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Using Maternal Conditional Positive Regard to Promote Anxiety Suppression in Adolescents: A Benign Strategy?

Maya Israeli-Halevi, Avi Assor, and Guy Roth

SYNOPSIS

Objective. The focus of the current article was on the parenting strategy of using maternal conditional positive regard to promote adolescents' suppression of anxiety to assess whether this strategy is benign or maladaptive. **Method.** Two studies ($N = 230$) examined mothers' and adolescents' reports of maternal conditional regard, adolescents' motivation, and mothers' contingent self-esteem, general warmth, and neuroticism. **Results.** Study 1 showed that mothers' self-reported maternal conditional positive regard predicted adolescents' perceptions of mothers' use of maternal conditional positive regard, which then predicted adolescents' introjected (stressful and internally controlling) motivation to suppress anxiety. These effects obtained when controlling for Maternal Conditional Negative Regard. Study 2 showed that mothers' contingent self-esteem predicted mother-reported maternal conditional positive regard and maternal conditional negative regard which, respectively, predicted adolescents' experience of mothers' using maternal conditional positive regard and maternal conditional negative regard. These effects were obtained when controlling for mothers' general warmth and neuroticism. **Conclusions.** The association of maternal conditional positive regard with mothers' contingent self-esteem and adolescents' introjected motivation suggests that this seemingly benign practice might be a product and a cause of psychological difficulties, and therefore, should be minimized.

INTRODUCTION

The present research focuses on the socializing practice of using mothers' conditional positive regard (MCPR) to promote adolescents' tendency to suppress fear and anxiety (e.g., Assor, Kanat-Maymon, & Roth, 2014; Assor & Roth, 2005; Assor & Tal, 2012; Roth & Assor, 2010; Roth, Assor, Niemiec, Ryan, & Deci, 2009). MCPR refers to mothers' tendency to provide more affection and esteem than usual when their children enact parentally valued behaviors. Past work has shown that mothers also use a more harmful and punitive type of conditional regard strategy: maternal conditional negative regard (MCNR), in which they provide less affection and esteem when children do not enact valued behaviors (Assor & Tal, 2012; Roth et al., 2009). Processes similar to MCNR have been examined in relation to the construct of love-withdrawal (e.g., Elliot & Thrash, 2004; Hoffman, 1970; Sears, Maccoby, & Levin, 1957) and to some extent the construct of psychological control (Barber, 1996; Soenens & Vansteenkiste, 2010). However, the concept of MCPR differs from the concepts of love withdrawal and psychological control (and MCNR) in that MCPR involves attempts to control via the provision of more affection rather than the withdrawal of affection. MCPR has been neglected in empirical

research. The phenomenon of MCPR was also hardly examined. Moreover, the practice of MCPR is of special interest because of its seemingly more benign nature.

Mothers respond to their adolescents' negative emotions in different ways (e.g., Eisenberg, Cumberland, & Spinrad, 1998; Katz, Maliken, & Stettler, 2012), and some responses appear to be similar to the socializing strategy of using MCNR to promote suppression of negative emotions. For example, Eisenberg, Fabes, and Murphy (1996) identified a specific type of invalidating response in which parents de-value the adolescent because of the adolescent's distressed emotional reaction. Gottman, Katz, and Hooven (1997) suggested that some parents believe that, in general, negative emotions are undesirable and their expression should be avoided by everyone. These parents may try to teach their adolescents to minimize the experience and expression of negative emotion by voicing disapproval and giving less affection when the adolescent expresses negative emotions (i.e., MCNR). Eisenberg et al. (1998) and Krause, Mendelson, and Lynch (2003) showed that parents' tendency to minimize adolescents' experience and expression of negative emotions is associated with maladaptive adolescents' outcomes, such as low social competence and psychological distress.

Whereas research has examined strategies similar to MCNR, it appears that the strategy of using MCPR to suppress negative emotion is only beginning to be investigated in a systematic way. Research on MCPR seems particularly important because MCPR involves apparently more pleasant means to promote emotion suppression (i.e., providing more affection or appreciation when adolescents suppress negative emotions). Thus, it is interesting to examine if this seemingly less harmful practice is associated with maladaptive features in adolescents and parents. Specifically, based on the Self-Determination Theory (SDT; Ryan & Deci, 2000) and indirect evidence from previous SDT-based studies in various domains (e.g., Assor, 2011; Assor, Israeli-Halevi, Freed, Roth, & Deci, 2007; Assor et al., 2014; Assor, Roth, & Deci, 2004; Assor & Tal, 2012; Roth, 2008; Roth & Assor, 2010; Roth et al., 2009), the hypothesis that the use of MCPR was examined, despite its seemingly benign nature, is associated with the maladaptive adolescent outcome of a stressful motivation to suppress anxiety and the maternal attribute of contingent self-esteem.

Presently, the correlates of parental conditional regard in the emotion regulation domain were examined in four studies (Assor et al., 2004; Roth & Assor, 2010, 2012; Roth et al., 2009). In the first direct study of parental conditional regard and its correlates, Assor et al. (2004) found that college students' perceptions of their parents' use of conditional regard predicted students' introjected motivation to suppress their negative feelings, and a number of other maladaptive students' attributes that are often associated with introjected motivation. According to SDT (Assor, Vansteenkiste, & Kaplan, 2009; Ryan, Deci, Grolnick, & La Guardia, 2006), introjected motivation is a stressful and emotionally harmful type of disposition, which pressures people to engage in a particular action to avoid feeling unworthy and ashamed of themselves or to feel worthy and grand. Thus, introjected motivation forces people to perform specific actions not because they understand and identify with the value of these actions, but to protect their sense of esteem and love-worthiness. Introjected motivation has considerable psychological costs, including anxiety, sense of internal compulsion, fluctuations of self-esteem, poor coping with failure, experiencing conflicted emotions regarding preferred outcomes, and lack of self-cohesion (e.g., Assor et al., 2004; Koestner, Losier, Vallerand, & Carducci, 1996; Ryan & Connell, 1989; Ryan, Rigby, & King, 1993).

