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Maladaptive perfectionistic self-representations: The mediational link between psychological control and adjustment ☆

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Abstract

This study examined the role of maladaptive perfectionism in the relation between perceived parental psychological control and both self-esteem and depression. In line with our hypotheses, evidence was found for the mediating role of maladaptive perfectionism. In addition, we examined the unique contribution of psychological control in predicting severity of depression, self-esteem and maladaptive perfectionism in comparison to other parenting style dimensions and parents' own maladaptive perfectionism. Although results showed significant convergence between mothers' and daughters' maladaptive perfectionism, psychological control was found to predict daughters' perfectionism in addition to their mothers' perfectionism. Finally, psychological control predicted severity of depression, self-esteem and maladaptive perfectionism in addition to other parenting dimensions (i.e., responsiveness and behavioral control). These findings suggest that the hypothesized pathway of parental representations over maladaptive perfectionistic self-representations to adjustment may apply specifically to the influence of psychological control.

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1. Introduction

Psychological control refers to parental behaviors that intrude upon children's thoughts and feelings, and has been characterized as typical of parents who excessively use manipulative parenting techniques such as guilt-induction and love withdrawal (Barber, 1996). It is believed that psychological control inhibits adolescents' development towards autonomy, interferes with the acquisition of a secure sense of self, and leads to disturbances in psychosocial functioning (Barber & Harmon, 2002). Although psychological control was central in early theories of socialization (e.g., Schaefer, 1965), systematic empirical research on this construct has only recently been undertaken (Barber, 1996; Barber, Olsen, & Shagle, 1994). Results of this research indicate that, among other negative outcomes, psychological control relates to depression and low self-esteem (Barber & Harmon, 2002; Caron, Weiss, & Harris, 2003). However, little is known about the mechanisms that establish this relation. Therefore, Barber, Bean, and Erickson (2002) have urged attention to the role of the processes that mediate this relation. The present study investigated whether maladaptive perfectionism mediates the link between psychological control and adjustment.

2. Maladaptive intrapersonal perfectionism

Perfectionism has been defined as the tendency to set excessively high standards, to rigidly adhere to these standards, and to engage in overly critical self-evaluations (Frost, Marten, Lahart, & Rosenblate, 1990; Shafran & Mansell, 2001). According to Shafran, Cooper, and Fairburn (2002, p. 778), perfectionism is present "when personally demanding standards are pursued despite significant adverse consequences". Perfectionists tend to define their self-worth in terms of achieving self-imposed standards (Burns, 1980). Defined in this way, perfectionism is a dysfunctional trait, creating vulnerability for maladjustment. However, Hamachek (1978) has argued that perfectionism can be normal, and that the associated striving may lead to positive adjustment. In line with this theorizing, research confirmed the idea that perfectionism is a multidimensional construct with both adaptive and maladaptive aspects (Frost et al., 1990; Hewitt & Flett, 1990, 1991). Frost et al. (1990) identified five perfectionism dimensions, two of which are interpersonal (i.e., perceptions of high Parental Expectations and Parental Criticism) and three of which are intrapersonal (i.e., high Personal Standards, Concern over Mistakes, and Doubts about Actions). Given our interest in how psychological control relates to adolescents' self-representations, this study focused on the intra-personal aspects of perfectionism. The Concern over Mistakes and Doubts about Actions dimensions reflect maladaptive concerns and have been shown to be associated with low self-esteem and depression (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). The Personal Standards dimension, in contrast, has been shown to be an indicator of the positive, adaptive strivings that can be associated with perfectionism. In recent factor analyses, the Personal Standards scale was shown to load on a factor labeled Positive Striving (Bieling, Israeli, & Antony, 2004) or Adaptive Perfectionism (Cox, Enns, & Clara, 2002; Enns, Cox, & Clara, 2002; Stumpf & Parker, 2000), which was found to be either unrelated or positively related to individuals' adjustment.

