCNR and PCPR simultaneously, a good fit was found for the hypothesized models. Of note, there was also a strong relation between PCPR and dysregulation of anger and fear, which appears to operate through introjection. The latter finding suggests that the parents' use of conditional positive regard to promote their adolescents' tendency to suppress negative emotions can, to some extent, lead to the undesirable consequence of adolescents failing to develop the capacity to regulate negative emotions. Overall, in the first study, PCPR (as well as PCNR) had negative consequences for types of motivation and associated



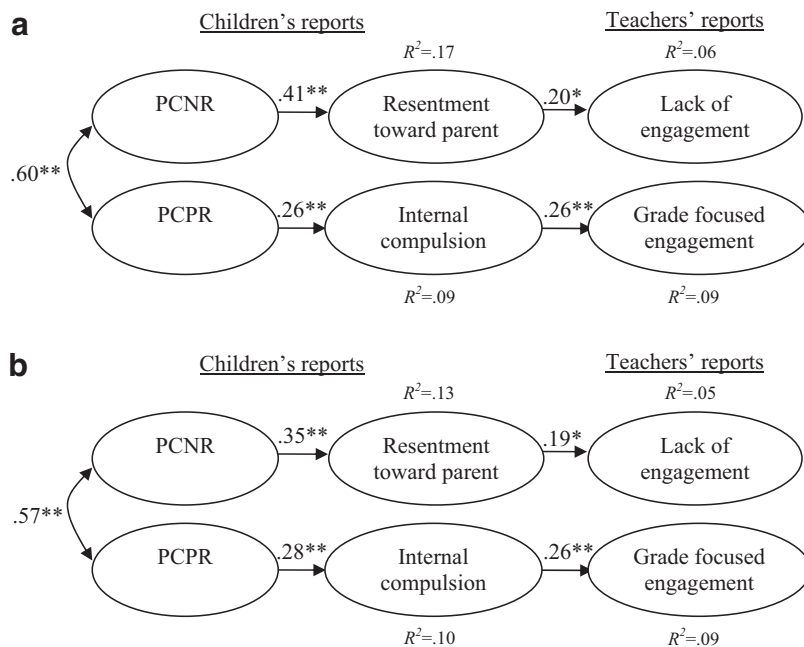


Figure 4. Panel a. Perceptions of mothers' conditional positive and negative regard as predictors of children's academic engagement. Panel b. Perceptions of fathers' conditional positive and negative regard as predictors of children's modes of academic engagement. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCNR = parental conditional negative regard; PCPR = parental conditional positive regard. \*  $p < .05$ . \*\*  $p < .01$ .

feelings and behavior with respect to emotion regulation and school engagement, although the overall effects of PCPR were somewhat less negative than those for PCNR. Thus, we now move on to a direct comparison of PCPR and another parenting practice, parental autonomy support, which is expected to be superior.

### Study 2

In Study 2, we examined additional issues related to PCPR and tested whether parental autonomy support would predict enactment of parents' desired behaviors (viz., regulation of negative emotions, academic engagement) without the emotional costs associated with PCR (Assor et al., 2004). In parental autonomy support, parents attempt to promote internalization of desired behaviors by explaining and demonstrating the value of those behaviors to adolescents and by respecting adolescents' perspectives, including their negative feelings and disagreements about the behaviors (Assor, Cohen-Melayev, et al., 2005; Assor, Kaplan, & Roth, 2002; Deci & Ryan, 2000; Grolnick et al., 1997; Roth, 2008). Here, we examined the consequences of PCPR and autonomy support in the same domains as in Study 1. We hypothesized that while PCPR would again predict suppressive emotion regulation and grade-focused school engagement through introjected regulation, parental autonomy support would predict integrative regulation of anger and fear and interest-focused engagement through identified or integrated motivation (as indicated by sense of choice). We also examined dysregulation of anger and fear as possible correlates of PCPR because of the fairly strong relations for these variables in Study 1. As in that study, parental practices, internalization, and styles of emotion regulation were measured by

adolescents' reports, and school engagement was measured by teachers' reports.

### Method

#### Participants and Procedure

Participants were 156 ninth-grade students (54% girls, 46% boys) and their primary teachers from six classes in two Israeli schools serving middle-class and lower middle-class families. The mean age of the participants was 14.6 years. As was described in Study 1, active informed consent was obtained from the adolescents, and passive informed consent was required from parents. Less than 2% of the parents did not allow their children to participate in the study. The procedure used in Study 2 was similar to the procedure used in Study 1. Participants completed the questionnaires in two consecutive sessions, which were separated by 1 hr. In the first session, participants reported on their feelings of internal compulsion and choice and their emotion regulation in the two domains. In the second session, they reported on their perceptions of their mothers' and fathers' use of domain-specific PCPR and autonomy support. Students' responses were made on a 6-point Likert-type scale, ranging from 1 (*not true at all*) to 6 (*very true*). Teachers' responses were made on a 5-point Likert-type scale, ranging from 1 (*never*) to 5 (*most of the time*).

