4

Maladaptive Perfectionism as an Intervening Variable between Psychological Control and Adolescent Depressive Feelings: A Three-Wave Longitudinal Study.

Soenens, B., Luyckx, K., Vansteenkiste, M., Luyten, P., Duriez, B., & Goossens, L.

Manuscript submitted for publication.

Maladaptive perfectionism has been postulated as an intervening variable between psychologically controlling parenting and adolescent maladjustment. Although this hypothesis has been confirmed concurrently, it has not yet been examined from a longitudinal framework. The present three-wave longitudinal study provided evidence for an integrated model in which parental psychological control (as indexed by parent and adolescent reports) at Age 15 predicted maladaptive perfectionism one year later. Maladaptive perfectionism, in turn, predicted adolescent depressive feelings again one year later. These prospective relations were obtained controlling for initial levels of both maladaptive perfectionism and depression. Multi-group analyses addressing the moderating role of gender showed that, whereas paternal psychological control was predictive of maladaptive perfectionism irrespective of adolescent gender, maternal psychological control predicted maladaptive perfectionism among males but not among females. Suggestions for future research are outlined.

Introduction

There is ample evidence that controlling, overprotective, and intrusive parenting renders children and adolescents vulnerable to impaired psychosocial functioning in general and to internalizing problems in particular (Barber & Harmon, 2002; Grolnick, 2003; Parker, 1983). Current socialization theory and research witnesses a specific interest in the construct of parental psychological control (Barber, Olsen, & Shagle, 1994; Barber, 1996), as it pertains to parental attempts to pressure the child through internally controlling means (e.g., guilt-induction and love withdrawal). Although the relation between parental psychological control and child maladjustment is well-established, research has only recently begun to systematically uncover the psychological processes that may account for this relation.

In line with diverse theoretical perspectives (e.g., Blatt, 1995; Burns, 1980; Hamacheck, 1978), it has been found that (psychologically) controlling parenting relates to higher levels of perfectionism in children and that associations between controlling parenting and child and adolescent internalizing problems are mediated by perfectionism (e.g., Kenney-Benson & Pomerantz, 2005; Soenens, Vansteenkiste, Luyten, Duriez, & Goossens, 2005). However, in spite of the fact that mediation is by its very nature a dynamic and developmental phenomenon, the intervening role of perfectionism between (psychologically) controlling parenting and adolescent adjustment has not yet been studied from a longitudinal perspective. Accordingly, this study relied on a prospective 3-wave longitudinal design to examine this hypothesized sequence of events.

Parental Psychological Control and Adolescent Internalizing Problems

Psychological control has been construed as a negative, insidious type of control characteristic of parents who are strongly focused on their personal position in the parent-child relationship and on their own goals and standards (Barber & Harmon, 2002; Soenens, Elliot, et al., 2005). To make their children comply with their own goals and standards, psychologically controlling parents engage in a variety of internally pressuring behaviors such as guilt-induction, instilling anxiety, love withdrawal, and affect-laden expressions and criticisms (e.g., disappointment and shame; Barber, 1996; Barber & Harmon,

2002). These internally pressuring tactics may be expressed in a rather subtle and manipulative fashion, for instance, by giving a child “the silent treatment” or by buttressing a child with feelings of guilt, shame, and worthlessness. As such, the internally controlling strategies that characterize psychological control need to be differentiated from more overt, blunt and externally controlling expressions such as corporal punishment, threats, deprivations, coerciveness, and power-assertion that charaterize other types of controlling parenting (Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005).

Psychological control intrudes upon the child’s psychological world and is therefore though to have a particularly detrimental impact on the child’s self-processes (Barber & Harmon, 2002). In line with this, research has consistently shown that psychological control relates to severe impairments in children’s and adolescents’ psychosocial functioning (Barber & Harmon, 2002). Numerous studies have demonstrated particularly strong associations between psychologically controlling parenting and internalizing problems such as low self-worth (e.g., Garber, Valentiner, & Robinson, 1997), depression (e.g., Barber et al., 1994; Barber, 1996), suicide ideation (e.g. Comstock, in Barber & Harmon, 2002), anxiety (e.g., Pettit, Laird, Dodge, Bates, & Criss, 2001) and loneliness (Soenens, Vansteenkiste, Duriez, & Goossens, in press).

It is important to note that the association between psychological control and adolescent internalizing problems should not be interpreted as a mere parent effect, however. Recent cross-lagged longitudinal research shows that psychological control does not only predict over-time increases in adolescent internalizing problems but that, conversely, adolescent distress and maladjustment also predict over-time increases in psychological control (Barber, Stolz, Olsen, & Maughan, 2005; Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2006). Such findings suggest that the relation between psychological control and internalizing problems is a transactional one. Although psychological control makes adolescents vulnerable to increased levels of distress, parents appear to respond to these heightened levels of distress by increasing their use of psychological control which, in turn, further exacerbates adolescents’ vulnerability to internalizing problems. Acknowledging the fact that

psychological control and internalizing problems influence one another in a reciprocal fashion, this study focuses on the path from psychological control to adolescent adjustment and, more specifically, addresses the mediating process that may account for this pathway.

Until recently, relatively little was known about the underlying psychological dynamics that may explain the association between psychological control and internalizing problems (Barber, Bean, & Erickson, 2002). In recent theorizing and research, however, adolescent perfectionism has been proposed and tested as an intervening variable of the association between (psychologically) controlling parenting and adolescent adjustment (e.g., Blatt, 1995; Soenens, Vansteenkiste, et al., 2005). According to this view, children of (psychologically) controlling parents come to develop a more perfectionist attitude which, in turn, renders them vulnerable to internalizing problems. The construct of perfectionism will be outlined in more detail in the following section.

Perfectionism and Internalizing Problems

Within different theoretical frameworks, perfectionism is conceived of as a multidimensional construct comprising both maladaptive and relatively more adaptive features (Frost, Marten, Lahart, &. Rosenblate, 1990; Flett & Hewitt, 2002; Hewitt & Flett, 1991). A central feature of perfectionism is the setting of high standards for performance and achievement, but the setting of high standards is not necessarily, by itself, pathological. To the extent that people are able to flexibly adjust and re-evaluate their standards in accordance with life events, experiences, and situational demands, holding high standards may motivate people and provide them with a sense of goal-directedness and purpose. As such, endorsing high standards may have some adaptive qualities (Hamacheck, 1978). However, perfectionism may turn into more maladaptive functioning when people pursue their standards in a very rigid fashion -- thereby adhering to their standards even when faced with adverse consequences -- and when their pursuit of high standards goes hand in hand with negative self-evaluations (Shafran & Mansell, 2001). Accordingly, maladaptive perfectionism is defined as people's tendency to hold unrealistic standards for achievement and an inability to accept mistakes. Maladaptive perfectionists

engage in relentless self-scrutiny in light of failure, have pervasive concerns about failure, and continuously doubt whether their actions will meet their harsh and rigid standards.