Although several authors have proposed that perfectionistic concerns originate from disrupted parent–child relationships, little is known about the parenting style dimensions that are associated with perfectionism. Blatt (1995), for instance, hypothesized that adolescents who perceive their parents as setting high standards and as being responsive only when certain norms and standards are met, may develop a self-image in which the pursuit of perfectionistic expectations is crucial. This cognitive-affective representation of the self may create a vulnerability to psychopathology at a later age (Blatt, 1995). Likewise, Hamachek (1978) considered non-approval and inconsistent and conditional approval of parents as an important factor in the development of perfectionism, and Burns (1980) suggested that parents of perfectionistic children use love withdrawal and interact with their children in a highly evaluative way. These theoretical accounts suggest that perfectionism is likely to be associated with adolescents' perceptions of their parents as intrusive, and excessively using guilt-induction and love withdrawal. It is hypothesized, therefore, that adolescents experiencing psychological control will report higher perfectionism, which, in turn, will relate to higher levels of maladjustment. Given the consistent evidence that maladaptive perfectionism is particularly predictive of maladjustment, it was hypothesized that maladaptive perfectionism (and not Personal Standards—as an adaptive aspect of perfectionism) would mediate the relation between psychological control and adjustment.

No published study has investigated whether psychological control predicts adolescents' perfectionism. Instead, research on the relation between parenting and perfectionism has focused on measures of overtly hostile, authoritarian, and neglectful parenting (Flett, Hewitt, & Singer, 1995; Kawamura, Frost, & Harmatz, 2002; Rice, Ashby, & Preusser, 1996; Rice & Mirzadeh, 2000). In some of these studies, it was found that maladaptive perfectionism mediates the relationship between harsh parenting and depression proneness (Enns et al., 2002; Enns, Cox, & Larsen, 2000; Randolph & Dykman, 1998). And although psychological control and harsh, authoritarian parenting may seem overlapping constructs, there is a substantial difference (Flett, Hewitt, Oliver, & MacDonald, 2002). Psychological control is neither about overt conflict nor about manifest judgmental or neglecting parenting. Instead, it deals with covert, indirect techniques that are communicated in a subtle, implicit fashion (Barber, 1996). In addition, in these studies, the focus is usually on the effect of one specific aspect of parenting style. Other parent-related factors that may be predictive of adolescents' adjustment and perfectionism are hereby often neglected. Hence, we will evaluate the role of psychological control in the prediction of perfectionism and adjustment in comparison to parents' own perfectionism levels and other parenting style dimensions.

Parents' perfectionism. A number of studies have addressed the question of whether parents' perfectionism is associated with their children's perfectionism. Whereas some studies reported that there is a low concordance (Chang, 2000), others reported that there is no such concordance (Ablard & Parker, 1997), and still others concluded that there is a significant association with the same-sex parent only (Frost, Lahart, & Rosenblate, 1991; Vieth & Trull, 1999). The present study is the first to examine both the degree of concordance between maladaptive perfectionism in parents and their children, and the relative contribution of psychological control and parents' maladaptive perfectionism in the prediction of children's maladaptive perfectionism.

Other parenting dimensions. Besides psychological control, behavioral control and responsiveness have also been proposed as important dimensions of parenting style (Barber, 1997). Responsiveness refers to the degree to which adolescents experience a positive and warm relationship with their parents, and has been found to relate to positive adjustment. Behavioral

control involves the provision of sufficient regulation of children's behavior. Insufficient behavioral control deprives adolescents of adequate supervision and therefore places them at risk for developmental difficulties (Barber, 1996; Gray & Steinberg, 1999). Therefore, it is important to evaluate the contribution of psychological control in the prediction of perfectionism and adjustment in comparison to these two other parenting dimensions.

3. Aims of the present study

Apart from investigating the role of maladaptive perfectionism in the relation between psychological control and adjustment, this study investigates the relative contribution of psychological control in predicting adjustment and perfectionism compared to parents' perfectionism and other parenting styles. Because it is important to establish the effects of psychological control on adolescents' adjustment in a broad age range (Barber et al., 2002), these questions were examined in a sample of both middle and late adolescents.

4. Method

4.1. Participants

Dutch-speaking Belgian educational science students participated in the context of a psychology course ($N = 171$). They were asked to complete a questionnaire, and to distribute five questionnaires to other people, including both their parents (or, when impossible, an adult of the same age and gender), a fellow college student of the opposite gender, and a male and a female high school student. Because participants received course credit, response rates were very high (>98%). This procedure resulted in a late adolescent sample (Sample 1; $N = 336$; 50% male ranging in age from 18 to 24 years with a mean of 20 years), a middle adolescent sample (Sample 2; $N = 338$; 50% male ranging in age from 14 to 20 years with a mean of 16 years), and an adult sample (Sample 3; $N = 336$). For the purpose of the present study, this last sample was restricted to the parents of the university students who collected the questionnaires. Because these students were almost exclusively (93%) female, the analyses about the convergence between perfectionism in parents and children were restricted to the female participants. This resulted in a sample of 155 female participants of whom 141 mothers and 130 fathers completed the questionnaire. The age of this parent sample ranged from 41 to 62 years with a mean of 48 years.