#### Measures

Adolescents' perceptions of PCPR, internal compulsion, and modes of emotion regulation; teachers' reports of students' grade-

focused academic engagement; and social desirability were assessed as they were in Study 1. Factor analyses, alphas, and subscale correlations were comparable to those in Study 1. Additional measures were the following:

*Perceptions of parental autonomy support for anger and fear regulation.* This scale was modified from those described by Roth and Assor (2003) and Grolnick, Ryan, and Deci (1991). Participants first read a stem describing a brief account of a parent–child disagreement. Four stems were used, which resulted from crossing the contents of the regulation of anger and fear with perceptions of mothers and fathers. A sample stem is “When I show my fear or anxiety, but my mother thinks I should cover it up and not show it, she . . . .” Each stem was followed by items that involved parents’ taking the child’s perspective (three items; e.g., “She gives me the impression that she understands me”) and that involved parents’ providing a rationale (three items; e.g., “She explains to me why she thinks so”), for a total of six items per stem.

Four factor analyses with varimax rotation (one for each disagreement) were done, and one factor was extracted in each. For anger, the factor accounted for 70% of the variance in mother items and 79% in father items. For fear, the factor accounted for 69% of the variance in mother items and 75% in father items. Cronbach’s alphas were all above .88. Correlations between mother and father scales were .34 for anger and .61 for fear. The correlation between anger and autonomy support for fear was .72 for mothers and .74 for fathers.<sup>1</sup> Descriptive statistics for anger and fear are presented in Table 2. Gender differences are presented in the appendix.

*Perception of parental autonomy support for academics.* The autonomy support measure for engagement had nine items. Six were identical to the items used for fear and anger, with just the stems changed. There was one disagreement stem for each parent, (e.g., “When I think that my investment in school is adequate, but my father thinks it is not, he . . . .”), with three items each for taking the child’s perspective and providing a rationale. The final three items assessed parents’ demonstration of the intrinsic value of academic engagement (“My mom enjoys studying and expanding her knowledge”). Items about fathers and mothers were presented separately, and factor analyses with varimax rotation were done separately for the two parents, with all nine items in each. Items for taking the child’s perspective and providing rationale loaded on the same factor, and items for intrinsic value demonstration loaded on separate factors, with eigenvalues that ranged from 2.40 to 3.90, all factor loadings above .55, and the factors accounting for at least 69% of the variance in each analysis. Cronbach’s alphas were .84 and .90 for mothers’ and fathers’ intrinsic value demonstration, respectively, and .76 and .86 for mothers’ and fathers’ taking the child’s perspective or providing rationale, respectively. The correlations between the two subscales were .38 for mothers and .34 for fathers. Descriptive statistics for academics are presented in Table 3. Gender differences are presented in the Appendix.

*Identification and integration.* We used the Assor et al. (2004) measure of “feeling choice” about performance of the behaviors as the indicator of autonomous regulation. It has three items for each domain. A sample item is “I feel a real sense of choice about my tendency to suppress my anger and not show it.” Alphas were .77, .78, and .74 for anger, fear, and academics, respectively.

*Emotion regulation: Integrative regulation.* These scales were modified from Roth, Assor, and Eliot (2004) and consists of four items, for example, “I seriously examined my fears in order to understand their sources.” We performed factor analyses with varimax rotation separately for fear and anger, using the items for dysregulation, suppression, and integrative regulation. Three factors emerged for each emotion, with eigenvalues ranging from 2.30 to 3.30 and all items loading appropriately above .59. At least 61% of the variance was accounted for by the factors. Cronbach’s alphas for anger were .76, .73, and .85 for dysregulated, suppressive, and integrative modes, respectively, and for fear were .77, .73, and .76.

*Teachers’ reports of students’ interest-focused academic engagement.* We developed a four-item measure for teachers’ reports of students’ interest-focused engagement. A sample item is “This student shows interest, enjoyment, and curiosity in studying.” A factor analysis with varimax rotation that included the new items assessing interest-focused engagement and the items assessing grade-focused engagement (which were the ones used in Study 1) revealed the expected two factors with eigenvalues ranging from 1.60 to 3.20. Every item loaded on the appropriate factor with loadings above .57. The factors extracted accounted for 68% of the variance. Cronbach’s alphas were .65, for controlled engagement and .90 for autonomous engagement. The correlations are presented in Table 3. As had been done in Study 1, we computed the interclass correlation coefficient for the two measures (using HLM, Version 6.02) and found nonsignificant values.

## Results

### Plan of Analysis

The same plan of analysis used in Study 1 was used in Study 2.

### Preliminary Analyses

Table 2 and Table 3 present descriptive statistics and correlations among the study variables in the emotion control and academic domains, respectively (gender differences appear in the Appendix). Social desirability (not presented in the tables) was not significantly correlated with any variable. As shown in Table 2, perceptions of PCPR in the emotion control domain correlated positively with feelings of internal compulsion, dysregulation, and suppressive regulation of anger and fear, whereas the two autonomy support subscales correlated positively with both feelings of choice and integrative regulation of anger and fear. As shown in Table 3, perceptions of PCPR in the academic domain correlated positively with both feelings of internal compulsion and teachers’ reports of grade-focused engagement and negatively with teachers’ reports of interest-focused engagement, whereas the two autonomy

<sup>1</sup> The high correlations between perceptions of parents’ autonomy support for anger and fear regulation were somewhat surprising. Thus, we conducted two additional factor analyses, one that included all mother items for anger and fear and one that included all father items for anger and fear. Anger and fear items formed separate factors for mothers but not for fathers. Because we found a clear distinction between PCPR for anger and fear and because the structural analyses were conducted for PCPR and parental autonomy support simultaneously, we treated parental autonomy support for anger and fear as distinct, even for fathers.