Research is increasingly documenting the validity of a distinction between maladaptive and relatively more adaptive forms of perfectionism. It has been found, for instance, that the scales of the Frost Multi-dimensional Perfectionism Scale (FMPS; Frost et al., 1990) – one of the most intensively used instruments in research on perfectionism – can be reduced to two higher-order factors. The Personal Standards scale of the FMPS has been found to load on a factor labeled Positive Striving or Adaptive Perfectionism, whereas the Doubts about Actions scale and the Concern over Mistakes scales were found to load on a different factor which has been labeled Evaluative Concerns or Maladaptive Perfectionism (e.g., Bieling, Israeli, & Antony, 2004; Dunkley, Blankstein, Masheb, & Grilo, 2006; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). Apart from demonstrating their empirical distinctiveness, abundant research has shown that both perfectionism dimensions are differentially related to measures of maladjustment. It has been shown that, after controlling for the variance shared by the two perfectionism components, adaptive perfectionism is typically uncorrelated or slightly negatively related to maladjustment, whereas measures of maladaptive perfectionism are positively related to numerous indicators of psychopathology, including depression, anxiety, suicide ideation, and eating disorders (e.g., Blatt, 1995; Shafran & Mansell, 2001).

Essential to the topic of this paper, there is some evidence from recent cross-lagged longitudinal studies that perfectionism does not merely correlate with maladjustment but predicts increases in maladjustment over time. Chang and Rand (2000), for instance, found that socially prescribed perfectionism (i.e., an indicator of maladaptive perfectionism) predicted increased levels of distress in college students over a 1-month period, although this effect primarily occurred in combination with high levels of perceived stress. Shahar, Blatt, Zuroff, Kuperminc, and Leadbeater (2004) found evidence that early adolescents' self-criticism – a personality feature closely linked to maladaptive perfectionism (Blatt, 1995) – predicted increased levels of depression over a 1-year interval, albeit only in girls. Depression

was also found to reciprocally predict self-criticism in girls. Rice and Aldea (2006) found that maladaptive perfectionism predicted depression in college students across a 2-month interval. It should be noted, though, that other studies failed to find evidence for a cross-lagged effect of perfectionism on subsequent adolescent maladjustment (e.g., Enns & Cox, 2005). Moreover, most of the studies obtaining evidence for the predictive role of perfectionism relied on relatively short time intervals. As such, the present study contributed to this limited body of research by examining whether maladaptive perfectionism would predict adolescent subsequent depressive feelings across a 1-year period. More importantly, this study examined whether increases in maladaptive perfectionism are, by themselves, predicted by parents' use of psychological control.

Parental Psychological Control and Perfectionism

Diverse theories such as the psychodynamic theory of Blatt (1995, 2004; Blatt & Homann, 2002) and the social expectations model of perfectionism (Flett, Hewitt, Oliver, & MacDonald, 2002; Hamacheck, 1978) converge on the notion that controlling parenting is a crucial factor in understanding the genesis and maintenance of perfectionism and of maladaptive perfectionism in particular. Specifically, (maladaptive) perfectionism is thought to develop in families where parents conditionally approve of the child's behavior, depending on whether or not the child meets the parents' strict standards for performance and behavior. When an adolescent fails to meet parental standards, parents would criticize the adolescent and induce guilt for performing less than perfectly. As a consequence of being exposed to such a guilt-inducing, conditionally approving, and thus psychologically controlling family environment, adolescents would develop a conditionally approving attitude towards themselves, along with an extreme need for achievement (Blatt, 1995). Not only would adolescents of psychologically controlling parents adopt harsh standards to themselves and rigidly adhere to these standards for achievement, they would also develop a tendency to engage in negative self-evaluations when they feel incapable of meeting their self-imposed standards (e.g., guilt, self-scrutiny, worthlessness, and hopelessness) (Flett et al., 2002). It is clear then, that psychological control is

thought to be implicated in the development of a perfectionist orientation and, more specifically, in the development of a maladaptive perfectionist orientation.

As psychologically controlling parenting is thought to lead to maladaptive perfectionism and as maladaptive perfectionism is related to maladjustment and internalizing problems in particular, it is hypothesized herein that maladaptive perfectionism will function as an intervening variable in relations between psychological control and adolescent internalizing problems. A number of studies have yielded findings that are relevant to this hypothesized sequence of events. Randolph and Dykman (1998), for instance, found that adolescent perceptions of a critical and controlling parenting environment were associated with dysfunctional perfectionist attitudes which subsequently predicted depression proneness. Kenney-Benson and Pomerantz (2005) similarly found in a sample of young children that observations of controlling parenting were positively related to children's reports of socially prescribed perfectionism (i.e., an indicator of maladaptive perfectionism) and subsequent levels of depression. Although consistent with the idea that perfectionism may mediate or intervene in associations between parenting and depression, these studies did not explicitly distinguish between maladaptive and adaptive types of perfectionism, a shortcoming which was addressed in a study by Enns, Cox, and Clara (2002). The latter authors found that adolescent perceptions of harsh and perfectionist parenting were related to maladaptive (but not adaptive) perfectionism and that maladaptive (but not adaptive) perfectionism mediated the associations between parenting and depression proneness. Soenens, Vansteenkiste, et al. (2005) added to these findings by examining the specific role of parental psychological control as a predictor of adolescent perfectionism. Psychological control relates positively to maladaptive (but not adaptive) perfectionism and maladaptive perfectionism in turn mediated the associations between psychological control and low self-worth and depressive feelings in adolescents.

The Present Study

The results of the studies cited in the preceding paragraph are in line with the notion that exposure to (psychologically) controlling parenting contributes to the development of maladaptive

perfectionist attitudes and subsequent proneness to internalizing problems in adolescents. Important limitations of this body of research, however, are (a) its lack of prospective, longitudinal studies and (b) its reliance on self-report measures of parenting constructs.