Research focusing specifically on the tendency to suppress expression of negative feelings, such as anxiety, has shown that this tendency is associated with maladaptive functioning. Socially, emotion suppression is associated with avoidance of close relationships (e.g., Butler et al., 2003; English, John, Srivastava, & Gross, 2012; Roth & Assor, 2012; Srivastava, Tamir, McGonigal, John, & Gross, 2009). Emotion suppression is accompanied by low self-esteem, negative emotions, depressive symptoms, and feelings of in-authenticity (e.g., Gross, 2013; Nezlek & Kuppens, 2008). Physiologically, emotion suppression is associated with lower C-reactive protein, a marker of inflammation that predicts cardiovascular disease (Appleton, Buka, Loucks, Gilman, & Kubzansky, 2013). Similarly, conscious attempts to suppress thoughts about undesired emotions and events often increase obsessive rumination, depressive feelings, and unpleasant self-related thoughts (e.g., Wegner, 1989).

Overall then, it appears that there is considerable evidence suggesting that introjected motivation to suppress anxiety is associated with harmful personal consequences.

A second study of parental conditional regard in the domain of emotion regulation was conducted by Roth and Assor (2012). Parents' use of conditional regard to suppress offspring's fear and sadness predicted offspring's tendency to suppress fear and sadness, which in turn predicted poor intimacy capacity in romantic relationships. Roth et al. (2009) proposed that it is important to differentiate between two types of parental conditional regard: positive and negative. They further posited that only conditional positive regard promotes introjected motivation to enact parentally valued behaviors. Thus, in this type of parental strategy, adolescents' hope of winning parental affection and esteem drives them to act in line with parental expectations. Results obtained by Roth et al. (2009) clearly supported the above predictions. Finally, findings obtained by Roth and Assor (2010) supported the hypothesis that mothers' use of conditional positive regard to promote emotion suppression is associated with non-optimal adolescents' outcomes.

Objectives of the Present Research

The results obtained by Roth and Assor (2010) and Roth et al. (2009) clearly suggest that MCPR is associated with maladaptive socio-emotional correlates. Yet, there are a number of questions concerning MCPR that remain open, and which the studies presented herein address.

The first question refers to the assessment of mothers' use of MCPR to suppress adolescents' expression of anxiety and fear. Roth et al. (2009) assessed MCPR only via adolescents' self-reports. However, adolescents' descriptions of their mothers' as using this strategy might not accurately reflect mothers' own thoughts concerning their response strategies. Consistent with this view, research on the correspondence between parents' and adolescents' reports has yielded inconclusive results (e.g., Gaylord, Kitzmann, & Coleman, 2003; Tein, Roosa, & Michaels, 1994).

A second issue worthy of further investigation refers to the process through which mothers' explicit tendency to use MCPR promotes introjected motivation in adolescents. Previous SDT-based research (Assor & Tal, 2012; Roth et al., 2009) posited that mothers' explicit tendency to use the strategy of MCPR leads to introjected motivation by creating a perception or a representation (in adolescents) of increases in mothers' regard as dependent on the adolescent compliance with mothers' expectations. Accordingly, adolescents' perceptions of mothers' regard as dependent on compliance

with mothers' expectations are considered to constitute the underlying psychological foundation for the harmful motivational effects of conditional positive regard. Thus, the SDT view posits that mothers' explicit tendency to use conditional positive regard not only leads to specific harmful motivational effects on adolescents, but to a more complex psychological process involving first representations of mothers' reactions, which then produce specific motivational and behavioral reactions in adolescents. The present research examines whether empirical findings are consistent with the psychological process described above. Thus, the aim of the present study was to use both mothers' and adolescents' reports of MCPR, which allowed for the examination of the degree of convergence between these reports and for testing of a mediation sequence in which adolescents' representations mediate effects of mother-reported inclination to use MCPR on adolescents' outcomes.

Third, given the psychological toll that MCPR can have on adolescents, understanding maternal antecedents of MCPR is important. Therefore, it is important to identify maternal attributes which might lead mothers' to use MCPR to promote suppression of negative emotions in adolescents. In the present study, one such maternal disposition was examined: contingent self-esteem. Grolnick, Price, Beiswenger, and Sauck (2007) showed that parents who reported that their self-worth depends on their adolescents' social conduct endorsed controlling childrearing attitudes. Ng, Pomerantz, and Deng (2014), found that in both American and a Chinese samples, mothers' self-worth that is contingent on adolescents' achievement predicts maternal psychological control. Similar findings were recently reported by Wuyts, Vansteenkiste, Soenens, Chen, and Assor (2015). Finally, Assor et al. (2007) found that parents whose self-esteem hinges on their adolescents' academic achievement were perceived by their adolescents as using the strategy of MCPR to promote academic achievement.

The present research goes a step beyond the previous studies, by moving from the specific disposition of adolescents-contingent maternal self-worth to the more general personality disposition of contingent self-esteem as conceptualized by Crocker and Park (2004) and by Kernis (2003). Individuals with highly contingent self-esteem are concerned about where they stand on various evaluative dimensions, place great importance on how they are viewed by others, and engage in a continual process of setting and meeting evaluative standards to validate their positive self-feelings. Following the logic of past research on adolescent-contingent parental self-worth (e.g., Grolnick et al., 2007), it was hypothesized that mothers with contingent self-esteem use the strategies of MCPR and MCNR to pressure their adolescents to suppress their anxiety, in an attempt to minimize threats to mothers' own self-esteem and support the self-reassuring view that both they and their adolescents are emotionally "strong" and they as mothers have done a good job rearing strong and resilient adolescents.

Hypotheses

The current predictions concerning MCPR were examined by means of two studies of mothers and their adolescent. The authors chose to focus on adolescents to maintain consistency with previous research (Roth et al., 2009) and because most adolescents are capable of detecting and reporting relatively subtle psychosocial processes, such as conditional regard and introjected motivation.

Based on the foregoing considerations, the following hypotheses were formulated.

Hypothesis 1: Mothers' self-reported use of the strategy of maternal conditional positive regard (M-MCPR) to promote the suppression of anxiety by their adolescents (M-MCPR) predicts adolescents' perceptions that their mothers provide them more regard when they suppress their anxiety (C-MCPR), which in turn predicts offspring's introjected motivation to suppress anxiety.

Hypothesis 2: The MCPR effects specified in Hypothesis 1 are obtained when controlling for the effects of mothers' use of MCNR.