Table 2  
Descriptive Statistics and Correlations of the Variables in Study 2: Emotion Control Domain

Variable	M	SD	1	2	3	4	5	6	7	8	9
Anger regulation											
1. Mothers' PCPR	2.24	1.08	—								
2. Mothers' PAS	4.88	1.28	-.05	—							
3. Fathers' PCPR	2.08	1.06	.54**	-.04	—						
4. Fathers' PAS	4.55	1.40	-.12 <sup>†</sup>	.34**	.00	—					
5. Internal compulsion	2.77	1.16	.30**	-.03	.36**	-.06	—				
6. Choice	3.97	1.31	.00	.29**	.11	.31**	.10	—			
7. Dysregulation	3.44	1.12	.15*	-.07	.17*	-.09	.31*	.04	—		
8. Supp. reg.	2.85	1.04	.23**	.03	.28**	-.10	.49**	.04	.18**	—	
9. Integr. reg.	3.56	1.29	.04	.32**	.00	.18*	.11	.36**	.10	.20**	—
Fear regulation											
1. Mothers' PCPR	1.45	.80	—								
2. Mothers' PAS	4.44	1.23	.03	—							
3. Fathers' PCPR	1.69	0.98	.67**	-.05	—						
4. Fathers' PAS	4.51	1.38	-.04	.61**	-.11 <sup>†</sup>	—					
5. Internal compulsion	2.83	1.23	.30**	.05	.48**	-.06	—				
6. Choice	3.77	1.37	.03	.43**	.00	.28**	.12 <sup>†</sup>	—			
7. Dysregulation	2.95	1.08	.14*	.05	.31**	-.03	.44**	.08	—		
8. Supp. reg.	3.11	1.07	.37**	.11 <sup>†</sup>	.39**	.03	.54**	.11 <sup>†</sup>	.23**	—	
9. Integr. reg.	3.76	1.11	.12 <sup>†</sup>	.34**	.13 <sup>†</sup>	.30**	.12 <sup>†</sup>	.34**	.22**	.26**	—

Note. PCPR = parental conditional positive regard; PAS = parental autonomy support; Supp. reg. = suppressive regulation; Integr. reg. = integrative regulation.  
<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

support subscales correlated positively with both feelings of choice and teachers' reports of interest-focused engagement.

Primary Analyses

We used SEM to test simultaneously the hypotheses that PCPR would predict suppressive emotion regulation and grade-focused academic, as mediated by feelings of internal compulsion, whereas autonomy support would predict integrative emotion regulation and interest-focused engagement, as mediated by feelings of choice. We created latent constructs using items as indicators with one exception. In the academic domain, the two subscales of parental autonomy support (viz., perspective-taking/rationale and intrinsic value demonstration) were used as indicators of the latent construct labeled *autonomy support*.

*Emotion regulation.* Results are presented in Figures 5 and 6 for anger and fear, respectively. In each figure, results for mothers appear in the top panel and results for fathers appear in the bottom panel. As shown, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. As was found in Study 1, internal compulsion predicted both suppressive regulation and dysregulation of emotions (see Table 2). The fit indices were adequate. Specifically, for the model examining conditional regard from mothers in the anger regulation domain,  $\chi^2(318, N = 156) = 450.98, p < .01; \chi^2/df = 1.42; CFI = .94; IFI = .94; RMSEA = .05$ . For the model examining conditional regard from fathers in the anger regulation domain,  $\chi^2(318, N = 156) = 551.9, p < .01; \chi^2/df = 1.73; CFI = .90; IFI = .91; RMSEA = .06$ . For the model examining conditional regard from

Table 3  
Descriptive Statistics and Correlations of the Variables in Study 2: Academic Domain

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Mothers' PCPR	2.52	1.28	—									
2. Mothers' PAS: IVD	4.89	0.99	-.17*	—								
3. Mothers' PAS: PT&R	4.40	1.05	-.23**	.38**	—							
4. Fathers' PCPR	2.64	1.36	.72**	-.05	-.06	—						
5. Fathers' PAS: IVD	4.73	1.18	-.01	.24**	.11 <sup>†</sup>	.04	—					
6. Fathers' PAS: PT&R	4.32	1.22	-.28**	.19*	.43**	-.22**	.34**	—				
7. Internal compulsion	3.75	1.01	.26**	.00	.06	.31**	.02	-.02	—			
8. Choice	3.90	1.20	-.09	.20**	.16*	-.11 <sup>†</sup>	.22**	.16*	-.05	—		
9. Grade-focused engagement	2.23	0.77	.18*	-.01	.03	.15*	-.07	.08	.21**	-.08	—	
10. Interest-focused engagement	3.44	1.07	-.14*	.19*	.17*	-.11 <sup>†</sup>	.27**	.17*	-.17*	.20**	-.29**	—

Note. PCPR = parental conditional positive regard; PAS = parental autonomy support; IVD = intrinsic value demonstration; PT&R = perspective taking and providing rationale.  
<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

