



The costs of parental pressure to express emotions: Conditional regard and autonomy support as predictors of emotion regulation and intimacy[☆]

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A B S T R A C T

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This research focuses on offspring's perceptions of their parents' usage of conditional regard and autonomy-supportive practices in response to the offspring's experiences of negative emotion. Participants were 174 college students (60% were females). As predicted from self-determination theory (Ryan & Deci, 2000), students' perceptions of parents as hinging their regard on students' expression or suppression of negative emotions predicted a maladaptive pattern of emotion regulation and intimacy capacity. In contrast, autonomy-supportive parenting predicted more adaptive emotion regulation and intimacy patterns. Also as predicted, emotion-regulation mode mediated the relations between parental practices and intimacy capacity. The innovative aspect of the study is the finding that parents who use conditional regard to encourage children's expression (sharing) of negative emotions may actually undermine their children's socioemotional capacities.

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The concept of parental conditional regard (PCR) as coined by Rogers (1959) involves parents' provision of more affection when their child engages in parentally desired behaviors or attributes and less affection when the child does not. Some researchers have argued that reinforcement practices similar to PCR lead children to behave in ways their parents believe are good for them (Aronfreed, 1968; Gewirtz & Pelaez-Nogueras, 1991), whereas others (e.g., 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 young adults' perceptions of their parents' conditional regard in relation to their own internalization and behavior in four domains: academic, sport, prosocial, and emotion control. The findings indicated that PCR predicted internal compulsion to comply with parents' expectations, which in turn predicted behavioral engagement. Internal compulsion was an indicator of introjected internalization, which, according to self-determination theory (SDT; Deci, 2008; Deci & Ryan, 2008; Ryan & Deci, 2000), is a conflicted and shallow type of internalization (Roth, Assor, Kanat-Maymon, & Kaplan, 2006; Ryan & Connell, 1989). Moreover, PCR correlated with anxiety before performance, shame and guilt after failure, short-lived satisfaction after success, and fluctuations in self-esteem.

Roth (2008) elaborated on the work of Assor et al. (2004) by showing that PCR correlates with self-oriented helping (egoistic helping) through internal compulsion, whereas autonomy-supportive parenting (ASP; which provides rationales for desired behaviors and takes the child's perspective) correlated with other-oriented helping through a sense of choice. Thus, in addition to its associations with negative feelings and conflicted internalization, young adults' perception of their parents'

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conditional regard also correlated with a low quality helping orientation. Together, these results suggest that the use of PCR may be convenient but also has associated costs.

Especially relevant to the present study are findings concerning the relation between PCR and offspring's emotional functioning (Assor et al., 2004; Roth, Assor, Niemiec, Ryan, & Deci, 2009). Suppression-oriented PCR has predicted young adults' suppression of negative emotions through a sense of internal compulsion (Roth, Assor et al., 2009). Elaboration on this research has differentiated among three modes of emotion regulation based on SDT conceptions: dysregulation, suppressive regulation, and emotional integration (Roth, Assor et al., 2009; Ryan, Deci, Grolnick, & La Guardia, 2006). Dysregulation involves children's experience of emotions but inability to regulate them; that is, children unintentionally express the behavioral tendencies inherent in the emotions (e.g., Deci, 1980; James, 1890). Suppressive regulation involves avoiding or minimizing the experience of negative emotions. Finally, emotional integration involves a differentiated awareness of one's emotional states and the capacity to use this sensitivity to regulate behavior intentionally. SDT proposes that integration is essential for optimal emotional regulation because it allows *exploration*, experience, and choices in how to express emotions, rather than suppression or stifling of emotions (e.g., Rogers, 1961). Children can thus explore their emotions without being overwhelmed by them, so they can use the emotions autonomously as a guide for adaptive behavior.

Furthermore, Roth, Ron, and Benita (2009) also differentiated between the two components of PCR, that is, conditional positive regard (providing more affection when the child engages in parentally desired behaviors) and conditional negative regard (providing less affection when the child fails to meet parental expectations). Results based on two samples of adolescents showed that suppression-oriented conditional negative regard predicted dysregulation, and suppression-oriented conditional positive regard predicted suppressive regulation and dysregulation. Alternatively, adolescents' perceptions of ASP predicted integrative regulation.

Overall, previous research on PCR and ASP has indicated that conditional regard correlates with maladaptive or non-optimal functioning, whereas autonomy support correlates with more positive outcomes. However, several important issues linked to the phenomenon of emotion regulation and its interpersonal consequences have not yet been adequately addressed.

First, although research thus far has only focused on the use of conditional regard to promote suppression of negative emotions, it is quite possible that parents may actually use conditional regard to promote expression and sharing of negative feelings. This may be particularly relevant in adolescence or emerging adulthood, when some youth try to create distance between themselves and their parents (e.g., Meeus, Iedema, Maassen, & Engels, 2005). Youngsters may simply want to sort things out by themselves before disclosing what they feel, or at times they may be too flooded with emotions to be able to talk about them. In such cases, many well-intentioned parents may want to encourage their older children to share their negative feelings. Yet, based on SDT, we would expect that using conditional regard to promote such sharing would also lead to negative outcomes, perhaps because emotions are perceived as highly personal and delicate; therefore, the pressure to share them may be experienced as especially intrusive. Hence, in the present research on negative emotions, we examined not only suppression-oriented conditional regard, but also expression-oriented conditional regard and its effects on emotion regulation and intimacy.