First, to the best of our knowledge, none of the studies providing evidence for the intervening role of maladaptive perfectionism has been longitudinal in nature, which precludes sound inferences about the direction of effects involved in the hypothesized associations. Studying relations among constructs within a longitudinal framework is particularly important when intervening or mediated effects are involved because such effects, by definition, pertain to dynamic processes that gradually unfold over time (Cole & Maxwell, 2003). Specifically, the hypothesis tested in this study assumes that psychologically controlling parenting predicts increases in adolescent maladaptive perfectionism which would, in turn, predict increased levels of depressive feelings. To test this hypothesized sequence of events, this study examined the effect of initial levels of psychological control (Time 1) on subsequent levels of adolescent maladaptive perfectionism one year later (Time 2), thereby controlling for initial levels of maladaptive perfectionism and for concurrent associations between psychological control and maladaptive perfectionism at Time 1. Maladaptive perfectionism, in turn, was modeled as a predictor of subsequent levels of depressive feelings (Time 3), thereby controlling for initial levels of depression and for the within-time association between maladaptive perfectionism and depression at Time 1.

Second, with the exception of the study of Kenney-Benson and Pomerantz (2005), which relied on behavioral observations of controlling parenting, studies have typically assessed both parenting and perfectionism through self-report measures. Due to their shared method variance, self-report assessments of both parenting and perfectionism may lead to an overestimation of the strength of the association between these constructs. This problem may be particularly relevant in the context of perfectionism. As maladaptive perfectionists have a general tendency to pressure themselves to meet self-imposed standards, they may also project these perfectionist expectations onto their social environment, thereby experiencing their parents as demanding perfect achievement. Hence, a

maladaptive perfectionist's experience of his or her parents as controlling and pressuring may not be an accurate reflection of the parents' actual interpersonal style but may instead be mainly driven by the maladaptive perfectionist's own psychological functioning. To eliminate this alternative hypothesis, the present study relied on both adolescents' and parents' reports of psychological control and used both reports as indicators of a single underlying construct (see Simons, Whitbeck, Conger, & Chyi-In, 1991; Soenens, Elliot, et al., 2005 for a similar approach). It is assumed that the variance that is shared by parents' and adolescents' reports of psychological control yields a more accurate reflection of the actual level of psychological control compared to either parent or adolescent reports of psychological control.

In testing the hypothesized model, we explored participants' gender as a possible moderator. Research has shown mean-level gender differences in a number of constructs central to this study. It has been found, for instance, that males tend to perceive their parents as more psychologically controlling than girls (Barber & Harmon, 2002) and that females report higher levels of depression than males (Leadbeater, Kuperminc, Blatt, & Herzog, 1999). In addition, it has been argued by some authors that the strength of the associations between psychological control and adolescent adjustment may differ depending on both parents' and adolescents' gender (Rogers, Buchanan, & Winchell, 2003). Accordingly, multi-group analyses were conducted to assess the moderating role of gender in associations between psychological control, maladaptive perfectionism, and depressive feelings.

Method

Participants and procedure

Participants were 10th to 12th grade students from seven secondary schools in Flanders (Belgium) and their parents. Active informed consent was obtained from the adolescents and passive informed consent was obtained from parents. Parents received a letter about the purpose and method of the study two weeks prior to the data collection and they were asked to fill out a form if they did not want their child to participate in this study. Less than 2% of the parents did not allow their child to participate and none of the students with parental permission refused participation. In addition, parents received a

questionnaire that they were asked to fill out and to deliver to the school's principal by the time data collection would take place. The adolescent questionnaires were administered during a class period. Students had approximately 45 minutes to complete the survey.

At initial assessment, this procedure resulted in a sample of 677 adolescents (337 boys and 340 girls). Adolescent age ranged from 15 to 18 years (Mean = 15.65 years; *SD* = 0.36). 87% of the adolescents came from intact married families, 10% had divorced parents, and 3% came from a family in which one of the parents had deceased. Of the 677 adolescents, 555 (82%) adolescents had at least one parent who participated in the research. A total of 540 mothers (80%) and 473 fathers (70%) participated. Mothers' mean age at the onset of the study was 44 years (*SD* = 3.73). On a 6-point scale the mean educational level was 3.65 (*SD* = 1.12), indicating an average of 12 years of education. Fathers' mean age was 46 years (*SD* = 3.83). Fathers' mean educational level was 3.91 (*SD* = 1.35), indicating an average of about 15 years of education.

The initial sample of adolescents was followed with two subsequent assessments. The three measurement waves were one year apart. Of the initial sample (*N* = 555), 78% participated in each of the three measurement waves. This longitudinal sample of 434 participants consisted of 203 males and 231 females. A logistic regression analysis tested if sample attrition (dummy coded as drop-out = 0 and retention = 1) was predicted by age, gender (dummy coded as male = 1 and female = 1), and all study variables at Time 1. Age and gender were entered in Step 1. The measures of psychological control, adaptive perfectionism, maladaptive perfectionism, and depression were entered in Step 2. Model χ^2 for Step 1 was not significant ($\chi^2(2) = 4.46$, $p > .05$). Step 2 added significantly to the multivariate prediction of retention ($\chi^2(7) = 16.82$, $p < .05$). This effect was uniquely due to the negative effect of depression scores on retention (OR = 0.96, $p < .01$), indicating that adolescents who participated at all three waves experienced lower levels of depression at the onset of the study. Despite this, a direct comparison of the correlation matrices of the study variables at Time 1 revealed no significant difference between the longitudinal participants and those who dropped out (χ^2 (28) = 24.61; $p = 0.65$). In sum, despite mean-

level difference in depression at Time 1, the pattern of associations among the study variables at Time 1 was equivalent for participants who dropped out and participants who were retained in the study.

Measures

All questionnaires were translated into Dutch, the participants' mother tongue, according to the guidelines of the International Test Commission (Hambleton, 1994). Unless otherwise indicated, items were scored on 5-point Likert scales, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and scale scores were computed by taking the mean of the scale items.

Psychological Control. Psychological control was assessed at Time 1 using the 8-item Psychological Control Scale – Youth Self Report (PCS-YSR; Barber, 1996) (e.g., "My mother/father is less friendly to me if I don't see things like he/she does"). The adolescent participants rated the items for both mother and father. The parent participants rated the items with respect to their own parenting behavior. For this purpose, the items were slightly revised to make them amenable to parent self-report (e.g., the prior sample item was revised to "I tend to be less friendly to my son/daughter if he/she does not see things like I do"). Cronbach's alphas for adolescent reports of maternal and paternal psychological control were .82 and .79, respectively; Cronbach's alpha was .69 for both the mother and the father self-reports.