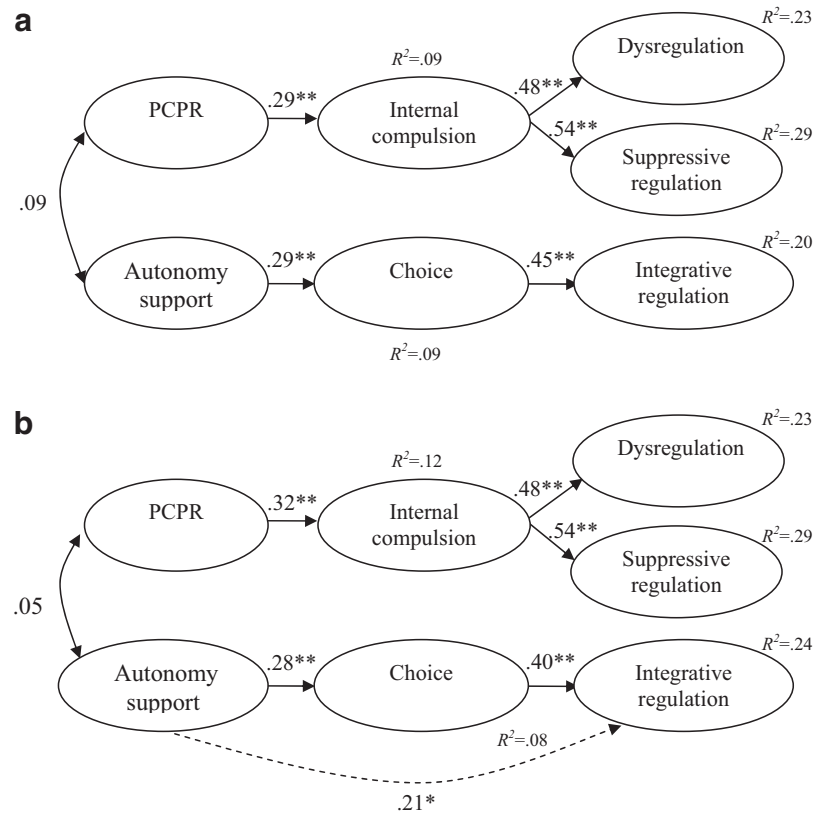


Figure 5. Panel a. Perceptions of mothers' conditional positive regard and parental autonomy support as predictors of children's anger regulation modes. Panel b. Perceptions of fathers' conditional positive regard and parental autonomy support as predictors of children's anger regulation modes. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCPR = parental conditional positive regard. \*  $p < .05$ . \*\*  $p < .01$ .

mothers in the fear regulation domain,  $\chi^2(318, N = 156) = 524.3$ ,  $p < .01$ ;  $\chi^2/df = 1.65$ ; CFI = .90; IFI = .90; RMSEA = .06. For the model examining conditional regard from fathers in the fear regulation domain,  $\chi^2(318, N = 156) = 481.57$ ,  $p < .01$ ;  $\chi^2/df = 1.51$ ; CFI = .92; IFI = .92; RMSEA = .05.

Next, we tested whether the indirect paths were significant using Sobel's (1982) test. In the anger regulation domain, the indirect path from PCPR to suppressive regulation through internal compulsion was significant for both mothers ( $z = 2.44$ ,  $p < .05$ ) and fathers ( $z = 2.03$ ,  $p < .05$ ), as was the indirect path from PCPR to dysregulation through internal compulsion for both mothers ( $z = 2.43$ ,  $p < .05$ ) and fathers ( $z = 1.99$ ,  $p < .01$ ). Likewise, the indirect path from autonomy support to integrative regulation through feelings of choice was significant for both mothers ( $z = 2.35$ ,  $p < .05$ ) and fathers ( $z = 2.44$ ,  $p < .05$ ). In the fear domain, the indirect path from PCPR to suppressive regulation through internal compulsion was significant for both mothers ( $z = 3.20$ ,  $p < .01$ ) and fathers ( $z = 3.11$ ,  $p < .01$ ), as was the indirect path from PCPR to dysregulation through internal compulsion for both mothers ( $z = 3.08$ ,  $p < .01$ ) and fathers ( $z = 3.01$ ,  $p < .01$ ). Likewise, the indirect path from autonomy support to integrative regulation through feelings of choice was significant for both mothers ( $z = 2.05$ ,  $p < .05$ ) and fathers ( $z = 2.54$ ,  $p < .05$ ).

**Academic engagement.** Results for mothers and fathers appear in the top and bottom panels of Figure 7, respectively. As shown, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. Although not hypothesized, strong correlations of PCPR and internal compulsion with interest-focused engagement emerged (see Table 3) so we included these paths in the SEM analyses. The fit indices were adequate. Specifically, for the model examining conditional regard from mothers,  $\chi^2(203, N = 156) = 295$ ,  $p < .01$ ;  $\chi^2/df = 1.45$ ; CFI = .92; IFI = .92; RMSEA = .05. For the model examining conditional regard from fathers,  $\chi^2(203, N = 156) = 354$ ,  $p < .01$ ;  $\chi^2/df = 1.75$ ; CFI = .90; IFI = .90; RMSEA = .07.

Next, we tested whether the indirect paths were significant using Sobel's (1982) test. The indirect path from PCPR to grade-focused engagement through internal compulsion was significant for both mothers ( $z = 2.00$ ,  $p < .05$ ) and fathers ( $z = 2.06$ ,  $p < .05$ ), as was the indirect path from autonomy support to interest-focused engagement through feelings of choice for both mothers ( $z = 1.99$ ,  $p < .05$ ) and fathers ( $z = 1.98$ ,  $p < .05$ ).