4.2. Measurements

Whereas participants in Sample 1 and 2 completed all of the measures described below, participants in Sample 3 completed the perfectionism questionnaire only. All questionnaires included in the present study were translated into Dutch according to the guidelines of the International Test Commission (Hambleton, 1994). Except for the depression scale (see below), items were scored on 5-point Likert-type scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Parenting style. Participants completed 21 items derived from the Children's Report on Parent Behavior Inventory (CRPBI; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Schaefer, 1965), and rated these for both mother and father. Cronbach's alphas for the psychological control scale (7 items, e.g., "My mother/father is less friendly to me if I don't see things like he/she does.") were 0.82 and 0.81 in Sample 1, and 0.82 and 0.79 in Sample 2, for mothers and fathers respectively. Cronbach's alphas for the responsiveness scale (7 items, e.g., "My father/mother makes me feel better after I discussed my worries with him/her") were 0.89 and 0.90 in Sample 1, and 0.88 and 0.90 in Sample 2. Cronbach's alphas for the behavioral control scale (7 items, e.g., "My father/mother allows me to do anything I want"—reverse coded) were 0.82 and 0.81 in Sample 1, and 0.78 and 0.80 in Sample 2.

Perfectionism. Participants completed the Frost Multidimensional Perfectionism Scale (MPS; Frost et al., 1990), which measures five perfectionism dimensions. For the present purpose, we will report the results of the three scales tapping intrapersonal perfectionism only. Cronbach's alphas for the Personal Standards scale (7 items, e.g., "I set higher goals for myself than most people") were 0.82, 0.73, and 0.76, in Sample 1, 2, and 3, respectively. In order to determine whether the items tapping Concern over Mistakes (9 items, e.g., "People will probably think less of me if I make a mistake") and Doubts about Actions (4 items, e.g., "Even when I do something very carefully, I often feel that is not quite right") could be reduced to a single underlying factor ('Maladaptive Perfectionism'), Principal Components Analysis was performed. In each of the three samples, the scree test pointed to a one-factor solution. The eigenvalues of this single factor were 4.43, 4.78, and 4.69 in Samples 1, 2 and 3 (which corresponds to percentages of explained variance of 34%, 37%, and 36%). Factor loadings ranged from 0.40 to 0.74. The mean of these 13 items was computed as a measure of maladaptive perfectionism, resulting in Cronbach's alphas of 0.83, 0.85, and 0.85.

Depression. Participants completed the 20-item Centre for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1977), indicating how often they experienced specific depressive symptoms during the past week. Ratings were made on a scale ranging from (0) *rarely or none of the time (less than one day)*, over (1) *a couple of times (1–2 days)*, and (2) *sometimes or regularly (3–4 days)*, to (3) *most or all of the time (5–7 days)*. For each individual, a total severity of depression score was calculated by summing the responses. This produced a possible range of depression scores from 0 (low depression) to 60 (high depression). Cronbach's alphas were 0.90 in both Samples 1 and 2.

Self-esteem. Participants completed Rosenberg's (1965) 10 item self-esteem scale (e.g., "In general I am happy with myself"). This scale measures global feelings of self-worth and self-acceptance. Cronbach's alphas were 0.89 and 0.90, in Samples 1 and 2, respectively.

5. Results

5.1. Preliminary analyses

Preliminary analyses examined whether the measure of psychological control could be combined across maternal and paternal ratings. Although there was a significant difference between the mean levels of maternal and paternal psychological control in Sample 2

($t(317) = 2.90, p < 0.01$), with mothers ($M = 2.39$) being rated slightly higher in psychological control than fathers ($M = 2.28$), no such difference was found in Sample 1 ($t(316) = -0.37, p = 0.71$). Moreover, in both samples, maternal and paternal psychological control were significantly and similarly related to self-esteem, depression and maladaptive perfectionism, indicating that these relationships do not vary by parents' gender.