Perfectionism. At both Time 1 and Time 2, adolescents completed three scales from the Frost Multidimensional Perfectionism Scale (MPS; Frost et al., 1990), namely Personal Standards (7 items, e.g., "I set higher goals for myself than most people"), 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 it is not quite right"). Past research has identified the Personal Standards scale as an indicator of adaptive perfectionism and the Concern over Mistakes and Doubts about Actions scales as indicators of maladaptive perfectionism (Bieling et al., 2004; Frost et al., 1990, 1993). To assess the validity of the distinction between adaptive and maladaptive perfectionism in the present sample, a Principal Components Analysis was conducted on the items of the three

perfectionism scales at both Time 1 and Time 2. At both measurement waves, the scree plot clearly pointed to a 2-factor solution. After orthogonal rotation (VARIMAX), the first component explained 26% and 25% of the variance at the two measurement waves, respectively, and the second component explained 19% and 20% of the variance, respectively. At both measurement occasions, all items tapping maladaptive perfectionism were found to load on the first component (with loadings ranging from .46 to .76) and all items tapping adaptive perfectionism were found to load on the second component (with loadings ranging from .46 to .81). In accordance with these results, the Personal Standards scale was considered as a measure of adaptive perfectionism in this study and a maladaptive perfectionism scale was constructed by computing the mean of the items tapping Concern over Mistakes and Doubts about Actions (e.g., Soenens, Vansteenkiste, et al., 2005). Cronbach's alphas of adaptive perfectionism were .80 and .81 at Time 1 and Time 2, respectively, and Cronbach's alpha of maladaptive perfectionism was .87 at both Time 1 and Time 2.

Depression. At Time 1 and Time 3, adolescents 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 .91 and .92 at Time 1 and Time 3, respectively.

Results

Descriptive Statistics and Correlational Analyses

Means and standard deviations of the study variables are shown in Table 4.1. Preliminary analyses were conducted to investigate gender differences. A MANOVA was performed with gender as between subjects-variable and with each of the study variables as dependent variables. Gender had a

significant multivariate effect (Wilk's lambda = .93; F (10, 340) = 2.55; $p < .01$; $\eta^2 = .07$). Univariate ANOVA's indicated that girls reported more depression at Time 1 (M = 15.13; SD = 10.63) and at Time 3 (M = 3.52; SD = 0.89) than did boys (M = 11.27; SD = 8.53 and M = 3.82; SD = 0.79, respectively); F (1, 675) = 27.21; $p < .001$ and F (1, 675) = 22.35; $p < .001$, respectively.

Correlations among the study variables are presented in Table 4.1. Positive correlations were obtained between adolescent reports of psychological control at Time 1 and maladaptive perfectionism at both Time 1 and Time 2. Parent reports of psychological control were only significantly positively related to maladaptive perfectionism at Time 1. Across reporters and across measurement waves, correlations between ratings of psychological control and adaptive perfectionism were less pronounced, although a number of positive correlations did emerge. Significant positive correlations were found between adolescent reports of maternal and paternal psychological control at Time 1 and adolescent depression at both Time 1 and Time 3. Correlations between parental reports of psychological control and adolescent depression at Time 1 were also significantly positive but failed to reach significance at Time 3. Across measurement waves maladaptive and adaptive perfectionism scores were positively related to depression, although correlations with maladaptive perfectionism were more pronounced.

To assess the strength of the associations between adaptive and maladaptive perfectionism and the other study variables after controlling for the variance shared by the two perfectionism components, partial correlations were computed. Significantly positive partial correlations were obtained between maladaptive perfectionism at Time 1 and adolescent-reported paternal psychological control (r = .34; $p < .001$), adolescent-reported maternal psychological control (r = .36; $p < .001$), father-reported psychological control (r = .11; $p < .05$), mother-reported psychological control (r = .15; $p < .05$), depression at Time 1 (r = .49; $p < .001$) and depression at Time 3 (r = .28; $p < .001$). In contrast, after controlling for the variance shared with maladaptive perfectionism, adaptive perfectionism was not significantly related to adolescent-reported paternal psychological control (r = -.07; $p > .05$), adolescent-reported maternal psychological control (r = .01; $p > .05$), father-reported psychological control (r = .02;

$p > .05$), mother-reported psychological control ($r = -.07$; $p > .05$), and depression at Time 3 ($r = -.08$; $p > .05$). The partial correlation between adaptive perfectionism and depression at Time 1 even turned out to be significantly negative ($r = -.16$; $p < .01$). In line with expectations, these findings show that, after controlling for the variance shared by maladaptive and adaptive perfectionism, only maladaptive perfectionism is systematically positively related to both parental psychological control and adolescent depression. As a consequence, only maladaptive perfectionism will be considered as an intervening variable in relations between psychological control and depression in the primary analyses.

Finally, it is important to note that father and adolescent reports of paternal psychological control were positively correlated, $r = .32$ ($p < .001$), and so were the mother and adolescent reports of maternal psychological control, $r = .31$ ($p < .001$). The magnitude of these relationships is similar to those observed in other research using parent and child reports of parental socialization (e.g., Schwartz et al., 1985). The parent and adolescent psychological control reports were used as indicators of the same underlying construct in all primary analyses (cf., Simons et al., 1991; Soenens, Elliot, et al., 2005).

Primary analyses

Structural equation modeling (SEM) with latent variables was used to examine the main hypotheses. Analysis of the covariance matrices was conducted using LISREL 8.54 (Jöreskog & Sörbom, 1996), and solutions were generated on the basis of maximum-likelihood estimation. With the exception of psychological control, which was represented using parent and adolescent reports as separate indicators of the underlying latent variable, all variables were represented by parcels (Marsh, Hau, Balla, & Grayson, 1998). Three randomly created parcels were computed for maladaptive perfectionism and depression. To remove the variance shared with adaptive perfectionism, each maladaptive perfectionism parcel was regressed on adaptive perfectionism and the residualized scores (controlling for adaptive perfectionism) were used as observed indicators of maladaptive perfectionism in subsequent analyses. The same parceling procedure was used to represent the constructs across the different measurement points.