Hypothesis 3: Mothers' contingent self-esteem predicts mother-reported use of conditional positive regard to promote anxiety suppression (M-MCPR), which in turn predicts adolescents' perceptions that their mothers provide them more regard when they suppress their anxiety (C-MCPR).

Hypothesis 4: Mothers' contingent self-esteem predicts M-MCNR, which in turn, predicts C-MCNR.

Hypothesis 5: The effect of contingent self-esteem on M-MCPR emerges when the effect of M-MCNR is controlled.

STUDY 1

Study 1 examined Hypotheses 1 and 2.

Method

Participants and procedures. Participants were 115 Israeli mothers and their adolescent (53% female), residing in a neighborhood including mostly lower middle-class families. The mean age of the adolescents was 15 years and 1 month ($SD = .67$; grades 9–10), and the mean age of the mothers was 44 years ($SD = 5.91$). A research assistant administered, at the mothers' home, questionnaires assessing mothers' MCPR and MCNR (i.e., M-MCPR and M-MCNR), and social desirability bias. Adolescents completed, at school, questionnaires assessing introjected motivation, perceptions of mothers' MCPR and MCNR (i.e., C-MCPR and C-MCNR), and social desirability bias. Scales' items were mixed. Participants' responses were made on a 6-point Likert-type scale, ranging from 1 (*not true at all*) to 6 (*very true*).

Adolescents' questionnaires.

Perceptions of mothers' regard as dependent on anxiety suppression. Adolescents' perceptions of mothers' MCPR and MCNR regarding anxiety suppression were assessed by two slightly modified versions of the scales developed and validated by Roth et al. (2009), including four C-MCPR items and five C-MCNR items. Evidence for the construct validity of these scales comes from several studies. Roth et al. (2009) showed that, as can be theoretically expected: (1) adolescents' perceptions of their parents CPR predicted introjected motivation, which in turn predicted suppressive emotion regulation, and (2) adolescents-perceived CNR predicted resentment toward parents, which in turn predicted emotion dis-regulation. A conceptually similar differential pattern was reported by Assor and Tal (2012). Assor, Eilat, and Roth (2009) replicated Roth et al.'s (2009) findings that adolescents' perceived Parental Conditional Positive Regard (PCPR)

predicted adolescents' suppressive emotion regulation whereas adolescents' perceived Parental Conditional Negative Regard (PCNR) predicted emotion dys-regulation.

Minor changes were introduced to include items capturing mothers' provision and withdrawal of esteem (in addition to warmth) as a function of adolescents' compliance. An illustrative C-MCNR item: "If I show that I am anxious or stressed, my mother would make me feel less worthy." An illustrative C-MCPR item: "When I am anxious or stressed—but able to conceal it—my mother shows me more affection and esteem than she usually does." Factor analysis with Varimax rotation yielded two distinct factors, with C-MCNR items loading on one factor, eigenvalue = 2.51, and C-MCPR items loading on a second factor, eigenvalue = 2.07. All items had a loading above .49 on their designated factor, and there were no cross-loadings higher than .36. The two factors accounted for 51% of the variance. Cronbach's alphas were .66 for C-MCNR and .72 for C-MCPR.

Introjected motivation to suppress anxiety. This variable was assessed by Assor Vansteenkiste, and Kaplan (2009) using well-validated measures of introjected avoidance and introjected approach motivation. Approach introjected motivation refers to the desire to approach or reach the feeling that one is especially and unusually worthy; avoidance introjected motivation refers to the desire to avoid feeling that one is unworthy (Assor, Vansteenkiste, & Kaplan, 2009). Approach-oriented introjected motivation was assessed by three items. An illustrative item is: "I often conceal my anxiety and don't show it so I can feel good about myself." Avoidance-oriented introjected motivation was assessed by three items. An illustrative item is: "I often conceal my anxiety and don't show it because I will feel ashamed of myself if I didn't." Cronbach alphas were .75 and .83 for the avoidance sub-scale and the approach sub-scale, respectively. According to SDT (Assor, Vansteenkiste, & Kaplan, 2009), approach and avoidance introjection have much in common because both reflect introjection motivation that is concerned with self-worth and social approval. Therefore, in the structural equations modeling (SEM) analysis testing the hypotheses (see Figure 1), the latent construct of introjection was assessed by the observed approach and avoidance introjection scales.

Social desirability bias. A 5-item version of Crowne and Marlowe's (1964) scale was used. This version was used in previous research by Assor et al. (2007) and by Assor Eilat et al. (2009). A sample item is: "I never curse." Cronbach α was .64.

Mothers' questionnaires.

Mothers' use of conditional positive and negative regard to promote anxiety suppression. These two 4-item scales are adapted from the C-MCPR and C-MCNR adolescents-reports measures presented above. Evidence supporting the construct validity of mothers' reports of MCPR comes from Roth and Assor (2010), which showed that mothers' reports of using CPR to suppress adolescents' sadness expression predicted adolescents' reports of not experiencing sadness.

Pilot interviews and open-response questionnaires showed that the wording of some of the items of the C-MCNR adolescent-report scales had to be changed so that mothers could feel more comfortable as they endorse them. Specifically, the M-MCNR items were modified to include more behavioral responses and fewer words indicating that adolescents are not worthy or would get less affection if they fail to suppress their anxiety.

An illustrative MCNR item is: “If my child shows that she is very anxious or stressed – I tell him that when he acts like that I prefer not to speak with him for a while.” The items of the mother-report MCPR scale (M-MCPR) were very similar to the items of the child-report MCPR scale (C-MCPR). An illustrative M-MCPR item is: “If my child is anxious or stressed and is able to conceal it – I show him more affection and esteem than I usually do.”

Factor analysis with Varimax rotation showed that participants clearly distinguished between MCNR and MCPR, with M-MCPR items loading on one factor (eigenvalue = 2.55), and M-MCNR items loading on another factor (eigenvalue = 2.21). All the items had a loading above .64 on their designated factor, and there were no cross-loadings higher than .34. The two factors accounted for 59.5% of the variance. Cronbach’s α were .71 for M-MCNR and .81 for M-MCPR.