The possibility that the effect of psychological control on self-esteem, depression, personal standards and maladaptive perfectionism depends on adolescents' gender was also explored. Therefore, regression analyses were performed in which self-esteem, depression, personal standards, and maladaptive perfectionism were predicted by a measure of psychological control (e.g., maternal psychological control) and the interaction between adolescent gender and psychological control. None of these analyses revealed a significant interaction (p 's > 0.05). Given these findings, a composite psychological control score was created by averaging the scores of mother and father. The same procedure was applied to create scores for responsiveness and behavioral control. In Sample 1, males reported more responsiveness than females ($F(1, 333) = 12.6, p < 0.001$). In Sample 2, females reported higher levels of depression ($F(1, 326) = 7.32, p < 0.01$) and lower levels of self-esteem ($F(1, 326) = 17.73, p < 0.0001$) than males. In contrast, males reported slightly higher levels of Personal Standards than females ($F(1, 326) = 4.00, p = 0.05$).

Correlations among the variables included in this study can be found in Table 1. In both Sample 1 and 2, psychological control was strongly positively related to maladaptive perfectionism. Correlations between psychological control and Personal Standards were also positive but less pronounced. In order to determine the contribution of psychological control in predicting both maladaptive perfectionism and personal standards, controlling for the (positive) relationship between both perfectionism components, two regression analyses were performed. First, maladaptive perfectionism was regressed on psychological control and Personal Standards. In both samples, psychological control significantly predicted maladaptive perfectionism after controlling for Personal Standards ($\beta = 0.32; p < 0.0001$ and $\beta = 0.31; p < 0.0001$, respectively). Second, Personal Standards was regressed on psychological control and maladaptive perfectionism. In both samples, psychological control did not significantly predict Personal Standards in addition to

Table 1
Correlations among the variables

Measure	01	02	03	04	05	06	07	08	09
01. Responsiveness		-0.05	-0.47***	0.08	-0.14	-0.13	-0.15*	-0.25***	0.24***
02. Behavioral control	0.01		0.35***	-0.03	0.06	0.15*	0.10	0.06	-0.20**
03. Psychological control	-0.44***	0.31***		0.16*	0.36***	0.31***	0.38***	0.27***	-0.18**
04. Personal standards	-0.08	0.08	0.11		0.50***	0.30***	0.48***	0.04	0.03
05. Concern over mistakes	-0.26***	0.07	0.35***	0.55***		0.56***	0.95***	0.34***	-0.30***
06. Doubts about actions	-0.08	0.08	0.25***	0.17*	0.40***		0.79***	0.32***	-0.33***
07. Maladaptive perfectionism	-0.24**	0.09	0.37***	0.49***	0.93***	0.72***		0.37***	-0.35***
08. Depression	-0.13	-0.01	0.24***	0.13	0.43***	0.50***	0.53***		-0.50***
09. Self-esteem	0.16*	-0.08	-0.22***	-0.11	-0.42***	-0.45***	-0.50***	-0.52***	

Note: Sample 1 below and Sample 2 above the diagonal.

* $p < 0.01$.

** $p < 0.001$.

*** $p < 0.0001$.

maladaptive perfectionism ($\beta = -0.08, p = 0.10$; $\beta = -0.02, p = 0.67$, respectively). As anticipated, these findings show that psychological control is significantly related to the maladaptive aspects of perfectionism. However, psychological control is unrelated to the more adaptive aspect of perfectionism, that is Personal Standards, after partialling out the variance shared with maladaptive perfectionism. In addition, the correlations show that whereas maladaptive perfectionism is strongly associated with depression and low self-esteem. Personal Standards is not significantly correlated with adjustment. Hence, the mediational analyses were only performed with maladaptive perfectionism as mediator.

5.2. Meditational analyses

In order to examine the mediation hypothesis, regression analyses were performed using a four-step procedure (Kenny, Kashy, & Bolger, 1998). Step 1 involves determining the magnitude of the path from the independent variable (psychological control) to the dependent variables (self-esteem and depression). Step 2 requires finding a significant path from the independent to the mediating variable (maladaptive perfectionism). Step 3 requires finding a significant path from the mediating to the dependent variable, controlling for the independent variable. Finally, in Step 4, the decrease in the path from the independent to the dependent variables after controlling for the mediating variable is inspected. Table 2 shows the results of these analyses. Given the significant gender differences in depression and self-esteem found in Sample 2, adolescents' gender was controlled for by including this variable as an independent variable in all regression analyses. In both samples, the necessary associations for Steps 1–3 were significant. When entering maladaptive perfectionism at Step 4, we found a substantial drop in the path coefficient from psychological control to both depression and self-esteem. In three out of four analyses, the path coefficients even turned out to be non-significant after taking the variance explained by maladaptive perfectionism into account. In these three cases, the Sobel test (Sobel, 1982) indicated that the indirect effect of psychological control over maladaptive perfectionism to adjustment was significant. In contrast to the full mediation hypothesis, the path coefficient for psychological control predicting depression in Sample 2 remained significant after control for maladaptive perfectionism. However, inspection of the regression coefficients indicates that the relationship between psychological control and depression reduced to half its original size after taking into account the effect of maladaptive