Another scarcely examined issue in previous research pertains to specific relational consequences or costs of PCR in the emotion-regulation domain. Given that conditional regard is likely to lead to non-optimal modes of emotion regulation, it is reasonable to hypothesize that PCR would undermine offspring's relational capacities, especially in the romantic domain (e.g., Richards, Butler, & Gross, 2003), by reducing their ability to regulate emotions adaptively.

Based on the foregoing considerations, the present study aimed to explore parents' use of expression- and suppression-oriented conditional regard and autonomy support as related to modes of emotion regulation and to intimacy capacity in young adults (college students). Moreover, we hypothesized that PCR would predict less-than-optimal regulation of negative emotion, which in turn would predict difficulties in intimacy capacity. In contrast, we expected that ASP would predict more adaptive emotion regulation, which in turn would predict improved intimacy capacity. Based on SDT and previous research, the following section describes the different emotion-regulation modes and intimacy outcomes that we expected the different parental practices to predict.

Parental practices and modes of emotion regulation

In line with extant research showing that stifling and suppression of emotions is harmful for healthy psychological development (Gross & John, 2003; Ryan et al., 2006), past findings highlighted the emotional and behavioral costs for children associated with PCR that focused on the suppression of negative emotions (Assor et al., 2004; Roth et al., 2009). However, these negative costs may stem from the children's very suppression and stifling of their emotions, and not from children's experience of controlling parenting. In line with this assertion, one may expect that PCR focusing on the expression of negative emotions would be less problematic for children's emotional and behavioral experiences.

As already noted, the phenomenon of parental pressure to express negative emotions is of special interest because it lends itself to different interpretations. At first glance, expression-oriented PCR may appear quite benign because it may convey acceptance of the child's negative emotions and provision of an opportunity to share negative emotions with parents. However, based on SDT, we would like to suggest that forcing a child to express and share personal feelings could elicit an experience of intrusion and coercion, which is quite different from the experience of parental endorsement of expression (Gottman, Katz, & Hooven, 1997). Therefore, we would expect that the negative consequences of this approach result from the parental controlling practice itself, rather than from the actual expression or sharing of negative emotions.

Thus, based on SDT, we hypothesized that such PCR focusing on expression of negative emotions is likely to evoke stress, internal conflict, and confusion in children. On the one hand, parents' demands for disclosure of personal feelings may push children to comply, in order to gain parental affection. On the other hand, children will likely experience this pressure to disclose personal feelings as intrusive and illegitimate. Findings from Smetana's (2006) seminal work on the legitimization of parental authority over various behavioral domains are consistent with this view. Although adolescents and parents agree that parents should have legitimate authority (setting expectations and rules) over moral, conventional, and prudential issues, adolescents reject parental authority over personal issues, which they perceive as lacking consequences for others and therefore as beyond the boundaries of legitimate moral and conventional concern. Adolescents' claims to jurisdiction over personal issues suggest that adolescents assert an "arena of privacy" (Buhrmester & Prager, 1995) over these issues; they believe that they are not obligated to disclose personal issues to parents (Smetana, Metzger, Gettman, & Champion-Barr, 2006).

Hence, in light of Smetana's work it seems reasonable to assume that adolescents may view their own negative feelings as personal, as not subject to parental authority, and as not requiring disclosure. Thus, using conditional regard to pressure children to express their negative feelings may predict children's reluctance and attempts to hide emotions due to an experience of parental intrusion into the children's personal arena. Based on the hypothesized internal conflict between a desire to hide personal negative emotions on the one hand and an inclination to express negative emotions in order to gain parental affection on the other hand, we hypothesized that young people will likely feel stressed and overwhelmed, which may impair their capacity to regulate their emotions. Inasmuch as past research did not focus on this phenomenon, we did not formulate a specific assumption as to whether expression-oriented PCR would predict suppressive regulation or dysregulation, but we hypothesized that it would predict a less-than-optimal emotion-regulation mode. Interestingly, research showed that PCR in response to adolescents' academic failures undermines adolescents' self-disclosure (sharing) of difficulties in school with parents (Roth et al., 2009).

In addition, in line with Assor et al. (2004) and Roth, Assor et al. (2009), we hypothesized that suppression-oriented PCR would predict suppressive regulation of negative emotions. It is reasonable to assume that children's perceptions of parental affection as hinging on their suppression of negative emotions would result in children's attempts to suppress their emotions in order to gain parental affection.

Finally, we hypothesized that ASP would predict an integrative mode of emotion regulation. ASP involves parents' efforts to promote their values by taking the children's perspective and providing a rationale. Those parental behaviors promote integrated internalization and non-constricted behavior, because parents thereby convey their expectations in ways that allow a sense of choice about behavioral enactment (Ryan & Deci, 2000). 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. Rationales support children's sense of autonomy with regard to desired behaviors, by helping children understand the value of the behaviors for them. The sense of choice and lack of internal pressure enable children to act in non-constricted and exploratory ways, responding to available information with curiosity and without defensiveness (Roth, 2008; Roth, Assor, Kaplan, & Kanat-Maymon, 2007; Vansteenkiste, Zhou, Lens, & Soenens, 2005). In line with this hypothesis and prior findings, Roth, Assor et al. (2009) found that the sense of choice indeed mediated the relation between ASP and integrated emotion regulation. Other research (e.g., Calkins, 1997) supports our reasoning by showing that maternal styles that were affectionate and encouraging without being overly controlling or restrictive correlated with children's effective emotion regulation. In line with these findings, emotion-coaching parenting (i.e., parents' attentiveness to their own and their child's feelings, and belief that feelings should not be stifled) predicted children's capacity to regulate emotions (Gottman et al., 1997). Thus, we hypothesized that ASP would predict emotional integration, which involves a differentiated awareness of one's emotional states and the capacity to use this sensitivity to regulate behavior intentionally.