Social desirability. Similar to the scale used with adolescents, the 5-item short version of Crowne and Marlowe’s (1964) scale was used to control for mothers’ social desirability bias. A sample item is “I don’t care what other people think about me.” Cronbach α was .60.

Results

Preliminary analyses. Table 1 presents descriptive statistics and correlations among the study variables. Adolescents’ social desirability scores correlated with introjected motivation, $r(113) = .22, p < .05$. Therefore, the various analyses examining the main hypotheses were conducted controlling for the effects of social desirability. Results of these analyses supported the hypotheses, and produced very similar results to the analyses conducted without controlling for the effects of social desirability. Importantly, mothers’ MCPR reports (M-MCPR) correlated positively and significantly with adolescents’ experiences of MCPR (C-MCPR), but not with C-MCNR. Similarly, mothers’ MCNR reports (M-MCNR) correlated significantly and positively with adolescents’ experiences of MCNR (C-MCNR), but not with C-MCPR. This pattern of correlations supports the construct validity of both adolescents and mothers indicators of MCPR and MCNR.

As expected theoretically and in line with previous research (e.g., Assor et al., 2014; Assor & Tal, 2012; Roth et al., 2009), M-MCPR correlated positively and significantly

TABLE 1
Descriptive Statistics and Correlations among the Variables in Study 1

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1 Mother-reported M-MCPR	3.26	1.25	–					
2 Mother-reported M-MCNR	2.61	1.09	.44**	–				
3 Child-reported C-MCPR	2.09	.87	.24*	.18	–			
4 Child-reported C-MCNR	1.46	.54	.16	.28**	.42**	–		
5 Introjected motivation	2.48	1.09	.20*	.11	.54**	.32**	–	
6 C-social desirability	1.4	.28	.04	–.05	.15	–.08	.22*	–
7 M-social desirability	1.5	.23	.08	–.08	.00	–.02	.09	.25**

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

with introjected motivation, whereas the correlation of M-MCNR with introjected motivation was not significant. The difference between the correlations of M-MCPR versus M-MCNR with introjected motivation, .20 versus .11, *ns*, was in the predicted direction, but was not significant, $Z = .69$, *ns*). As expected, C-MCPR had a more positive correlation with introjected motivation than did C-MCNR, .54 versus .32, and the difference between the two correlation coefficients was significant, $Z = 2.04$, $p < .04$, two tailed. These findings are consistent with the assumption that CPR tends to be a stronger trigger of introjected motivation than CNR. However, they suggest that CNR may be linked to introjected motivation.

Primary analyses of predicted relations. A SEM was conducted with latent variables, using AMOS 5.0 (Arbuckle & Wothke, 2003) with maximum likelihood estimation to test the hypothesis that M-MCPR would predict C-MCPR, which in turn would predict introjected motivation. The latent variables of M-MCPR and C-MCPR were each assessed by the four items comprising each scale. The latent variable of introjected motivation was assessed by the approach and avoidance introjection subscales. As shown in Figure 1, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. The fit indices were adequate, $\chi^2(33) = 48.82$, $p < .04$; $\chi^2/df = 1.48$; CFI = .96; Incremental fit index (IFI) = .96; root mean square error of approximation (RMSEA) = .066. To examine if adolescents' experience of MCPR (C-MCPR) mediates the relation between mothers' self-reported use of MCNR (M-MCNR) and adolescents' introjected motivation, we ran the bootstrapping procedure (Preacher & Hayes, 2008). Results supported the mediation hypothesis because the estimates of the 95% confidence intervals of the indirect effect were all above zero, .03–.21. To examine whether the mediation is full the authors added an additional path going from M-MCPR to introjected motivation to the SEM model in Figure 1. Results showed that the direct effect was clearly non-significant, $\beta = .06$, *ns*.

To increase confidence in the plausibility of this model, the model in Figure 1 was examined to see if the data fits better than other theoretically plausible models. Two alternative models were tested. According to the first alternative model, adolescents' stressed introjected motivation causes mothers' to respond with a controlling strategy, which then causes adolescents to perceive their mothers as behaving in this way. The second model assumes reversed causality; that is, introjected adolescent motivation

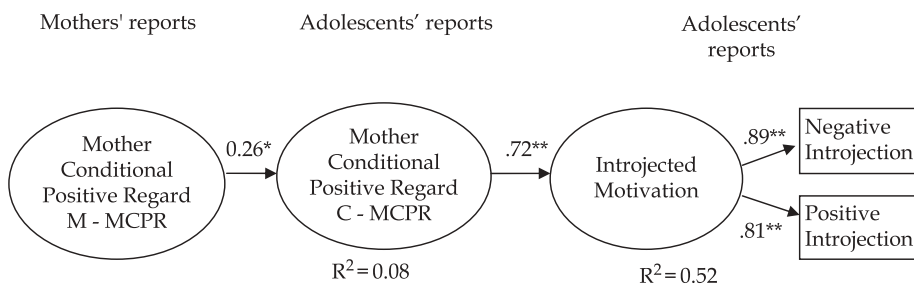


FIGURE 1

Adolescents' perceptions of mothers' use of the MCPR as a mediator of the effect of mother-reported use of MCPR on adolescents' introjected motivation ($\chi^2(33) = 48.82$, $p < .04$; $\chi^2/df = 1.48$; CFI = .96; IFI = .96; RMSEA = .066).

leads adolescents to experience their mothers as higher on CPR which, in turn, contributes to mothers' reports of using CPR. SEM and mediation analyses did not support these alternative models. To examine whether the gender of the adolescent moderates the relations between MCPR (as reported by mothers or adolescents) and adolescents' introjected motivation two regression analyses were conducted. In these analyses, introjected motivation was regressed on M-MCPR or C-MCPR, adolescents' gender, and a term reflecting the interaction between gender and M-MCPR or C-MCPR. Results showed that the interaction with gender was not significant in any of the analyses.