**Comparing the relative fit of partial- and full-mediation models.** As in Study 1, we added each direct path from PCPR and autonomy support to the outcomes separately and compared the model fit with the fit of the model with only indirect paths. Results

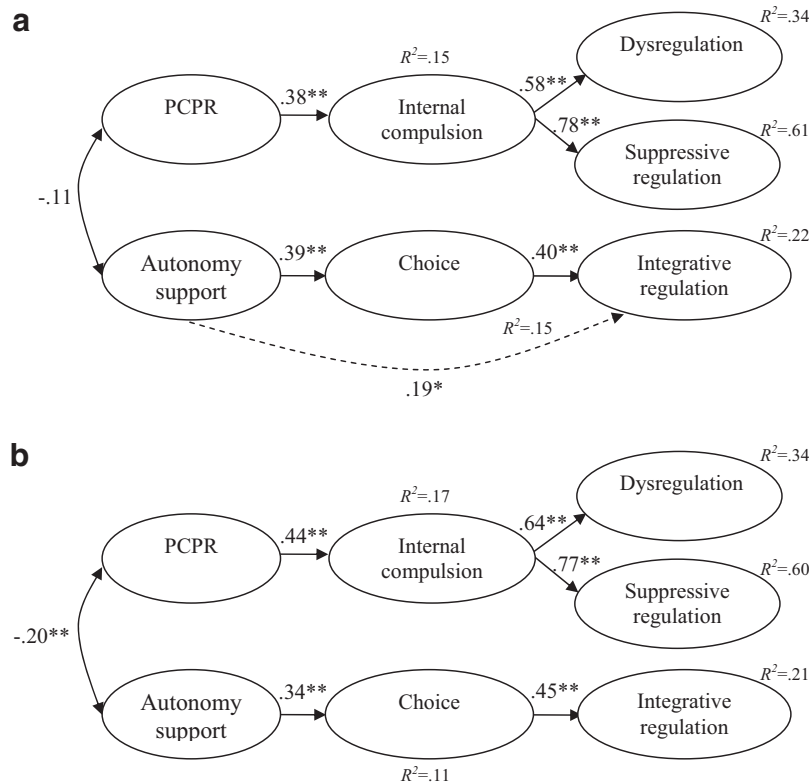


Figure 6. Panel a. Perceptions of mothers' conditional positive regard and parental autonomy support as predictors of children's fear regulation modes. Panel b. Perceptions of fathers' conditional positive regard and parental autonomy support as predictors of children's fear regulation modes. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCPR = parental conditional positive regard. \*  $p < .05$ . \*\*  $p < .01$ .

suggested that in two cases a direct path significantly improved model fit. These direct paths were from (a) perceptions of mothers' autonomy support to integrative regulation of fear,  $\chi^2(1, N = 156) = 7.20, p < .05$ , and (b) perceptions of fathers' autonomy support to integrative regulation of anger,  $\chi^2(1, N = 156) = 7.01, p < .01$ , and are depicted as dashed lines in Figure 6a and Figure 5b, respectively. Full-mediation models were preferred in all other cases.

*Gender of the respondent.* Finally, as in Study 1, we examined whether participant gender moderated any of the hypothesized relations. The interaction term was nonsignificant in all of the equations, suggesting that the relations of PCPR and autonomy support to the outcomes were not moderated by participant gender.

**Summary of Results**

The findings of Study 2 provide further evidence for the SDT perspective on parenting. As in Study 1, PCPR predicted feelings of internal compulsion, which then predicted constricted forms of behavior (viz., suppressive regulation of negative emotions and grade-focused academic engagement). In contrast, parental autonomy support predicted feelings of choice, which then predicted more explorative and optimal forms of behavior (viz., integrative regulation of negative emotions and interest-focused academic engagement). Thus, use of autonomy support as a parenting prac-

tice provides a good alternative to PCR for socialization of adolescents.

**General Discussion**

The two reported studies revealed three important findings. First, adolescents' perceptions of PCPR were associated with introjected regulation and constricted functioning in two domains (viz., emotion control and academics). In the academic domain, adolescents' perceptions of PCPR predicted behavioral enactment, but the behavior was performed rigidly and with feelings of internal compulsion. A similar pattern emerged in the emotion control domain, although in this domain PCPR was less effective because it also led to dysregulation of emotions. Second, adolescents' perceptions of PCNR were associated with resentment toward parents, dysregulation of emotions, and academic disengagement. Thus, use of PCNR seems to be ineffective in promoting adolescents' enactment of parents' desired behaviors. Third, adolescents' perceptions of autonomy support were associated with more optimal outcomes, including feelings of choice, integrative regulation of emotions, and interest-focused academic engagement.

The findings of Assor et al. (2004) suggested that PCR has associated emotional costs for young adults, including feelings of internal compulsion, suppression of negative emotions, and resent-