Parental practices, modes of emotion regulation, and intimacy capacity

We hypothesized that perceived parenting practices would be correlated with children's intimacy capacity through the emotions' regulation modes. The capacity for intimacy refers to one's abilities to disclose negative emotions to one's romantic partner, as well as to support a partner who expresses emotional and instrumental difficulties (Reis & Shaver, 1988). We hypothesized that both suppression-oriented PCR and expression-oriented PCR would predict less-than-optimal intimacy capacity because we hypothesized that each would predict a non-optimal emotion-regulation mode. Thus, using conditional regard in relation to children's emotional responses might interfere with the children's free experience of their own emotions and may undermine their intimacy capacity, which relies strongly on emotional ability. Specifically, it seems reasonable to assume that suppressive regulation (attempts to cover up and even ignore one's own negative emotions) would involve difficulties in disclosing negative emotions to a partner. Additionally, the effort to hide one's emotions may involve less sensitivity to another person's pain (Mayer & Salovey, 1997) and therefore may involve less potential support. Furthermore, we expected that dysregulation (being overwhelmed by negative emotion) would be less likely to correlate with provision of support to a partner who expresses negative emotions and would be more likely to interfere with task-oriented behavior such as supporting others in pain. Finally, we hypothesized that ASP would correlate positively with both aspects of intimacy capacity through integrative regulation. Hence, the differentiated awareness of one's emotional states and the capacity to use this sensitivity to regulate behavior intentionally would likely predict disclosure to one's partner as well as provision of support.

Thus, the current research extended past research by simultaneously exploring three parenting practices (PCR targeting emotional expression, PCR targeting emotional suppression, and ASP) concerning two negative emotions (fear and sadness) as related to young adults' emotion regulation (three modes defined by self-determination theorists), and their possible outcomes with respect to the young adults' capacity for intimacy. Fig. 1 summarizes the research hypotheses schematically.

Method

Participants and procedure

Participants were 174 Israeli college students (60% females) with mean age of 21.4 years ($SD = 2.23$) who received extra credit in an introductory psychology course for their participation in the study. We particularly focused on this age group because of the growing distance in the parent–child relationship and because of the specific focus on intimacy capacity, which is an important developmental task for adolescents and emerging adults. Participation included only students from intact families to avoid possible effects of parental divorce or death on the study variables. Only students involved in a romantic relationship for at least 3 months participated. Each participant completed questionnaires in two sessions separated by 2 weeks. In the first session, participants completed scales involving their perceptions of their parents (PCR and ASP), and 2 weeks later they completed questionnaires pertaining to the emotion regulation and intimacy capacity measures. Questionnaires tapped perceptions of parents and perceptions of self in separate sessions to avoid the influence of participants' naïve inferences. The first session lasted about 10 min, and the second lasted about 20 min.

Measures

Perceptions of PCR

This scale based on Assor et al. (2004) included 6 items for perceptions of mothers and 6 items for perceptions of fathers. Three items measured PCR for suppression of sadness and/or fear (e.g., “As a child or adolescent, I often felt that my father’s affection toward me depended on my not showing fear and/or not crying”). Three items examined PCR for expression of these negative emotions (e.g., “As a child or adolescent, I often felt that I would lose much of my father’s affection if I acted like nothing had happened when I was afraid, or if I didn’t express my fear;” or “I often felt that my father’s affection toward me depended on my not hiding my sadness from him”). Participants rated the extent to which the items characterized their parents, on a 7-point Likert scale ranging from 1 (*not true at all*) to 7 (*very true*).

We examined construct validity of the mother and father scales using separate factor analyses with varimax rotation, computation of internal consistency coefficients, and correlations among the subscales. The factor analyses resulted in two factor solution. Thus, results showed that participants clearly distinguished between PCR for expression and PCR for suppression of fear and sadness. Eigenvalues ranged from 3.4 to 1.2 for mothers and from 3.0 to 1.3 for fathers. Every item loaded on the appropriate domain factor, and the loadings were all high and unique (above .46 for mothers and above .50 for fathers). The factors extracted for mothers accounted for 60% of the variance, and those extracted for fathers accounted for 56%. Overall, then, the results of the factor analyses supported the appropriateness of examining PCR for suppression and expression separately. Cronbach alphas for the four subscales were all above .70 (Cronbach’s alpha for mothers was .74 and .82 for PCR toward suppression and for PCR toward expression respectively, and for fathers the reliability coefficients were .78 and .80). Intercorrelations among the scales were moderate (presented in Table 1).