Table 4.1 *Means, Standard Deviations, and Correlations among Study Variables*

	M	*SD*	01.	02.	03.	04.	05.	06.	07.	08.	09.
01. Psycon Father – YR	2.12	0.66									
02. Psycon Father – PR	2.28	0.56	.32***								
03. Psycon Mother – YR	2.04	0.67	.45***	.24***							
04. Psycon Mother – PR	2.19	0.57	.25***	.27***	.31***						
05. Maladaptive Perfectionism Time 1	2.14	0.63	.38***	.14**	.34***	.13**					
06. Adaptive Perfectionism Time 1	2.67	0.69	.17***	.09	.21***	.00	.52***				
07. Maladaptive Perfectionism Time 2	2.14	0.61	.31***	.10*	.26***	.07	.62***	.39***			
08. Adaptive Perfectionism Time 2	2.74	0.70	.07	-.01	.10*	-.05	.32***	.61***	.53***		
09. Depression Time 1	12.29	8.71	.38***	.14**	.26***	.08	.44***	.14**	.36***	.08	
10. Depression Time 3	12.25	9.99	.26***	.05	.10*	.00	.29***	.11*	.34***	.11**	.44***

Note: Psycon = Psychological Control; YR = Youth Report; PR = Parent Report. * $p < .05$; ** $p < .01$; *** $p < .001$.

Data screening of the observed indicators (i.e., the parcels and the psychological control scores) indicated partial data non-normality, both at the univariate and the multivariate level. Therefore, in all subsequent models we used the asymptotic covariance matrix between all indicators as input and inspected the Satorra-Bentler Scaled chi-square (SBS-χ^2, Satorra & Bentler, 1994). To evaluate model goodness of fit, the Standardized Root Mean Square Residual (SRMR) and the Root Mean Squared Error of Approximation (RMSEA) were selected. According to Hu and Bentler (1999), the combined cut-off values close to .08 for SRMR and close to .06 for RMSEA indicate good model fit.

Measurement Models. Before testing the hypothesized structural model, Confirmatory Factor Analyses (CFA's) were conducted to assess the quality of the measurement models. Separate CFA's were conducted for the paternal model and for the maternal model. Gender was indexed by a single indicator. Each CFA contained six latent factors (gender, psychological control, maladaptive perfectionism at Time 1 and Time 2, and depression at Time 1 and Time 3) and 15 observed indicators. For those constructs which were assessed at different measurement points (i.e., maladaptive perfectionism and depression), the measurement errors of the same indicators at different measurement points were allowed to covary (Burkholder & Harlow, 2003). In addition, to ensure that the measurement model would be equivalent across time, the factor loadings of the same indicators at different measurement points were set equivalent across the measurement points. Adding these constraints to the measurement models did not result in a significant loss of model fit.

Estimation of the measurement model for the paternal data yielded an acceptable model fit (SBS-χ^2 (76; N = 364) = 128.05; SRMR = .06; RMSEA = .04) and all factor loadings were highly significant (p < .001), ranging from .34 to .96 (mean lambda = .77). Similarly, estimation of the measurement model for the maternal data yielded an acceptable model fit (SBS-χ^2 (76; N = 417) = 103.90; SRMR = .06; RMSEA = .03) and all factor loadings were highly significant (p < .001), ranging from .37 to .91 (mean lambda = .76). In sum, both for the paternal and the maternal data evidence was obtained for a reliable and longitudinally invariant measurement model, which was used in all subsequent models.

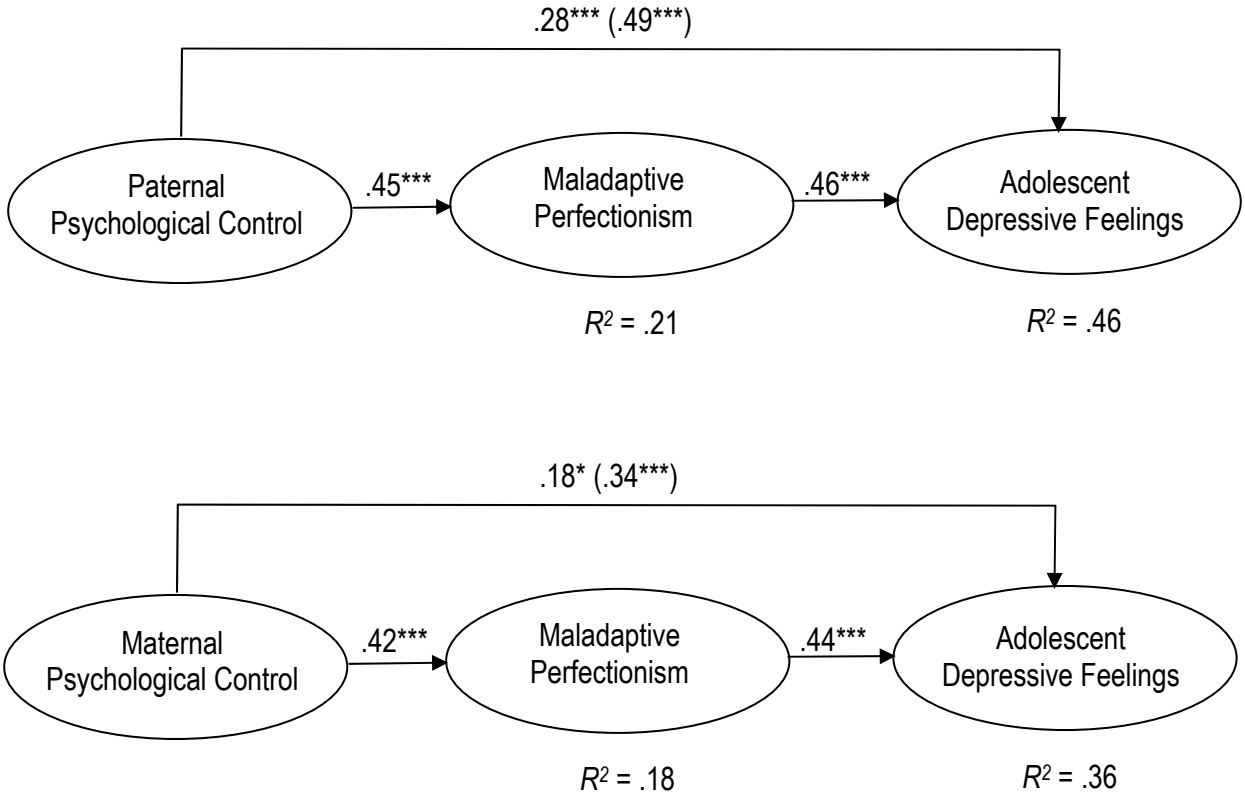
Cross-Sectional Tests of Intervening Effects. Although research (Soenens, Vansteenkiste et al., 2005) has provided evidence for the intervening role of maladaptive perfectionism in the relation between psychological control and depression at the cross-sectional level (i.e., at Time 1), we aimed to replicate and extend this work by using a multi-informant instead of a single-informant assessment of psychological control. All analyses were performed separately for maternal and paternal variables and the effect of gender was controlled for in each of the models by allowing correlations between gender and the independent variable and by adding paths from gender to the intervening and dependent variables. Mediation analyses proceeded in two steps (Holmbeck, 1997).