In the next step, the authors tested if the model of MCPR effects examined in Figure 1 holds when the effects of MCNR were controlled. To that end, the authors added to the SEM model in Figure 1 another latent independent variable: M-MCNR, assessed via the four items comprising this scale. In this new model, (1) M-MCNR was linked with a bi-directional path to the other independent variable: M-MCPR, and (2) a path was drawn from M-MCNR to the mediators and the dependent variable depicted in Figure 1. Results showed that the indirect M-MCPR effect depicted in Figure 1 remained significant and almost did not change as a function of adding M-MCNR. Importantly, the path coefficients going from M-MCNR to C-MCPR and from M-MCNR to introjected motivation were not significant and very small, $\beta = .08, ns$, for the path to C-MCPR, $\beta = -.01, ns$, for the path to introjected motivation.

To examine if the effect of adolescent reported use of conditional positive regard (C-MCPR) on introjected motivation emerges when the effect of adolescent reported use of conditional negative regard (C-MCNR) was controlled, a model was created in which both C-MCPR and C-MCNR function as predictors of introjected motivation. Results of SEM analysis showed that the C-MCPR effect depicted in Figure 1 remained significant when C-MCNR was added to the model.

Overall, the effects of MCPR cannot be attributed to the somewhat similar parental strategy of negative conditional regard.

Brief Discussion

Results supported the hypothesis that mothers' tendency to use conditional positive regard (MCPR) to promote anxiety suppression predicts adolescents' perception that their mother provides them with more regard when they suppress their anxiety, which in turn predicts adolescents' introjected motivation to suppress anxiety. Importantly, the relations between mothers' and adolescents' reports of MCPR and adolescents' introjected motivation emerged when mothers' use of conditional negative regard (MCNR) and social desirability bias were statistically controlled.

STUDY 2

Study 2 had four aims. First, Hypotheses 3 and 4 were examined, positing that mothers' contingent self-esteem predicts mothers' explicit tendency to use both positive and negative conditional regard to foster anxiety suppression in their adolescents, which in turn predicts adolescents' experiencing their mothers as using these specific strategies.

A second aim was to examine whether the expected relations between mothers' contingent self-esteem and mothers' self-reported use of conditional positive and negative regard (M-MCPR and M-MCNR) would emerge when statistically controlling for the

more general disposition of neuroticism (e.g., John, Donahue, & Kentle, 1991). Neurotics tend to be irritable and angry (e.g., Larsen & Ketelaar, 1989, 1991), and therefore, they might be particularly inclined to use controlling strategies when their adolescents express negative feelings. Consistent with this view, highly neurotic parents approach and view their adolescents in a less accepting and more negative way (e.g., McNulty, 2008). However, because the effect of contingent self-esteem on the use of controlling practices is not assumed to be motivated by irritability, it was hypothesized that contingent self-esteem will predict M-MCPR and M-MCNR when controlling for mothers' neuroticism.

A third aim was to examine whether the expected relations between mother-reported conditional positive regard (M-MCPR) and adolescents' perception of mother's use of conditional positive regard (C-MCPR) would emerge when controlling for the effects of mothers' general parental warmth. Given the importance of maternal warmth (e.g., MacDonald, 1992), one might claim that adolescents' MCPR reports reflect mothers' general tendency to provide warmth, rather than mothers' use of the specific MCPR strategy to shape adolescents' mode of anxiety regulation. However, in line with the view of MCPR as a distinct parental strategy (e.g., Assor & Tal, 2012) it was expected that mothers' self-reported use of MCPR would predict adolescents' perception of mothers' use of this strategy when the effect of mothers' self-reported general maternal warmth is controlled.

Finally, testing patterns specified in Hypotheses 3 and 4 allowed the authors to try to replicate the finding that mothers' self-reported tendencies to use the MCPR and MCNR strategies predict offspring's perception of mother as using these strategies.

Study 2 focused on adolescents almost 2 years younger than those who participated in Study 1. Whereas the participants of Study 1 were in grades 9–10, the participants of Study 2 were in grades 7–8. Studying younger adolescents allowed us to examine whether mothers' and adolescents' perceptions of MCPR would correlate when adolescents are younger. Research indicates that there are more intense and more frequent conflicts between adolescents and their parents in early adolescence (e.g., Allison & Schultz, 2004; Laursen, Coy, & Collins, 1998). As intense conflicts may generate feelings that bias perceptions of both parents and adolescents, it is interesting to examine whether the correspondence observed in mid adolescence emerges in early adolescence.

Method

Participants and procedure. Participants were 115 Israeli mothers and their adolescents (58% females). The adolescents' mean age was 13 years and 5 months ($SD = .70$ years; grades 7–8); mothers' mean age was 43 years and 6 months ($SD = 5.47$ years). The sample demographics and data collection process were the same as in Study 1.

Questionnaires.

Adolescents' and mothers' perceptions of mothers' regard as dependent on anxiety suppression. These variables were assessed by the same scales used in Study 1. Factor analyses again yielded the two expected factors for both mothers' and adolescents' reports. Cronbach alphas were .80 and .81 for C-MCNR and C-MCPR, respectively, and .64 and .73 for M-MCNR and M-MCPR, respectively.

Social desirability was assessed via the same scale used in Study 1, with adolescents' Cronbach $\alpha = .62$. and mothers' Cronbach $\alpha = .60$.

Mothers' contingent self-esteem. This variable was assessed by the contingent self-esteem scale (Kernis, 2003; Patrick, Neighbors, & Knee, 2004). It includes three subscales: (1) dependence of self-esteem on achievements and performance "My self-esteem is strongly dependent on my performance level at various tasks," four items, Cronbach Alpha = .72; (2) dependence of self-esteem on physical appearance "My general feeling concerning myself is strongly affected by how good I look," four items, Cronbach Alpha = .65; and (3) dependence of self-esteem on social acceptance "My general feeling concerning myself is strongly affected by the extent to which people love and accept me," seven items, Cronbach Alpha = .79. Cronbach alpha of the total scale was .88.

Neuroticism. This variable was assessed by a 6-item version of the 10 items of Goldberg et al. (2006) neuroticism scale. An illustrative item is: "I often feel blue." Cronbach Alpha was .77. In another sample of 90 mothers of a similar age (Assor et al., 2007), the shortened scale had a correlation of .82 with the complete scale.

Maternal warmth. This was assessed via ten items capturing the acceptance dimension in Schaefer's (1965) child report of parental behavior inventory (CRPBI), which were used by Barber, Stolz, and Olsen (2005) parental support scale. The items reflect the warmth dimension as conceived by Davidov and Grusec (2006) and MacDonald (1992) in that they directly refer to the mother's attempts to convey affection and warmth to her child. Sample items are: "I give my son/daughter a lot of care and attention." and "I almost always talk to my son/daughter in a warm and friendly tone."