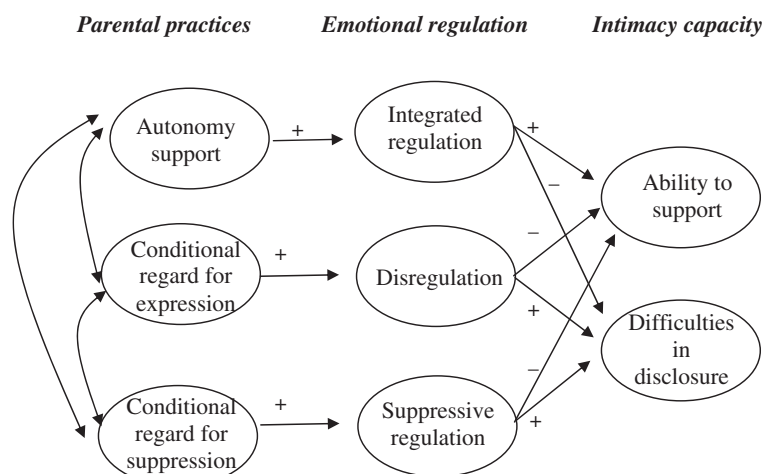


Fig. 1. Summary of the research hypotheses.

Table 1

Zero order correlations of study variables.

		Mean	sd	1	2	3	4	5	6	7	8	9	10
Maternal practices	1 PCR for suppression	2.20	1.03	–									
	2 PCR for expression	2.80	1.10	.25**	–								
	3 ASP	5.16	.97	–.50**	–.16*	–							
Paternal practices	4 PCR for suppression	2.18	1.15	.41**	.22**	–.25**	–						
	5 PCR for expression	2.27	1.06	.21**	.59**	–.34**	.26**	–					
	6 ASP	4.50	1.09	–.19**	–.22**	.28**	–.38**	–.15*	–				
Modes of emotion regulation	7 Dysregulation	3.76	.79	.15*	.28**	–.10	.23**	.18*	–.18**	–			
	8 Suppression	3.42	1.18	.19**	.15*	–.08	.28**	.09	–.15*	.12	–		
	9 Integration	4.89	1.25	–.18**	–.09	.18**	–.19**	–.03	.22**	.08	–.28**	–	
Intimacy capacity	10 Difficulties in disclosure	2.62	.67	.25**	.16*	–.15*	.28**	.08	–.19**	.17*	.50**	–.23**	–
	11 Ability to support	3.09	1.09	–.36**	–.20**	.32**	–.22**	–.23**	.20**	–.21**	–.17**	.29**	–.40**

Perceptions of ASP

In this 8-item scale based on Roth, Assor et al. (2009) and Grolnick, Ryan, and Deci (1991), participants first read one of four stems describing a brief account of a parent–child disagreement linked to maternal/paternal support for suppression/expression of negative emotions. Following each stem (e.g., for maternal support of suppression: “When I showed my fear or anxiety, but my mother thought I should cover it up and not show it, ...”), participants rated 4 items that involved parental acknowledgment of the child’s perspective and feelings (e.g., “...she gave me the impression that she understands me”) and 4 items that involved parents’ provision of a rationale (e.g., “...she explained to me why she thinks so”) on a 7-point Likert scale ranging from 1 (*not true at all*) to 7 (*very true*). Overall this scale thus comprised 8 items for mothers’ autonomy support and 8 items for fathers’. Like the PCR measure, the ASP scale was retrospective; thus, the college students had to describe their perceptions of parents when they were children or adolescents.

We conducted separate factor analyses with varimax rotation for mothers and fathers, extracting one factor in each, accounting for 68% of the variance for mothers and 66% for fathers. Thus, no distinction emerged between autonomy support for expression versus for suppression. Cronbach alphas were .88 for mothers and .86 for fathers. Correlations between the scales were moderate (presented in Table 1).

Modes of negative emotion regulation for fear and sadness

The three measures of emotion regulation (for dysregulation, suppressive regulation, and integrative regulation), based on Roth, Assor et al. (2009), demonstrated validity in two previous samples (Eilott, Assor, & Roth, 2006). The 4-item dysregulation measure comprised 2 items involving an experience of being overwhelmed and paralyzed by negative emotions (e.g., “Usually, if I get a feeling of sadness, it paralyzes me”) and 2 items involving difficulties in task-oriented functioning (e.g., “Usually, if I get a feeling of fear, it impedes my normal functioning”). The suppressive regulation measure included 3 items (e.g., “Usually, I ignore my fears”). The 4-item integrative regulation measure comprised 2 items reflecting an attempt to understand the causes of one’s negative emotion (e.g., “I examine my fears in order to understand their sources”) and 2 items reflecting a belief that exploration of negative emotions can help in understanding oneself (e.g., “Exploring my fears can help me understand important things about myself”).

We performed factor analysis with varimax rotation for all 11 of the emotion-regulation items together. The three expected factors emerged with eigenvalues ranging from 3.70 to 1.40 and all items loading appropriately above .64, thus accounting for 70% of the variance. Cronbach alpha coefficients were high: .85, .86, and .82 for dysregulation, suppressive regulation, and integrative regulation, respectively. The correlation between integrative regulation and suppressive regulation was $-.28$ ($p < .01$). All the other intercorrelations among the regulation modes were approximately zero (see Table 1).

Intimacy capacity

Following the conception of Reis and Shaver (1988) and based on measures developed by Alfi and Assor (1996), we used two intimacy scales consisting of 3 items each. One measure involved difficulties in expressing negative emotions with an intimate partner (e.g., “When I’m sad I try to hide it from my partner”), and the other involved an ability to support a partner who expresses emotional and instrumental difficulties (“When my partner is anxious, I really try to understand and support him/her”).