First, direct effects of psychological control on depression were tested. Estimation of the direct effects model for paternal ratings of psychological control (SBS-χ^2 (7; N = 470) = 19.21; SRMR = .03; RMSEA = .06) showed a significant initial direct effect of psychological control on depression (β = .49; p < .001). Estimation of this model for maternal ratings of psychological control (SBS-χ^2 (7; N = 538) = 6.10; SRMR = .01; RMSEA = .00) also showed a significant initial direct effect of psychological control on depression (β = .34; p < .001).

Second, an indirect effects model was tested in which psychological control was only indirectly related to depression through maladaptive perfectionism. Then, it was evaluated whether adding a direct path from psychological control to depression above and beyond the indirect effect of maladaptive perfectionism would add to the model fit. The indirect effects model for the paternal and maternal data (SBS-χ^2 (23; N = 470) = 88.10; SRMR = .05 RMSEA = .08 and SBS-χ^2 (23; N = 538) = 62.03; SRMR = .04; RMSEA = .06, respectively) showed that psychological control positively predicted maladaptive perfectionism (β = .51; p < .001 for fathers and β = .47; p < .001 for mothers) which, in turn, positively predicted depression (β = .65; p < .001 for fathers and β = .54; p < .001 for mothers). However, adding a direct path from psychological control to depression significantly added to the model fit (ΔSBS-χ^2 (1) = 22.02; p < .001 for fathers and ΔSBS-χ^2 (1) = 11.51; p < .001 for mothers). After entering maladaptive perfectionism in the model, the direct path from paternal psychological control to depression was still

significant (β = .28; p < .001 for fathers and β = .18; p < .05 for mothers), although it was reduced to about half its original size for in both the paternal and the maternal model (i.e., a reduction of 43% and 47%, respectively). Moreover, the indirect effect of psychological control on adolescent depression through maladaptive perfectionism was significant in both models (z = 4.05; p < .001 for fathers and z = 3.74; p < .001). In sum, it appears that, across parental gender, the effect of psychological control on concurrent levels of depression was partially mediated by maladaptive perfectionism. The final best fitting partial mediation models are depicted in Figure 4.1.

Figure 4.1 *Structural models of concurrent relationships between psychological control, maladaptive perfectionism, and adolescent depressive feelings. Coefficients shown are standardized path coefficients. Coefficients between brackets represent initial direct effects. For sake of clarity, the effects of gender are not shown. * p < .05; ** p < .01; *** p < .001.*



Longitudinal Tests of Intervening Effects. Before testing the hypothesized longitudinal model, it was examined whether psychological control at Time 1 has a direct effect on depression scores at Time 3 controlling for initial levels of depression at Time 1. As with the cross-sectional models, gender was entered as a control variable by allowing paths between gender and each of the model variables. Estimation of the paternal model (SBS-χ^2 (21; N = 364) = 59.85; SRMR = .04; RMSEA = .07) showed that paternal psychological control did not add to the prediction of depression at Time 3 (β = .04; p > .05) beyond the stability in depression from Time 1 to Time 3 (β = .62; p < .001). Similarly, in the maternal model (SBS-χ^2 (21; N = 434) = 47.96; SRMR = .04; RMSEA = .06) maternal psychological control did not significantly add to the prediction of depression at Time 3 (β = -.03; p > .05) beyond the stability in depression from Time 1 to Time 3 (β = .59; p < .001).

Despite the lack of significant direct effects of psychological control on depression across time, it was still examined whether maladaptive perfectionism at Time 2 would indirectly establish a link between psychological control at Time 1 and depression at Time 3. The hypothesized longitudinal model fit the data well for the paternal ratings of psychological control (SBS-χ^2 (77; N = 364) = 172.53; SRMR = .04; RMSEA = .06). As shown in Figure 4.2, paternal psychological control at Time 1 predicted maladaptive perfectionism at Time 2 (β = .14; p < .01) after controlling for stability in maladaptive perfectionism (β = .72; p < .001). Maladaptive perfectionism at Time 2, in turn, predicted depressive feelings at Time 3 (β = .19; p < .001) after controlling for stability in depressive feelings at Time 1 (β = .54; p < .001). Adding paths from depression Time 1 to maladaptive perfectionism Time 2 or from psychological control Time 1 to depression Time 3 did not significantly improve model fit. The indirect effect of paternal psychological control Time 1 to depression Time 3 through maladaptive perfectionism at Time 2 was significant (z = 2.05; p < .05).

Similarly, the hypothesized longitudinal model for maternal ratings of psychological control fit the data well (SBS-χ^2 (77; N = 434) = 172.53; SRMR = .04; RMSEA = .06) and, as with the paternal data, the model fit could not be improved by adding paths to the model. The path from maternal psychological

control Time 1 to maladaptive perfectionism Time 2 (β = .10; p < .05) was significant after controlling for stability in maladaptive perfectionism at Time 1 (β = .72; p < .001). The path from maladaptive perfectionism Time 2 to depression Time 3 was significant (β = .17; p < .001) after controlling for stability in depression at Time 1 (β = .50; p < .001). In addition, the indirect effect of maternal psychological control Time 1 to depression Time 3 through maladaptive perfectionism at Time 2 approached significance (z = 1.87; p = .06).

Moderation by Gender. In a final set of analyses it was examined whether gender would moderate the associations in the final models presented in Figures 4.1 through 4.3. For this aim, a multi-group analysis was performed that compares a constrained model, that is, a model in which the structural coefficients are set equal across gender, and an unconstrained model, that is, a model in which these coefficients are allowed to vary across gender. Models are compared in terms of the chi-square difference corresponding to the number of degrees of freedom. A significant difference implies that the model differs significantly across gender. In contrast, a non-significant difference implies that the model is invariant across gender.