Results

Preliminary analyses. Table 2 presents descriptive statistics and correlations among the study variables. As in Study 1, mothers' MCPR reports (M-MCPR) correlated positively and significantly with adolescents' perceptions of mothers' use of MCNR (C-MCNR), but not with adolescents' perceptions of mothers' use of MCPR (C-MCPR). Similarly, mothers' M-MCNR reports correlated significantly and positively with adolescents' C-MCNR, but not with C-MCPR. This pattern again supports the construct validity of the adolescents' and mothers MCPR and MCNR measures.

The pattern of correlations obtained between mothers' self-reports of warmth and mothers' and adolescents' reports of MCPR and MCNR indicated that MCPR and MCNR are clearly distinct from maternal warmth. However, given the significant negative correlation between maternal warmth and C-MCNR, the relation between M-MCNR on C-MCNR was examined when the effect of maternal warmth was controlled. Regression analysis showed that M-MCNR predicted C-MCNR when the effect of mothers' self-reported warmth was controlled for; $\beta = .25, p < .02$.

Primary analyses. Table 2 indicates that each mother-reported strategy had a significant correlation only with the corresponding adolescent-reported strategy. As shown in Figure 2, the correspondence between mothers and adolescents reports was examined via SEM analyses with latent variables, where M-MCPR, C-MCPR, and M-MCNR were each assessed by four items and C-MCNR was assessed by five items. As expected, the coefficients of the paths from M-MCPR to C-MCPR and from M-MCNR to C-MCNR

TABLE 2
Descriptive Statistics and Correlations among the Variables in Study 2

	M	SD	1	2	3	4	5	6	7	8
1 Mothers' contingent self-esteem	3.67	.78	—							
2 Mother-reported M-MCPR	3.34	1.09	.45**	—						
3 Mother-reported M-MCNR	2.29	.88	.38**	.37**	—					
4 Child-reported C-MCPR	2.26	1.07	.19*	.26**	.14	—				
5 Child-reported C-MCNR	1.57	.68	.23*	.13	.24*	.44**	—			
6 Mother-reported neuroticism	2.01	.70	.31**	.22*	.37**	.07	.21*	—		
7 Mother reported warmth and support	5.32	.64	.08	.07	-.10	-.04	-.28**	-.24*	—	
8 Social desirability child	1.43	.23	-.08	-.15	-.26**	-.17	-.16	-.08	.07	—
9 Social desirability mother	1.42	.22	-.12	.12	-.01	.19*	.03	-.12	.00	.01

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

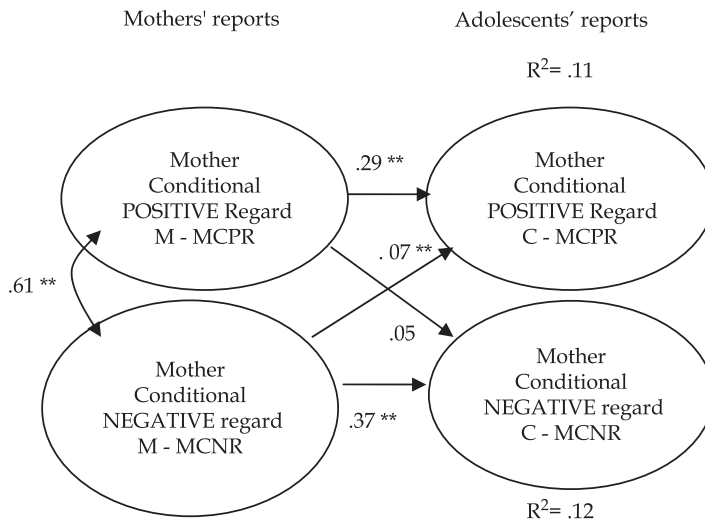


FIGURE 2

Mothers' reports of MCNR and MCPR as predictors of adolescents' perceptions of mothers' use of MCNR and MCPR (** $p < .01$. * $p < .05$; $\chi^2(114) = 139.25$, $p < .054$; $\chi^2/df = 1.22$; CFI = .95; IFI = .95; RMSEA = .044).

were both significant and in the predicted direction. None of the two mother reported variables had a significant effect on the non-corresponding child reported strategies.

SEM analyses with latent variables were used to test Hypotheses 3 and 4, predicting that mothers' contingent self-esteem enhances mothers' tendency to use both positive and negative conditional regard (M-MCPR and M-MCNR) to foster anxiety suppression in adolescents, which in turn leads adolescents to experience mothers as using these specific strategies. The latent constructs of MCPR and MCNR were the same as

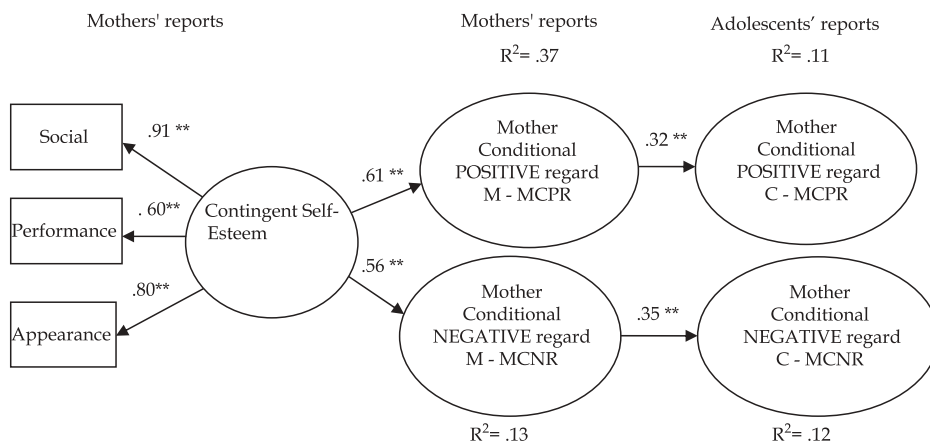


FIGURE 3

Mothers' contingent self-esteem as a predictor of mothers' and adolescents' reports of MCPR and MCNR (** $p < .01$. * $p < .05$; $\chi^2(168) = 230.81$, $p < .01$; $\chi^2/df = 1.37$; CFI = .91; IFI = .91; RMSEA = .057).