We performed factor analysis with varimax rotation for all 6 items. The two expected factors emerged, with eigenvalues ranging from 3.50 to 2.40 and all items loading appropriately above .79, thus accounting for 68% of the variance. Cronbach alpha coefficients were .78 for difficulties in expressing negative emotions with a partner and .81 for ability to support a partner. A moderate negative correlation of $-.40$ ($p < .01$) emerged between the two subscales.

Data analysis

First, we computed correlations among all study variables. Second, we used structural equation modeling (SEM) with latent variables to simultaneously examine the hypothesized relations of PCR and ASP to young adults’ emotion regulation

and intimacy capacity. We conducted separate SEM analyses for perceptions of mothers and fathers. Third, we compared the relative fit of partial mediation and full-mediation models to test for mediation.

Results

Preliminary analyses

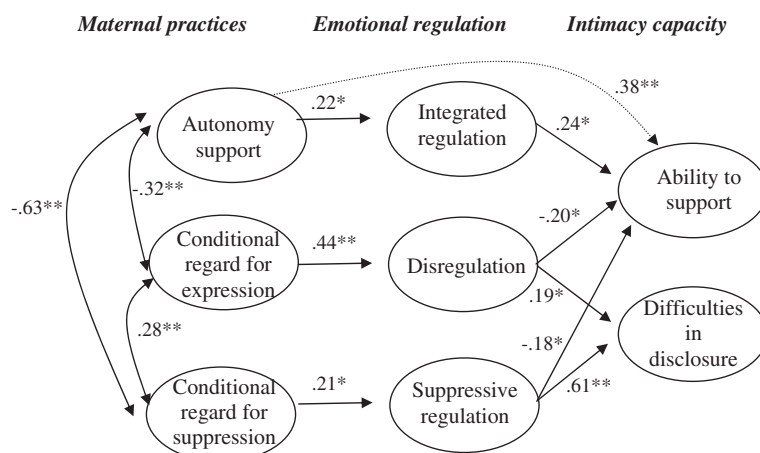
Table 1 presents correlations among the study variables. As expected, correlations between ASP, integrated regulation, and the intimacy measure of ability to support a partner were all positive and significant. Likewise, both ASP and integrated regulation revealed negative significant correlations with the intimacy measure of difficulties in disclosure with partner. In addition, in line with the hypotheses, expression-oriented PCR correlated positively with dysregulation for both perceptions of fathers and mothers, whereas expression-oriented PCR and dysregulation both correlated negatively with the ability to support a partner. Finally, positive correlations emerged among suppression-oriented PCR, suppressive regulation mode, and difficulties in disclosure of negative emotions with a partner; in contrast, suppression-oriented PCR and suppressive regulation both correlated negatively with the ability to support a partner. Overall, the correlations coincided with the hypotheses, and we next conducted the more rigorous SEM analysis to test the hypothesized unique relations among the parental practices, modes of emotion regulation, and intimacy capacity as well as the hypothesized role of emotion-regulation modes as mediators of the relations between parental practices and intimacy capacity.

Primary analyses

Based on the assumptions and the correlational analyses, we used AMOS 7.0 (Arbuckle & Wothke, 2003) with maximum likelihood estimation to simultaneously test the hypotheses that: (a) ASP would predict intimacy capacity through integrative regulation; (b) expression-oriented PCR would predict low ability to support a partner through dysregulation; and (c) suppression-oriented PCR would predict low intimacy capacity through suppressive regulation of negative emotions. We created latent variables by using the scales' items as indicators, with two exceptions: For ASP, we used, as indicators, the mean of (1) taking the child's perspective and (2) providing rationale, and for dysregulation we used, as indicators, the mean of (1) an experience of being overwhelmed by negative emotions and (2) difficulties in task-oriented functioning. Using only two indicators for latent variable raises the problem of identifiability. Thus, we followed the recommendation of Little, Cunningham, Shahar, and Widaman (2002) and Little, Lindenberger, and Nesselrode (1999) and placed an equality constraint on the two loadings associated with the construct.

We assessed model fit to the data using the ratio of chi-square to degrees of freedom (χ^2/df), incremental fit index (IFI; Bollen, 1989), comparative fit index (CFI; Bentler, 1990), and root mean square error of approximation (RMSEA; Browne & Cudeck, 1993). Indicators of acceptable fit comprise: a χ^2/df ratio of 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).

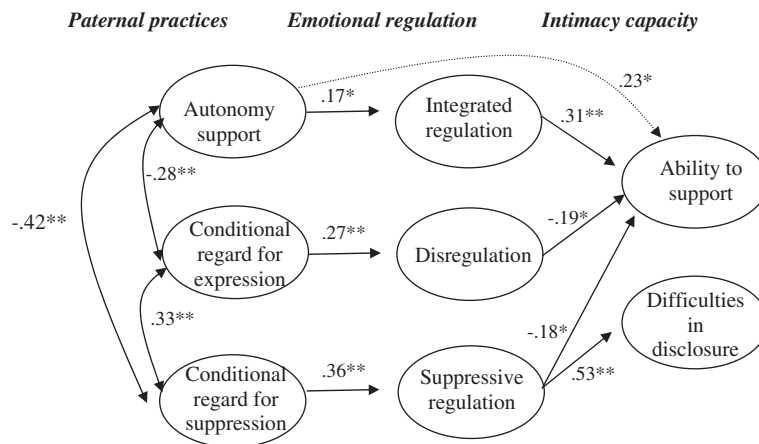
Figs. 2 and 3 present the results for perceptions of mothers' and fathers' parenting practices, respectively. As shown, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. The fit indices were



Note. The indicators are omitted for clarity.