The paths in the cross-sectional models depicted in Figure 4.1 were not significantly moderated by gender, neither in the paternal model (ΔSBS-χ^2 (3) = 5.89; p > .05) nor in the maternal model (ΔSBS-χ^2 (3) = 2.83; p > .05). Regarding the longitudinal paternal model (Figure 4.2), no significant differences were found between the constrained and unconstrained models, neither with respect to the two stability coefficients in the model (ΔSBS-χ^2 (2) = 0.33; p > .05) nor with respect to the two cross-lagged paths (ΔSBS-χ^2 (2) = 2.69; p > .05*)*. These findings indicate that none of the structural paths in the paternal model was moderated by adolescent gender. For the maternal longitudinal model (Figure 4.3), the multi-group comparison did not show a moderating effect of gender on the stability coefficients (ΔSBS-χ^2 (2) = 1.06; p > .05) but did reveal a significant difference between the constrained and unconstrained models for the cross-lagged effects (ΔSBS-χ^2 (2) = 6.33; p < .05). Follow-up analyses pointed out that this was uniquely due to a moderating effect of gender on the path from maternal psychological control Time 1 to

Figure 4.2 *Structural model of longitudinal relations between paternal psychological control, maladaptive perfectionism, and adolescent depressive feelings. Coefficients shown are standardized path coefficients. For sake of clarity, the effects of gender are not shown. * p < .05; ** p < .01; *** p < .001.*

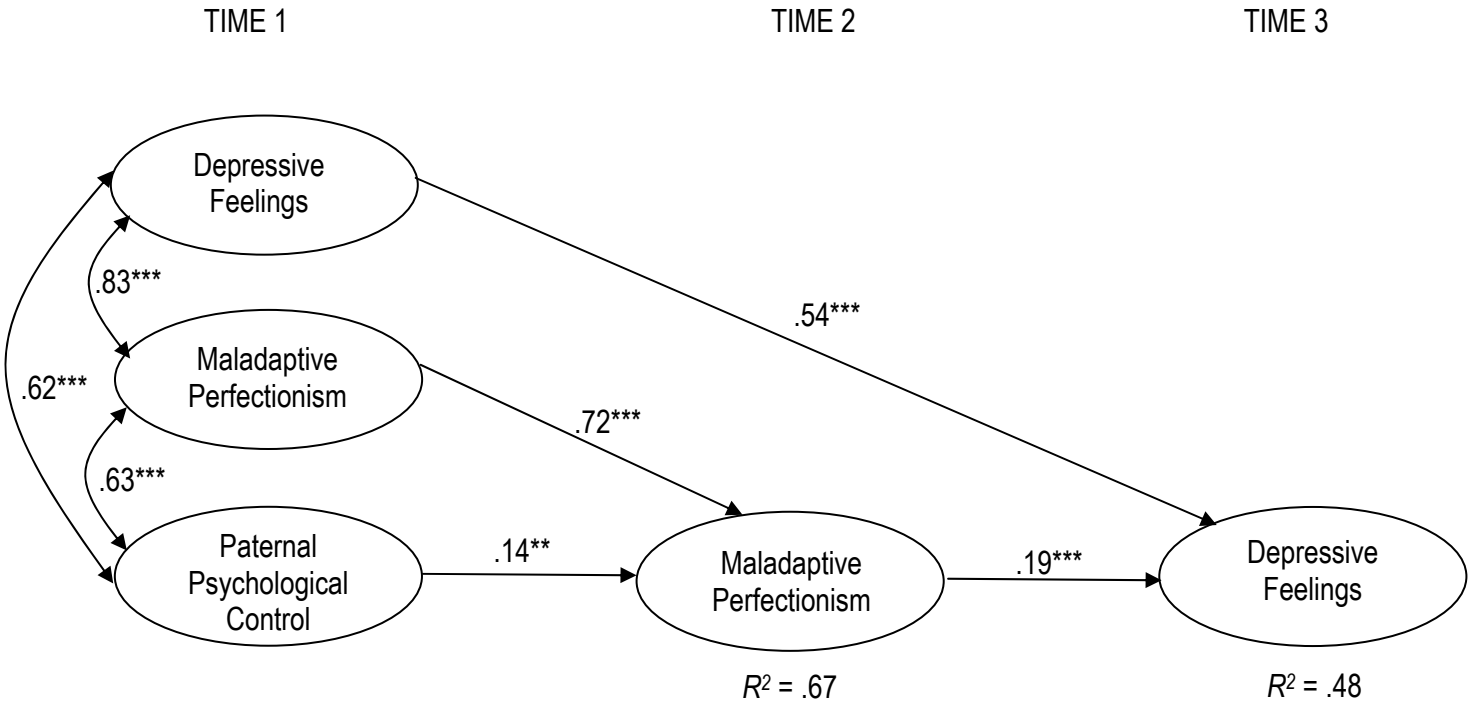
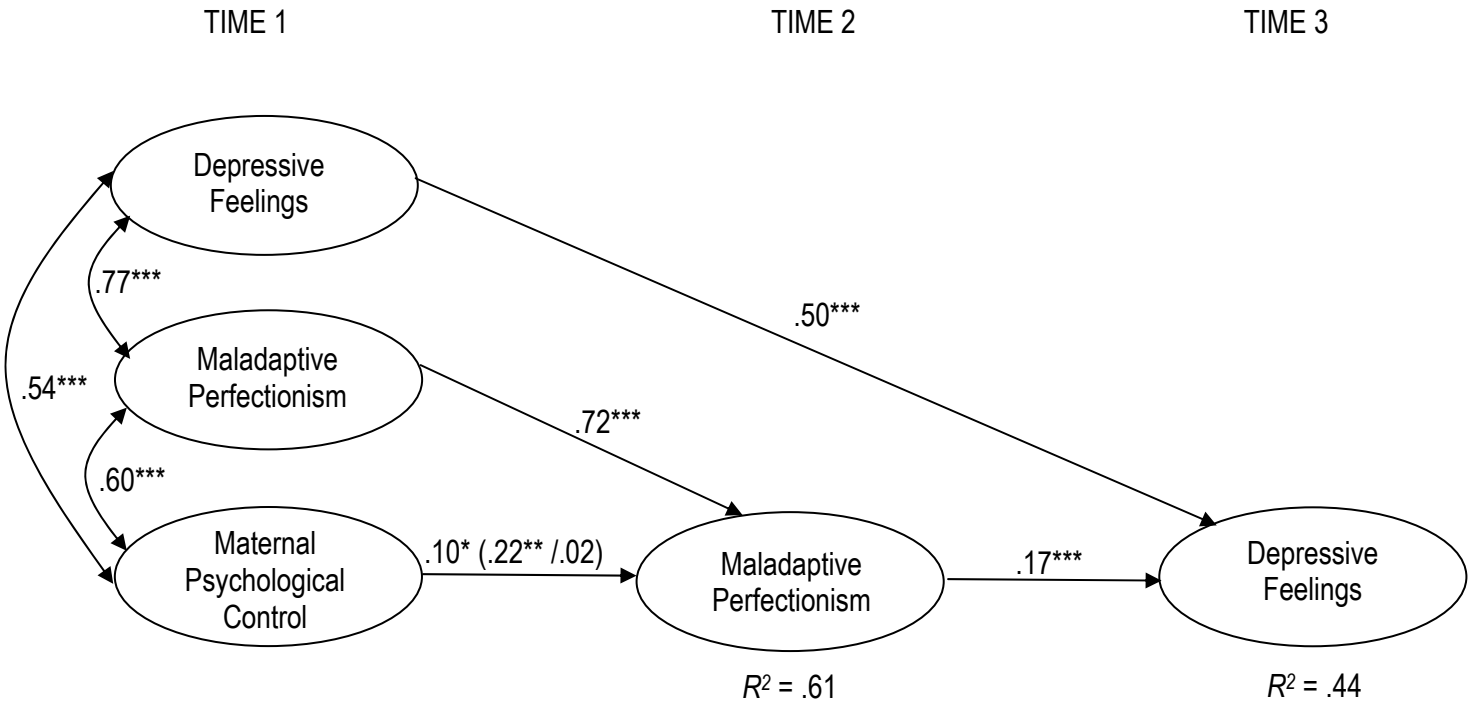