Table 2
Mediational analyses

Dependent variable	Sample	Step 1	Step 2	Step 3	Step 4	Sobel	R-square
Self-esteem	1	-0.22***	0.37***	-0.49***	-0.02	-5.84***	0.26***
	2	-0.18**	0.38***	-0.32***	-0.06	-4.59***	0.18***
Depression	1	0.24***	0.37***	0.51***	0.04	5.99***	0.29***
	2	0.27***	0.38***	0.31***	0.16*	4.47***	0.17***

Note: Step 1 = Path from independent (psychological control) to dependent variable. Step 2 = Path from independent to mediating variable (maladaptive perfectionism). Step 3 = Path from mediating to dependent variable (controlling for the independent variable). Step 4 = Path from independent to dependent variable (controlling for the mediator). * $p < 0.01$, ** $p < 0.001$, *** $p < 0.0001$.

perfectionism. Moreover, the Sobel test indicated that the indirect effect was significant. In all, these findings suggest that the relationship between psychological control and both depression and self-esteem is almost fully mediated by the intrapersonal, maladaptive components of adolescents' perfectionism.

5.3. *The relative contribution of psychological control*

In order to examine whether psychological control predicts adolescents' perfectionism in addition to their parents' own level of maladaptive perfectionism, we needed to first establish the degree of convergence between adolescents' and parents' maladaptive perfectionism. As described in the Method section, these analyses were performed on the subsample of the female participants of Sample 1 and their parents. A significant correlation was found between mothers' and daughters' maladaptive perfectionism ($r = 0.17$; $p < 0.05$; $N = 148$), but not between fathers' and daughters' maladaptive perfectionism ($r = 0.06$; $p = 0.52$; $N = 130$). It was then examined whether psychological control adds to the prediction of daughters' perfectionism in addition to the perfectionism of their mothers. A multiple regression analysis was performed in which psychological control and mothers' perfectionism were entered as predictors of daughters' perfectionism. Whereas psychological control was significantly associated with daughters' perfectionism ($\beta = 0.34$, $p < 0.01$), mothers' perfectionism ($\beta = 0.11$, $p = 0.18$) did not add significantly to the prediction. Together, both variables explained 14% of the variance in daughters' maladaptive perfectionism.

In order to examine the relative power of psychological control in predicting the mediating and the dependent variables in addition to other parenting dimensions, three sets of multiple regression analyses were run in both samples (see Table 3). In these analyses, depression, self-esteem, and maladaptive perfectionism were regressed on responsiveness, behavioral control and psychological control. Results show that, when taking the other parenting styles into account, psychological control turns out to be the strongest, and almost unique, predictor of depression and maladaptive perfectionism. With respect to self-esteem, a difference emerged between the two

Table 3
Predicting depression, self-esteem and perfectionism from the parenting styles

Predictor	Sample	Depression	Self-esteem	Perfectionism
Responsiveness	1	-0.01	0.08	-0.09
	2	-0.15*	0.21**	0.04
Behavioral control	1	-0.09	-0.03	-0.01
	2	-0.02	-0.18*	-0.05
Psychological control	1	0.26***	-0.17*	0.34***
	2	0.21**	-0.02	0.42***
R^2	1	0.064	0.053	0.130
	2	0.091	0.091	0.146
F	1	7.49***	6.16***	18.73***
	2	10.90***	10.83***	18.69***

* $p < 0.01$.

** $p < 0.001$.

*** $p < 0.0001$.

samples. In Sample 1, psychological control was the only significant (negative) predictor of self-esteem. In contrast, in Sample 2, responsiveness was the strongest (positive) predictor of adolescents' self-esteem. In all, the findings suggest that psychological control has a unique contribution to the prediction of depression, self-esteem, and maladaptive perfectionism in comparison to the other parenting style dimensions under study.