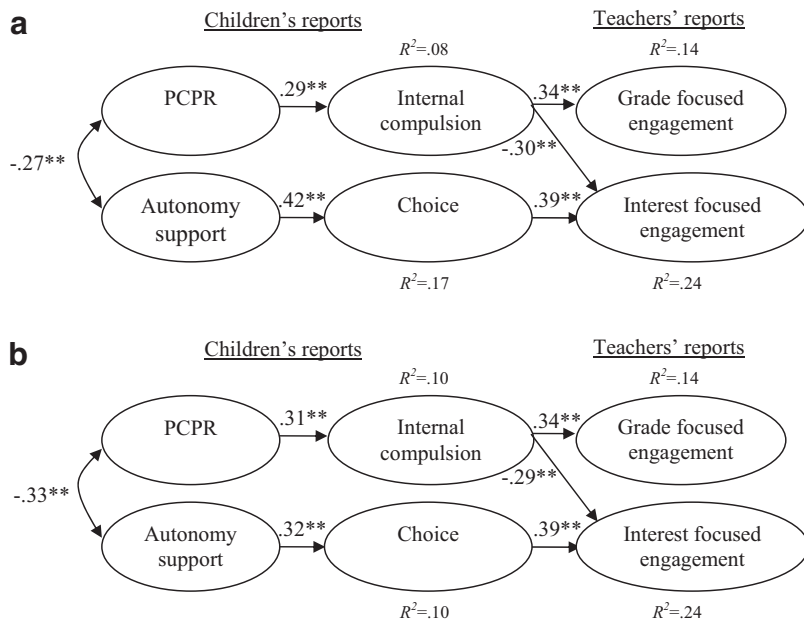


Figure 7. Panel a. Perceptions of mothers' conditional positive regard and parental autonomy support as predictors of children's academic engagement. Panel b. Perceptions of fathers' conditional positive regard and parental autonomy support as predictors of children's modes of academic engagement. The indicators are omitted for clarity and presented in the Appendix.  $R^2$  = value of the multiple  $R^2$  of each endogenous variable; PCPR = parental conditional positive regard. \*\*  $p < .01$ .

ment toward parents. The current studies extended previous research by distinguishing between PCPR and PCNR and by revealing the unique negative consequences associated with each. PCPR involves parents' providing more attention and affection when their children enact desired behaviors and was related to feelings of internal compulsion and suppression of negative emotions. PCNR involves parents' withdrawal of love when their children do not meet parental expectations and was related to resentment toward parents. Furthermore, Assor et al. did not find an association between PCR and academic engagement. However, the present research found associations between (a) PCPR and grade-focused engagement and between (b) PCNR and disengagement, perhaps because we focused on the quality, rather than the quantity, of academic engagement.

These results support and extend past research. The link between PCNR and resentment toward parents confirms Chapman and Zahn-Waxler's (1982) finding that love withdrawal is related to avoidance of parents. It is interesting, though, that earlier studies and speculations indicated that love withdrawal would yield desired behaviors, accompanied by emotional costs, because the present research suggests that PCPR, rather than PCNR (i.e., love withdrawal), leads to enactment of desired behaviors. Perhaps, in those earlier studies, PCPR was used in tandem with love withdrawal, even though it was not recognized by the researchers.

Some people consider PCPR an effective socializing strategy because it yields desired behaviors. Surely, it would be preferable to PCNR if the two types of PCR could be separated in practice, but it still has negative consequences. It prompts feelings of internal compulsion, which is linked to unstable self-esteem (Kernis & Paradise, 2002); fleeting satisfaction after success; and

shame and guilt after failure. Presumably, it was PCPR that yielded those negative outcomes found in Assor et al. (2004). Further, PCPR predicted dysregulation and suppressive regulation of negative emotions, and there is ample evidence that suppression is a problematic emotion-regulation strategy (e.g., Gross & John, 2003).

Because we expected behavior prompted by PCPR to have negative consequences, we examined an alternative parenting strategy (viz., autonomy support) to test whether behavioral enactment could be prompted without negative affective costs. There were clear advantages for parental autonomy support relative to PCPR. With autonomy support, internalization was fuller, leading to identification with the value of the behaviors and a sense of choice in enacting them. The regulation of negative emotions involved exploring their source rather than suppressing them, and the learning was out of interest and was less constricted by concern with grades.

The results for parental autonomy support confirm previous findings that parents who are affectionate and encouraging without being overly controlling promote adolescents' effective emotion regulation (Calkins, 1997; Calkins & Johnson, 1998; Grolnick et al., 1996). Similarly, the findings in the academic domain are consistent with previous studies indicating that parental autonomy support predicts explorative, interest-focused engagement, whereas PCPR is related to nonautonomous, rigid engagement (Assor, Kaplan, et al., 2005; Assor et al., 2004; Grolnick & Ryan, 1989; Vansteenkiste, Zhou, Lens, & Soenens, 2005). In short, the present findings regarding PCPR and PCNR suggest that the controlling parental practice of conditional regard does not promote high quality behavior in adolescents.

The results for PCNR are of special interest. It is well documented that power assertion (one of the most studied techniques associated with the construct of control) results in rejection of socialization attempts (Hoffman, 1960). The current results provide the first indication that PCNR, which when compared with power-assertion might be considered a less severe form of control, predicts resentment toward parents and amotivation. That is, like power assertion, using PCNR does not predict behavioral enactment according to parental expectations, but resentment toward parents, amotivation toward academics, and dysregulation of anger and fear. It is interesting to note that Hoffman (1970) speculated that love withdrawal might be even worse than other, apparently harsher punishments. He wrote, "Although it poses no immediate physical or material threat to the child . . . it may be more devastating emotionally than power-assertion because it poses the ultimate threat of abandonment or separation."

Unexpectedly PCPR and internal compulsion also contributed to dysregulation of anger and fear. It would be useful for future research to investigate more fully when and how suppression-oriented PCPR leads to suppression versus dysregulation of negative emotions.

Among the strengths of the present research was the use of multiple reporters. In both studies, the students provided reports of their parents' socialization practices and self-reports of emotion regulation, while their teachers rated students' academic engagement. Thus, although the studies were cross sectional, relatively little variance in the key findings from the education domain could be due to method variance. Indeed, causal interpretation can not be obtained on the basis of the present research design; therefore, further studies could examine the issues with longitudinal data and experimental designs. Studies with objective observations of behavior would also be useful. An additional limitation of the current studies involves the measure of fear regulation, which did not differentiate between fear and anxiety and used them interchangeably. Although fear and anxiety share some common aspects, they are not the same emotion, and future research should differentiate between them.