in Figure 2. The latent construct of contingent self-esteem was assessed by the three subscales of domain specific contingent self-esteem. As shown in Figure 3, results supported the hypotheses, as all path coefficients were significant and in the predicted directions. The fit indices were adequate, $\chi^2(168) = 230.81$, $p < .01$, $\chi^2/df = 1.37$, CFI = .91, IFI = .91, RMSEA = .057. To examine if M-MCPR mediates the effect of mothers' contingent self-esteem on C-MCPR, the bootstrapping procedure was ran. Results supported the mediation hypothesis as the estimates of the 95% confidence intervals of the indirect effect were all above zero, .02-.33. To examine whether the mediation is full or partial, two new models were constructed, each including one additional direct path. In the first model, a direct path going from mothers' contingent self-esteem to C-MCPR was added. Results showed that this path was not significant, $\beta = -.05$, *ns*. In the second model, a direct path was added going from mothers' contingent self-esteem to C-MCNR. This path was not significant, $\beta = .07$, *ns*. Thus, the findings suggested that mother-reported strategies of M-MCPR and M-MCNR function as full mediators. The bootstrapping procedure indicated that M-MCNR mediates the effect of contingent self-esteem on C-MCNR, with estimates of .003-.19.

Then, a partial correlation procedure was used to examine whether the effect of contingent self-esteem on mother reported MCPR will emerge when examined in relation to the part of the M-MCPR score that is unrelated to M-MCNR (residualized M-MCPR score from which the effect of M-MCNR was partialled out). A partial correlation of .35, $p < .01$, supported this prediction. Similarly, a partial correlation of .26, $p < .01$, suggested that the effect of contingent self-esteem on M-MCNR emerges when examined in relation to the part of M-MCNR score that is unrelated to M-MCPR.

To examine if the effects of contingent self-esteem on mothers' reported strategies emerge when controlling for mothers' neuroticism a SEM analysis was conducted with latent variables, in which mothers' self-reported neuroticism and contingent self-esteem were simultaneously examined as predictors of both M-MCPR and M-MCNR.

Neuroticism was assessed via two parcels (each parcel comprised of a random selection of three items). Results indicated that contingent self-esteem showed the expected positive effects on M-MCPR and M-MCNR, $\beta = 0.56, p < .01$; $\beta = 0.41, p < .01$; respectively, when the effect of neuroticism was controlled. Neuroticism had a significant effect on M-MCNR, $\beta = 0.43, p < .01$, but not on M-MCPR, $\beta = 0.10, ns$.

To examine if the effects of mother-reported strategies have significant effects on the corresponding adolescent-reported strategies when controlling for mothers' warmth, warmth was added as a third independent latent variable to the SEM model in [Figure 2](#). Warmth was assessed via three parcels (each parcel comprised of a random selection of three–four items). Results indicated that M-MCPR and M-MCNR had the expected effects on the corresponding adolescent-reported strategies of C-MCPR and C-MCNR, $\beta = 0.29, p < .01$; $\beta = 0.25, p < .05$, respectively. Mothers' warmth had a small non-significant effect on C-MCPR, $\beta = -.06, ns$, and a significant negative effect on C-MCNR, $\beta = -.38, p < .01$.

Finally, the authors examined, via regression analyses, whether adolescents' gender moderates each of the bi-variate relations hypothesized. In addition, two regression analyses were conducted in which both M-MCPR and M-MCNR and the two terms reflecting their interactions with gender, served as predictors of either C-MCPR or C-MCNR. Results showed that there were no significant interactions with adolescents' gender in any of the analyses.

Brief Discussion

Consistent with the hypotheses, mothers' contingent self-esteem predicted their self-reported use of the MCPR strategy, which in turn predicted adolescents' experience that their mothers provide more affection and esteem when they suppress their anxiety. As expected, mothers' contingent self-esteem predicted their self-reported use of the MCNR strategy, which then predicted adolescents' experience that their mothers provide less affection and esteem when they do not suppress their anxiety. The findings of Study 2 suggest that mothers' self-reported use of MCPR or MCNR and adolescents' perceptions of their mothers as using these strategies cannot be viewed as reflections of mothers' general warmth. Thus, consistent with the current view of MCPR and MCNR as distinct parental strategies (e.g., Assor et al., 2014) mothers' self-reported use of MCPR and MCNR was not associated with mothers' self-reported general warmth. Moreover, mothers' self-reported MCNR and MCPR predicted adolescents' perception of mothers' use of these strategies when the effect of mothers' self-reported general maternal warmth was controlled.

GENERAL DISCUSSION

The major aim of the present research was to examine the notion that mothers' explicit tendency to use the strategy of conditional positive regard (M-MCPR) to promote adolescents' suppression and concealment of their anxiety is associated with non-optimal adolescent and parent attributes. Specifically, the authors tested the hypotheses that mothers' self-reported use of MCPR correlates with stressful introjected motivation in their adolescent and is associated with mothers' experience of their self-esteem as fairly contingent on external outcomes. Results confirmed these hypotheses when the effects of MCPR and MCNR were examined simultaneously.

The findings demonstrating the non-optimal nature of the MCPR strategy appear fairly robust because they emerged when MCPR assessment was based on either the adolescents' or the mothers' reports, irrespective of the adolescents' gender, and when controlling for social desirability biases. The lack of relation between MCPR and general maternal warmth suggests that MCPR is a distinct maternal strategy whose negative correlates cannot be ascribed to low maternal warmth.

The evidence concerning the problematic correlates of MCPR is of special interest because the strategy of using positive rewards, such as parental appreciation and affection (rather than punishments or love-withdrawal), to promote desired child behavior can be viewed as benign and even desirable (e.g., Latham, 1994; Patterson & Gullion, 1976). Moreover, because adolescents spend considerably less time with their mothers than do younger children (e.g., Larson & Richards, 1991) and often have a wider network of relationships one might hypothesize that the MCPR strategy may not affect them negatively. However, contrary to these views and consistent with previous studies (e.g., Assor et al., 2014), the seemingly more benign MCPR strategy is associated with stressful, maladaptive, features in both adolescents and mothers.