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

Fig. 2. Students' perceptions of maternal practices toward negative emotions as predictors of their emotional and intimacy capacities.



Note. The indicators are omitted for clarity.

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

Fig. 3. Students' perceptions of paternal practices toward negative emotions as predictors of their emotional and intimacy capacities.

adequate for the model examining maternal practices, $\chi^2_{(177)} = 262.97, p < .01$; $\chi^2/df = 1.49$; CFI = .94; IFI = .94; RMSEA = .05, and for the model examining paternal practices, $\chi^2_{(178)} = 229.00, p = .01$; $\chi^2/df = 1.28$; CFI = .96; IFI = .96; RMSEA = .04. Next, we tested whether the indirect paths were significant using Sobel's (1982) test. The indirect path from ASP to an ability to support a partner through integrative regulation was significant for both mothers ($z = 2.00, p < .05$) and fathers ($z = 1.96, p < .05$). Likewise, the indirect path from expression-oriented PCR to an ability to support through dysregulation was significant for both mothers ($z = 1.97, p < .05$) and fathers ($z = 1.96, p < .05$). Also, the indirect path from expression-oriented PCR to difficulties in exposure with partner through dysregulation was significant for mothers ($z = 1.98, p < .05$). We did not test this relation for fathers because the correlation between expression-oriented PCR and exposure was not significant. Finally, the indirect path from suppression-oriented PCR to difficulties in exposure was significant for both mothers ($z = 2.17, p < .05$) and fathers ($z = 3.24, p < .01$). Likewise, the indirect path from suppression-oriented PCR to an ability to support a partner was significant for both mothers ($z = 1.96, p < .05$) and fathers ($z = 2.15, p < .05$).

Comparing the relative fit of partial- and full-mediation models

To compare the goodness-of-fit of nested models, we separately added each direct path from each parental practice to the outcomes, and we compared the model fit to the fit of the model with only indirect paths. Results suggested that in only one case (i.e., perceptions of mothers' ASP and fathers' ASP to the ability to support a partner) a direct path significantly improved the model fit: $\Delta\chi^2_{(1)} = 17.32, p < .01$ for mothers, and $\Delta\chi^2_{(1)} = 5.34, p < .05$ for fathers (depicted as a dashed line in Figs. 2 and 3). Comparison of the AIC indices also supported the difference between the two models; when including the direct path between ASP and ability to support, the value of AIC declined from 426.58 to 412.98 for mothers and from 386 to 373.68 for fathers. Full-mediation models were preferable in all other cases.

Thus, in general the results support our hypotheses. The emotion-regulation modes mediated the relation between perceived parental practices and intimacy capacity. Specifically, expression and suppression-oriented PCR correlated negatively to intimacy capacity through maladaptive emotional functioning, whereas ASP positively predicted intimacy capacity through an integrative emotion-regulation mode.

Discussion

This study extends past research by revealing two main findings. First, perceptions of PCR targeting the expression of negative emotions emerged as a predictor of young adults' dysregulation of negative emotions, which, in turn, correlated with deficiencies in their capacity for intimacy. To the best of our knowledge, this is the first study that examined correlates of perceived controlling parenting practices in relation to expression of emotions. Second, ASP, an alternative parental practice, emerged as a predictor of more optimal outcomes, including integrative regulation and better intimacy capacity. Interestingly, these two findings together seemed to indicate that pressuring one's child to express (share) negative emotions by means of PCR does not seem to predict that child's later ability to effectively express negative emotions in young adulthood. In fact, such pressures predicted young adults' dysregulation of negative emotions, referring to a sense of being overwhelmed by negative emotions and to difficulties in task-oriented functioning, neither of which involves intentional expression of emotions. Furthermore, PCR targeting affective expression did not predict an ability to share emotions with a partner and correlated negatively with the ability to support a partner.

As mentioned earlier, PCR for expression of negative feelings most likely involves an experience of coercion, which differs considerably from an experience of parental endorsement of expression (Gottman et al., 1997). In contrast, emotional coaching parenting as well as ASP (Grolnick, 2003) each conveys that negative emotions are legitimate and may be freely expressed, discussed with close others, and openly explored. Such endorsements of emotional expression are likely to predict an adaptive emotional capacity (Gottman et al., 1997).

Our hypothesis regarding the association between expression-oriented PCR and maladaptive forms of emotional regulation derived partly from empirical work conducted by Smetana (2006) and her colleagues who differentiated among moral, conventional, prudential, and personal issues. Thus, we suggested that children may perceive their own negative emotions as private and, as such, as off limits to parental authority or intrusion. However, researchers have not yet explored emotion regulation among the privacy issues studied by Smetana; hence, future research would do well to explore this issue. This line of research will provide more information regarding the pros and cons that may be associated with being subject to parental control in this domain.

We speculated that the two hypothesized antagonistic processes, in which children may prefer to hide their personal negative emotions in order to protect their privacy on the one hand, and may wish to express their negative emotions in order to satisfy parents on the other hand, would result in a less-than-optimal emotion-regulation capacity. The current results may allow a more specific hypothesis: This speculated internal conflict may result in an unorganized emotion-regulation type (dysregulated per Roth, Assor et al. (2009); Ryan et al., 2006) characterized by a sense of being overwhelmed by negative emotions, an experience that interferes with one's capacity to function in an effective, task-oriented way.