In conclusion, the current studies help elaborate the dynamics of parental conditional regard and clarify the negative consequences associated with the two types of parental conditional regard. It also makes clear that parental autonomy support, in which parents acknowledge and relate to their adolescents' perspectives, leads to fuller internalization of parental expectations resulting in a more optimal and less constricted enactment of the desired behaviors without the negative affective consequences. Surely, being supportive of adolescents' autonomy at times of disagreement is not easy for parents, yet research suggests that, for the sake of children's psychological and behavioral functioning, it is worthwhile to try.

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## Appendix

## Gender Differences

Table A1  
*Descriptive Statistics for Girls and Boys in Study 1*

Variable	Girls		Boys	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Anger regulation				
Mothers' PCPR	2.10	1.12	1.96	0.97
Mothers' PCNR	1.58	0.91	1.43	0.48
Fathers' PCPR	2.02	1.29	2.16	0.95
Fathers' PCNR	1.50	0.71	1.61	0.82
Resent mothers	3.31	1.33	2.65	1.07
Resent fathers	2.69	1.23	2.89	1.16
Int. compulsion	2.74	1.11	2.81	1.22
Dysregulation	3.62	0.96	3.19	1.27
Supp. reg.	2.81	1.01	2.89	1.22
Fear regulation				
Mothers' PCPR	1.45	0.82	1.50	0.75
Mothers' PCNR	1.19	0.51	1.23	0.45
Fathers' PCPR	1.68	1.06	1.68	0.87
Fathers' PCNR	1.28	.60	1.52	0.86
Resent mothers	3.31	1.33	2.65	1.07
Resent fathers	2.69	1.23	2.89	1.16
Int. compulsion	2.61	1.14	2.90	1.17
Dysregulation	3.24	0.93	3.01	1.24
Supp. reg.	2.93	0.98	3.28	1.15
Academic engagement				
Mothers' PCPR	2.52	1.25	2.52	1.32
Mothers' PCNR	1.43	0.76	1.32	0.51
Fathers' PCPR	2.50	1.39	2.79	1.32
Fathers' PCNR	1.34	0.68	1.65	0.88
Resent mothers	3.31	1.33	2.65	1.07
Resent fathers	2.69	1.23	2.89	1.16
Int. compulsion	3.72	1.00	3.83	1.01
Lack of engagement	2.53	1.09	2.55	1.12
Grade-focused	2.16	0.73	2.33	0.81

*Note.* PCPR = parental conditional positive regard; PCNR = parental conditional negative regard; Int. compulsion = internal compulsion; Supp. reg. = suppressive regulation.

(Appendix continues)

Table A2  
*Descriptive Statistics in Study 2 for Girls and Boys Regarding Fear and Anger*

Variable	Girls		Boys	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Anger regulation				
Mothers' PCPR	1.79	0.94	2.38	1.12
Mothers' PAS	5.1	1.10	4.56	1.52
Fathers' PCPR	1.56	0.83	2.24	1.26
Fathers' PAS	4.65	1.39	4.31	1.44
Internal compulsion	2.66	1.19	2.90	1.12
Choice	4.29	1.17	3.57	1.43
Dysregulation	3.47	1.14	3.38	1.08
Suppressive regulation	2.70	0.98	3.02	1.07
Integrative regulation	3.88	1.15	3.37	1.26
Fear regulation				
Mothers' PCPR	1.28	0.56	1.75	0.91
Mothers' PAS	4.76	1.00	4.22	1.52
Fathers' PCPR	1.40	0.81	2.04	0.99
Fathers' PAS	4.69	1.33	4.15	1.43
Internal compulsion	2.74	1.26	2.98	1.21
Choice	4.07	1.19	3.51	1.46
Dysregulation	3.01	1.09	2.86	1.20
Suppressive regulation	3.02	0.94	3.31	1.07
Integrative regulation	3.90	0.93	3.49	1.04

*Note.* PCPR = parental conditional positive response; PAS = parental autonomy support.

Table A3  
*Descriptive Statistics in Study 2 for Girls and Boys in Academics*

Variable	Girls		Boys	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Mothers' PCPR	2.23	1.16	2.76	1.30
Mothers' PAS: IVD	4.98	0.88	4.74	1.00
Mothers' PAS: PT&R*	4.66	1.01	4.22	1.09
Fathers' PCPR	2.29	1.38	2.91	1.37
Fathers' autonomy support: IVD	4.78	1.23	4.49	1.23
Fathers' autonomy support: PT&R	4.56	1.18	4.05	1.26
Internal compulsion	3.69	1.08	3.78	0.94
Choice	4.27	0.97	3.43	1.08
Grade-focused engagement	2.27	0.76	2.20	0.70
Interest-focused engagement	3.92	0.88	2.92	1.06

*Note.* PCPR = parental conditional positive response; PAS = parental autonomy support; IVD = intrinsic value demonstration; PT&R = perspective taking and providing rationale.