The results of Study 1 are consistent with the hypothesis that mothers' self-reported tendency to use conditional positive regard to promote adolescents' compliance with their expectations not only predicts a fairly stressful type of adolescent motivation, but it does so by creating a non-optimal representation of mothers' expected behavior. The demonstration of this sequence is important because it suggests that parents' explicit tendency to use CPR as a socializing strategy may generate a complex psychological dynamics in adolescents, having both representational and motivational outcomes, which as shown in other studies (e.g., Assor et al., 2014), can lead to problematic socio-emotional behavior. The multi-level nature of the psychological dynamics created by parental conditional regard may account for its persistence across generations and its enduring negative effects (e.g., Assor et al., 2004).

The present research may point to relatively unexplored psychological processes through which some types of maternal control (mainly MCPR and guilt induction) promote adolescents' anxiety. Discussions of the psychological processes underlying the effect of parental control on adolescents' anxiety suggest that overinvolved and over-solicitous controlling parenting deprives adolescents of the opportunity to develop skills, coping mechanisms, and sense of efficacy; consequently, when facing difficult challenges, adolescents are anxious because they do not feel that they can cope effectively with these challenges without their parents' help (e.g., Chorpita & Barlow, 1998; Wood, 2006). Findings linking MCPR with introjected motivation point to a rather different process. Thus, controlling parenting involving MCPR is likely to promote adolescents' anxiety because parents' reactions themselves are experienced as a source of pressure and concern. Unlike in the case of overinvolvement, rather than being a source of potential (albeit efficacy-reducing) help, parents are experienced as a source of pressure because their great esteem and love would be considerably reduced if adolescents fail to cope with difficult challenges. In other words, in the case of overinvolvement the source of anxiety is an impaired sense of efficacy, but in the case of MCPR the source of the anxiety is a concern with potential loss of considerable parental esteem and love.

The present research draws attention to an important maladaptive correlate (perhaps even outcome) of parental control that was largely unnoticed and unexplored in empirical research on parental control: introjected motivation (e.g., Assor et al., 2014). Thus, while the current research suggests that MCPR is associated with maladaptive and

rigid effort investment, research on other types of controlling parenting suggests that these controlling practices are associated with lack of effort investment. For example, McLeod, Weisz, and Wood (2007) reported that controlling parental overinvolvement was associated with anxious child withdrawal, Assor and Tal (2012) reported similar findings for negative conditional regard, and Barber et al. (2005) and Soenens, Park, Vansteenkiste, and Mouratidis (2012) reported that psychological control was associated with depressive feelings.

Among the strengths of the present research was the use of both mothers' and adolescents' reports to assess mothers' use of conditional positive and negative regard. The significant correlations between mothers' and adolescents' reports, replicated in two studies, suggest that adolescents' reports of parents' use of conditional regard are at least partly valid. Therefore, it is reasonable to assume that past research concerning the harmful correlates of parents' conditional regard, relying only on adolescents' reports (e.g., Assor et al., 2004; Assor & Tal, 2012; Brambilla, Assor, Manzi, & Regalia, *in press*; Roth, 2008; Roth et al., 2009), captures, at least in part, parents' actual behavior.

The studies clearly have some limitations. One is its cross-sectional nature, which precludes causal inferences. Future studies may use longitudinal and experimental designs to try to assess causal effects. A second limitation involves the lack of observational measures of maternal conditional regard. The correspondence between mothers' and adolescents' reports of MCPR and MCNR suggests that these reports reflect maternal behaviors; yet, it would be useful to obtain more direct indicators of these behaviors, using observations or experience sampling techniques. A third limitation involves testing only one, albeit central, adolescent outcome (i.e., introjected motivation). Introjected motivation is associated with a number of maladaptive behaviors (e.g., Assor et al., 2004), but it would still be useful to assess additional maladaptive adolescent outcomes. A fourth limitation is the exclusive focus on mothers. Future research would need to examine if the processes demonstrated for mothers apply to fathers. A fifth limitation is the limited age range. In the present article, correspondence was shown between adolescent and mothers reports of MCPR and MCNR in both grades 9–10 (mean age = 15 years and 1 month) and grades 7–8 (mean age = 13 years and 5 months), representing early and mid-adolescence. However, there were relations that were only able to be tested in one age group. Future research may test the full model in both ages, as well in older and younger ages.

Finally, further studies could examine conditional parental regard in relation to other negative emotions besides anxiety, such as anger or sadness. Fear, sadness, and anger are of course different emotions. CPR was found to predict introjected motivation and suppressive regulation for all three emotions (e.g., Assor et al., 2014), but the suppression of fear may have some consequences that are different from those of anger or sadness suppression. For example, fear suppression, but not anger suppression, may lead to avoidance of help-seeking in distress situations because one does not allow himself/herself to feel the fear that triggers attachment-like help-seeking behaviors.

IMPLICATIONS FOR PRACTICE, APPLICATION, THEORY, AND POLICY

The current studies help to elaborate the dynamics of parental conditional positive regard and clarify potential negative consequences and antecedents associated with it. The associations of mothers' use of conditional positive regard (MCPR) with contingent

self-esteem in mothers and with the stressful introjected motivation in adolescents suggest that this seemingly more benign emotion-socializing strategy might be both a product and a cause of psychological difficulties and, therefore, should be minimized.

The findings concerning the role of general contingent self-esteem and adolescent-contingent parental self-worth (e.g., Ng et al., 2014; Wuyts et al., 2015) as predictors of controlling parental behaviors may have applied implications. Interventions aimed at improving parenting behavior often teach parents about desirable and undesirable parenting practices, and as such they may highlight the potential harms of MCPR, MCNR, and other controlling strategies. However, for some parents the use of controlling parenting strategies appears to originate from self-esteem deficiencies, so it is reasonable to expand the scope of parenting interventions to address self-esteem dynamics underlying the use of controlling strategies. Thus, at least for some parents, clarification of the problematic nature of MCPR and MCNR may not be enough unless accompanied by personal work on self-esteem difficulties and their impact on parenting.

ADDRESSES AND AFFILIATIONS

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