Unsurprisingly, the suppressive mode of regulation emerged as a predictor of difficulties in expressing negative emotions with a partner. When one consistently makes an effort to cover up and even ignore one's own negative emotions, it seems reasonable to assume that one may also attempt to hide these feelings from close significant others. However, the suppressive mode of regulation also correlated negatively with the ability to support a partner who expresses negative emotions and difficulties, thereby suggesting that efforts to hide and ignore one's own emotions may interfere with one's attentiveness to close others in need. Perhaps suppression-oriented PCR and a suppressive emotional regulation mode may involve fewer opportunities to explore one's own emotions, which could possibly limit one's growth in emotional skills like recognizing, experiencing, verbalizing, and coping with one's own emotions. Conceivably, these deficiencies may, in turn, impede one's ability to recognize and cope with others' emotions and therefore to support others in need. Future research should explore the processes that may mediate the relation between suppressive regulation and the capacity to support and empathize with others. This line of research may shed light on the specific emotional skills that may be impaired by controlling parenting aimed at children's suppression of their negative emotions.

The finding that retrospective perceptions of ASP predicted young adults' current integrative regulation of negative emotions, as well as a higher current capacity for intimacy, substantiated the importance of both ASP dimensions: acknowledgment and rationale. Perceptions of parents as acknowledging children's perspectives and feelings, and as providing rationales for children's responses to their own negative emotions, both appear to provide a foundation for non-defensive responsiveness to negative emotions. Provision of acknowledgment and rationale may even predict an ability to contain emotions like fear or sadness while exploring their sources (which was one of the indexes for integrative regulation) and to believe that such exploration may help promote self-understanding.

In turn, these regulatory abilities predicted a capacity to share emotions with a partner and to support a partner who expresses difficulties and negative emotions. It seems reasonable that one's ability to contain one's own negative emotions would permit the capacity to be attentive and to contain difficulties of close significant others. The two specific ASP dimensions discussed here may help practitioners in guiding parents with respect to their responses to their children's emotional experiences. Future research should explore parental antecedents of children's perceptions of ASP in relation to children's emotional experiences.

The present study has several limitations that should be noted. First, the present analyses examined correlations among cross-sectional self-reports. This is problematic in that it raises the possibility that the relations are in part a function of method variance. Additional studies that use multiple reporters and behavioral observations would be very helpful in confirming the present results. Second, the cross-sectional data do not allow causal interpretations. It is therefore important to test the hypotheses with prospective longitudinal research. Third, the sample size is relatively small and future research will do well to examine the present findings on a larger scale; also, this sample size does not allow examination of gender differences. In addition, the perceptions of PCR and ASP were retrospective, referring to the parents' behavior when the respondents were early adolescents or children, and the possibility exists that intervening factors from recent years played an influence on these remembered experiences. Therefore, further replication with children and adolescents (as done by Roth, Assor et al. (2009)) is important. Finally, the present research focused on emotions of fear and sadness. Given that adolescence is a period of heightened conflicts between parents and children, future research would do well to explore the same associations in relation to anger. Our pilot testing has revealed that maintaining autonomy support in response to children's anger is a challenging task for parents.

Future research should consider an exploration of the current hypotheses while differentiating between conditional positive regard (providing more affection when the child engages in parentally desired behaviors) and conditional negative regard (providing less affection when the child fails to meet parental expectations), as examined by Roth, Assor et al. (2009). We did not examine intimacy capacity in relation to these two components of PCR; however, conditional negative regard did

predict dysregulation, and conditional positive regard did predict suppressive regulation and dysregulation. Thus, it would be of interest to test conditional positive and negative regard in relation to intimacy capacity.

In conclusion, the present results convey that controlling parenting that leads children to suppress or express negative emotions predicts less-than-optimal emotion-regulation modes, and less-than-optimal intimacy capacities. On the other hand, parenting that supports autonomy predicts an integrative emotion-regulation mode and a higher intimacy capacity. These results support the hypotheses anchored in SDT. Future research would do well to explore other dimensions of ASP as well as its parental antecedents to shed more light on this alternative parental practice.