6. Discussion

The present study elaborates on recently accumulating research on the concept of psychological control, which has shown that children who experience psychological control are vulnerable to a range of developmental difficulties, particularly internalizing problems (Barber & Harmon, 2002). Because little is known how these relationships are established, the role of maladaptive perfectionism as a possible mediator was investigated. The hypothesized role of maladaptive perfectionism in the association between psychological control and both depression and self-esteem was confirmed. A composite score of Doubts about Actions and Concern over Mistakes, the two dimensions of maladaptive perfectionism identified by Frost et al. (1990), explained most of the relations between psychological control and adolescents' adjustment. Our findings suggest that adolescents who perceive their parents as excessively guilt-inducing, as disregarding their point of view, and as being responsive only when parental standards are met, have maladaptive self-representations in which the pursuit of almost unattainable goals is of central importance. Adolescents who report higher levels of psychological control doubt their behavior, engage in negative self-evaluations, and have strong concerns about their performance and potential mistakes. These maladaptive aspects of perfectionism, in turn, relate to negative outcomes such as depression and lower self-esteem. Notably, consistent with current perspectives on the differentiation between adaptive and maladaptive components of perfectionism (e.g., Bieling et al., 2004; Enns et al., 2002), it was found that psychological control, as a negative parenting dimension, predicted maladaptive perfectionism, but was unrelated to high Personal Standards, which is considered as a more adaptive aspect of perfectionism.

Our findings are in line with research which has shown that dysfunctional parent–child relationships, characterized by harshness and lack of responsiveness, are associated with higher perfectionism levels (e.g., Kawamura et al., 2002), and that perfectionism, in turn, acts as a mediator between parental representations and children's adjustment (e.g., Enns et al., 2002). The present study extends this body of research by introducing the concept of psychological control and by comparing the role of this parenting style dimension to the influence of other parenting dimensions and parents' perfectionism levels.

First, the contribution of psychological control in addition to parents' perfectionism in predicting adolescents' adjustment was evaluated. As a preliminary step, we examined the convergence between adolescents' and parents' perfectionism. Although the strength of the association was rather weak, we found mothers' and daughters' maladaptive perfectionism levels to be significantly related. No evidence was found for such a relationship between fathers' and daughters' perfectionism levels. Our findings are partially in line with studies examining the convergence between children's and parents' perfectionism levels (Frost et al., 1991; Vieth & Trull, 1999), in which preliminary evidence for the 'same sex-linkage hypothesis' was found. In a next step, the

contribution of mothers' maladaptive perfectionism and psychological control to the prediction of daughters' maladaptive perfectionism was compared. Psychological control was found to be the strongest predictor. Therefore, it seems that representations of parental psychological control are important predictors of adolescents' maladaptive perfectionism in addition to parents' own perfectionism.

Second, the contribution of psychological control was evaluated by comparing its predictive value to two other important parenting style dimensions, namely responsiveness and behavioral control. In line with studies which have shown that psychological control is quite specifically related to internalizing problems (Barber, 1996; Gray & Steinberg, 1999), psychological control turned out to be the strongest predictor of depression. Similar results were obtained when predicting intrapersonal maladaptive perfectionism. With respect to self-esteem, mixed evidence was found. In a middle adolescents sample (Sample 2), responsiveness was found to be the strongest self-esteem predictor. This effect of responsiveness should come as no surprise, because research on parenting has consistently shown that parental responsiveness is a major determinant of children's feelings of self-worth (Garber, Robinson, & Valentiner, 1997). It is unclear, however, why psychological control is a significant predictor of self-esteem in the late adolescent sample, but not in the middle adolescent sample. This finding might indicate that the inhibition of adolescents' autonomy through psychological control has a particularly detrimental impact on self-worth during late adolescence, presumably because issues of individuation and autonomy are more salient during this period. Future research might investigate the robustness of these findings.

Overall, our results (a) indicate that psychological control is strongly and almost uniquely related to adolescents' maladaptive perfectionism, self-esteem and depression, and (b) suggest that the hypothesized pathway of parental representations over maladaptive intrapersonal perfectionism to adjustment may apply specifically to the influence of psychological control. An important limitation of the present study, however, is that all relationships were investigated cross-sectionally. Longitudinal research is needed to establish whether psychological control actually *influences* perfectionism and adjustment in adolescents, or whether adolescents who are better adjusted and who are less perfectionistic give rise to less parental psychological control. It could be hypothesized that, when maladaptive perfectionism develops in children, negative interpersonal styles sustain and reinforce negative parent–child relations, which in turn enhance the child's vulnerability to perfectionism and maladjustment. Another limitation is the use of non-clinical samples in our study. Given that both perfectionism and psychological control have been identified as vulnerability factors to psychopathology, particularly depression and eating disorders (Barber & Harmon, 2002; Shafran et al., 2002), future research may examine relationships between these concepts in clinical samples.

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