Table A4  
*Indicator Loadings for Anger in Study 1*

Variable	Indicator loading	
	Mothers	Fathers
PCNR		
pcnr1	.67	.75
pcnr2	.81	.83
pcnr3	.78	.69
pcnr4	.77	.61
pcnr5	.75	.73
PCPR		
pcpr1	.81	.73
pcpr2	.78	.74
pcpr3	.59	.75
Resentment		
resent1	.83	.93
resent2	.80	.79
resent3	.58	.65
Internal compulsion		
comp1	.63	.68
comp2	.77	.75
comp3	.76	.73
Dysregulation		
dysreg1	.85	.78
dysreg2	.79	.67
dysreg3	.66	.62
dysreg4	.66	.59
Suppressive regulation		
supp1	.80	.72
supp2	.57	.51
supp3	.59	.83

*Note.* PCNR = parental conditional negative regard; PCPR = parental conditional positive regard.

*(Appendix continues)*

Table A5  
*Indicator Loadings for Fear in Study 1*

Variable	Indicator loading	
	Mothers	Fathers
PCNR		
pcnr1	.86	.90
pcnr2	.80	.95
pcnr3	.74	.74
pcnr4	.85	.82
pcnr5	.76	.81
PCPR		
pcpr1	.85	.98
pcpr2	.83	.85
pcpr3	.55	.62
Resentment		
resent1	.81	.58
resent2	.82	.85
resent3	.58	.79
Internal compulsion		
comp1	.67	.67
comp2	.83	.83
comp3	.68	.68
Dysregulation		
dysreg1	.78	.78
dysreg2	.74	.75
dysreg3	.79	.79
dysreg4	.73	.73
Suppressive regulation		
supp1	.73	.73
supp2	.73	.73
supp3	.47	.57
supp4	.45	.49

*Note.* PCNR = parental conditional negative regard; PCPR = parental conditional positive regard.

Table A6  
*Indicator Loadings for Academics in Study 1*

Variable	Indicator loading	
	Mothers	Fathers
PCNR		
pcnr1	.78	.76
pcnr2	.88	.86
pcnr3	.85	.83
pcnr4	.82	.76
pcnr5	.71	.80
PCPR		
pcpr1	.79	.87
pcpr2	.71	.77
pcpr3	.83	.88
pcpr4	.75	.61
pcpr5	.72	.87
Resentment		
resent1	.81	.86
resent2	.58	.63
resent3	.83	.95
Internal compulsion		
comp1	.60	.60
comp2	.51	.51
comp3	.65	.65
comp4	.61	.61
Lack of engagement		
lack1	.97	.97
lack2	.62	.76
Grade-focused engagement		
grade1	.63	.66
grade2	.66	.68
grade3	.49	.48

*Note.* PCNR = parental conditional negative regard; PCPR = parental conditional positive regard.

*(Appendix continues)*

Table A7  
*Indicator Loadings for Anger in Study 2*

Variable	Indicator loading	
	Mothers	Fathers
PCPR		
pcpr1	.87	.85
pcpr2	.75	.84
pcpr3	.62	.60
Parental autonomy support		
asp1	.94	.87
asp2	.90	.94
asp3	.88	.91
asp4	.86	.85
asp5	.86	.82
asp6	.90	.90
Internal compulsion		
comp1	.76	.76
comp2	.77	.77
comp3	.63	.63
Choice		
choice1	.61	.63
choice2	.89	.86
choice3	.47	.48
Dysregulation		
dys1	.86	.86
dys2	.79	.79
dys3	.66	.66
dys4	.65	.65
Suppressive regulation		
supp1	.78	.79
supp2	.57	.57
supp3	.60	.60
supp4	.51	.47
Integrative regulation		
int1	.89	.89
int2	.88	.88
int3	.84	.84
int4	.45	.64

*Note.* PCPR = parental conditional positive regard.

Table A8  
*Indicator Loadings for Fear in Study 2*

Variable	Indicator loading	
	Mothers	Fathers
PCPR		
pcpr1	.90	.87
pcpr2	.81	.96
pcpr3	.49	.63
Parental autonomy support		
asp1	.89	.86
asp2	.90	.88
asp3	.86	.83
asp4	.88	.91
asp5	.86	.90
asp6	.50	.84
Internal compulsion		
comp1	.67	.83
comp2	.83	.68
comp3	.68	.67
Choice		
choice1	.60	.64
choice2	.91	.85
choice3	.47	.44
Dysregulation		
dys1	.78	.78
dys2	.75	.75
dys3	.79	.79
dys4	.74	.74
Suppressive regulation		
supp1	.73	.73
supp2	.73	.70
supp3	.49	.49
supp4	.45	.45
Integrative regulation		
int1	.85	.85
int2	.83	.83
int3	.75	.75
int4	.46	.44

*Note.* PCPR = parental conditional positive regard.

(Appendix continues)

Table A9  
*Indicator Loadings for Academics in Study 2*

Variable	Indicator loading	
	Mothers	Fathers
PCPR		
pcpr1	.79	.86
pcpr2	.73	.78
pcpr3	.84	.88
pcpr4	.73	.81
pcpr5	.71	.86
Parental autonomy support		
ivd	.81	.89
pt&r	.65	.58
Internal compulsion		
comp1	.59	.59
comp2	.60	.61
comp3	.55	.54
comp4	.60	.58
Choice		
choice1	.55	.56
choice2	.83	.81
choice3	.61	.62
choice4	.60	.61
Grade-focused engagement		
grade1	.47	.47
grade2	.92	.92
grade3	.46	.46
Interest-focused engagement		
inter1	.90	.90
inter2	.88	.88
inter3	.76	.76
inter4	.77	.77

*Note.* PCPR = parental conditional positive regard; ivd = intrinsic value demonstration; pt&r = perspective taking & providing rationale.

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