References

- Alfi, O., & Assor, A. (1996). *Identity formation and intimacy in young married couples: A differentiated dimensional approach*. Paper presented at the International Society for the Study of Behavioral Development, Quebec, Canada.
- Arbuckle, J. L., & Wothke, W. (2003). *Amos 5.0 users guide*. Chicago: Small Waters.
- Aronfreed, J. (1968). *Conduct and conscience: The socialization of internalized control over behavior*. New York: Academic Press.
- Assor, A., Roth, G., & Deci, E. L. (2004). The emotional costs of perceived parents' conditional regard: a self-determination theory analysis. *Journal of Personality, 72*, 47–88.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238–246.
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods Research, 17*, 303–316.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Thousand Oaks, CA: Sage.
- Buhrmester, D., & Prager, K. (1995). Patterns and functions of self-disclosure during childhood and adolescence. In K. Rotenberg (Ed.), *Disclosure processes in children and adolescents* (pp. 10–56). Cambridge, UK: Cambridge University Press.
- Calkins, S. D. (1997). Cardiac vagal tone indices of temperamental reactivity and behavioral regulation in young children. *Developmental Psychology, 31*, 125–135.
- Carmines, E. G., & McIver, J. P. (1981). Analyzing models with unobserved variables. In G. W. Bohrnstedt, & E. F. Borgatta (Eds.), *Social measurement: Current issues*. Beverly Hills, CA: Sage.
- Deci, E. L. (1980). *The psychology of self determination*. Lexington, MA: D.C. Heath.
- Deci, E. L. (2008). Self-determination theory: a macrotheory of human motivation, development and health. *Canadian Psychology, 49*, 182–185.
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology, 49*, 14–23.
- Eilat, K., Assor, A., & Roth, G. (2006). *Three styles of emotion regulation and their parental antecedents*. Paper presented at the international workshop on autonomy support and suppression in parenting and education across cultures, Mitzpe Ramon, Israel.
- Gewirtz, J. L., & Pelaez-Nogueras, M. (1991). Proximal mechanisms underlying the acquisition of moral behavior patterns. In W. M. Kurtines, & J. L. Gewirtz (Eds.), *Theory. Handbook of moral behavior and development, Vol. 1* (pp. 153–182). Hillsdale, NJ: Erlbaum.
- Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Meta-emotion: How families communicate emotionally*. Hillsdale, NJ: Erlbaum.
- Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. Mahwah, NJ: Erlbaum.
- Grolnick, W. S., Deci, E. L., & Ryan, R. M. (1997). Internalization within the family: the self-determination theory perspective. In J. E. Grusec, & L. Kuczynski (Eds.), *Parenting and children's internalization of values* (pp. 135–161). New York: Wiley.
- Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). The inner resources for school performance: motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology, 83*, 508–517.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348–362.
- Harter, S. (1993). Causes and consequences of low self-esteem in children and adolescents. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 87–116). New York: Plenum.
- Hoyle, R. H. (1995). *Structural equations modeling: Concepts, issues and applications*. Thousand Oaks, CA: Sage.
- James, W. (1890). *The principles of psychology*. New York: Holt.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: exploring the question, weighing the merits. *Structural Equation Modeling, 9*, 151–173.
- Little, T. D., Lindenberger, U., & Nesselrode, J. R. (1999). On selecting indicators for multivariate measurement and modeling with latent variables: when "good" indicators are bad and "bad" indicators are good. *Psychological Methods, 4*, 192–211.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3–34). New York: Basic Books.
- Meeus, W., Iedema, J., Maassen, G., & Engels, R. (2005). Separation-individuation revisited: on the interplay of parent-adolescent relations, identity and emotional adjustment in adolescence. *Journal of Adolescence, 28*, 89–106.
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367–389). New York: Wiley.
- Richards, J. M., Butler, E. A., & Gross, J. J. (2003). Emotion regulation in romantic relationships: the cognitive consequences of concealing feelings. *Journal of Social and Personal Relationships, 5*, 599–620.
- Rogers, C. R. (1951). *Client centered therapy*. Boston: Houghton-Mifflin.
- Rogers, C. (1959). A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework. In S. Koch (Ed.), *Formulations of the person and the social context. Psychology: A study of a science, Vol. 3*. New York: McGraw Hill.
- Rogers, C. R. (1961). *On becoming a person*. Boston: Houghton-Mifflin.
- Roth, G. (2008). Perceived parental conditional regard and autonomy support as predictors of young adults' self- versus other-oriented prosocial tendencies. *Journal of Personality, 76*, 513–534.
- Roth, G., Assor, A., Kanat-Maymon, Y., & Kaplan, H. (2006). Assessing the experience of autonomy in new cultures and contexts. *Motivation and Emotion, 30*, 365–376.
- Roth, G., Assor, A., Kaplan, H., & Kanat-Maymon, Y. (2007). Perceived autonomy in teaching: how self-determined teaching may lead to self-determined learning. *Journal of Educational Psychology, 99*, 761–774.
- Roth, G., Assor, A., Niemiec, C. P., Ryan, R. M., & Deci, E. L. (2009). The negative emotional and behavioral consequences of parental conditional regard: comparing positive conditional regard, negative conditional regard, and autonomy support as parenting practices. *Developmental Psychology, 45*, 1119–1142.
- Roth, G., Ron, T., & Benita, M. (2009). Mothers' parenting practices and adolescents' learning from their mistakes in class: the mediating role of adolescent's self-disclosure. *Learning and Instruction, 19*, 506–512.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57*, 749–761.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist, 55*, 68–78.
- Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (2006). The significance of autonomy and autonomy support in psychological development and psychopathology. In D. Cicchetti, & D. Cohen (Eds.), *Theory and methods* (2nd ed.). *Developmental psychopathology, Vol. 1* (pp. 795–849). New York: Wiley.

- Smetana, J. G. (2006). Social domain theory: consistencies and variations in children's moral and social judgments. In M. Killen, & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Mahwah, NJ: Erlbaum.
- Smetana, J. G., Metzger, A., Gettman, D. C., & Champion-Barr, N. (2006). Disclosure and secrecy in adolescent–parent relationships. *Child Development*, 77, 201–217.
- Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco: Jossey-Bass.
- Vansteenkiste, M., Zhou, M., Lens, W., & Soenens, B. (2005). Experiences of autonomy and control among Chinese learners: vitalizing or immobilizing? *Journal of Educational Psychology*, 97, 468–483.