Figure 4.3 *Structural model of longitudinal relationships between maternal psychological control, maladaptive perfectionism, and adolescent depressive feelings. Coefficients shown are standardized path coefficients. For sake of clarity, the effects of gender are not shown. For those paths which were significantly moderated by gender, separate coefficients for males and females are shown. The first coefficient is for males, the second coefficient is for females. * p < .05; ** p < .01; *** p < .001.*



maladaptive perfectionism Time 2. Specifically, whereas this path was significant for males (β = .22; p < .01), it was not significant for females (β = .02; p > .05) (see Figure 4.3). Accordingly, whereas the indirect of psychological control Time 1 on depression Time 3 through maladaptive perfectionism Time 2 was significant for males (z = 2.10; p < .05), it was not significant for females (z = 0.01; p > .05).

Discussion

The general aim of this study was to provide further support for the hypothesis that adolescents' perfectionism – and maladaptive perfectionism in particular -- plays an intervening role in the relation of parental psychological control and adolescents' depressive feelings. In line with a number of previous studies, it was found that although both maladaptive and adaptive perfectionism are positively related to measures of inadequate parenting (i.e., psychological control) and impaired personal functioning (i.e., depression), only maladaptive perfectionism explains unique variance in these measures after accounting for the variance shared by both perfectionism components (e.g., Bieling et al., 2004; Dunkley, Blankstein, et al., 2006; Soenens, Vansteenkiste, et al., 2005). Our findings thus provide further evidence for a distinction between maladaptive and relatively more adaptive types of perfectionism and indicate that maladaptive (but not adaptive) perfectionism is a likely candidate to account for relations between controlling parenting and adolescent adjustment.

This study mainly contributed to the extant literature by assessing the intervening role of maladaptive perfectionism both concurrently and longitudinally. Cross-sectional mediation analyses replicated past research (e.g., Kenney-Benson & Pomerantz, 2005; Soenens, Vansteenkiste, et al., 2005) by showing (a) that the direct association between parental psychological control and adolescents' depressive feelings is substantially reduced after accounting for the intervening effect of maladaptive perfectionism and (b) that the indirect path of psychological control to adolescents' depressive feelings through maladaptive perfectionism is systematically significant. Although these findings are in line with the hypothesis that maladaptive perfectionism functions as an intervening variable in relations between psychological control and adolescent depression, they do not speak to the

longitudinal dynamics involved in this hypothesized sequence. For the latter aim, this study documented the intervening role of maladaptive perfectionism using a 3-wave longitudinal design. The principal finding of the longitudinal analyses was that psychological control at Age 15 predicted increased levels of adolescent maladaptive perfectionism one year later which, in turn, predicted increased levels of depressive feelings again one year later. Maladaptive perfectionism at Time 2 thus appears to indirectly establish an effect of psychological control at Time 1 on adolescent levels of depression at Time 3

In line with different theoretical accounts (Blatt, 1995; Flett et al., 2002), adolescents of psychologically controlling parents appear to increasingly engage in negative self-evaluative processes including harsh self-scrutiny, self-doubt, self-derogation, and guilt over failure. Common to these negative self-evaluations is a conditionally approving stance towards oneself, as maladaptive perfectionists' self-worth heavily depends on their achievement of rigidly pursued goals and standards. As a consequence of the guilt-inducing and love withdrawing (i.e., psychologically controlling) parenting they experience, adolescents thus appear to develop a set of conditionally approving and self-critical self-representations which, in turn, render them vulnerable to depressive feelings and distress over time.

The finding that psychological control prospectively predicts maladaptive perfectionism is intriguing because it shows that maladaptive perfectionism, as a personality feature, is susceptible to developmental change during middle adolescence and that the relative degree of change in maladaptive perfectionism during this period is linked to socialization processes. First, this finding is in line with the general idea that adolescence represents an important life period during which personality features are shaped and become relatively stable elements of individuals' functioning (e.g., Caspi & Roberts, 1999). According to Flett et al. (2002), adolescence specifically represents a key period for the development of perfectionism because this period is characterized by increased levels of self-consciousness and by an increased awareness of social standards and expectations for achievement. Second, the results of this study suggest that perfectionism should not be considered as a fully stable and dispositional trait, but may be better conceived of as a relatively malleable personality feature, the

development of which is significantly affected by social-contextual influences. Such a conclusion is consistent with other findings showing that therapeutic interventions can be effective in reducing patients' levels of perfectionism (e.g., Srinivasagam et al., 1995). Together with the results of this study, such findings support the claim made by Zuroff and colleagues (Zuroff, Blatt, Sanislow, Bondi, & Pilkonis, 1999; Zuroff, Mongrain, & Santor, 2004) that perfectionism represents a dynamic set of cognitive-affective structures which can be either triggered or diminished by interpersonal and socialization experiences rather than a stable, fully genetically inherited personality disposition. At a more general level, it is consistent with Asendorpf and van Aken's (2003) definition of surface traits as personality characteristics that are open to development and malleable by social-contextual influences.

Contrary to a number of previous studies (e.g., Barber et al., 2005; Soenens, Luyckx, et al., 2006), this study did not document a direct significant prospective relation between psychological control and depression. However, longitudinal associations between psychological control and depression have been most consistently demonstrated with one-year lags between measurement waves (Barber et al., 2005). The longer time interval between psychological control and depression in this study may thus account for the lack of a direct prospective relation between both constructs. In spite of this absence of a direct relation, it was found that psychological control is indirectly related to future depression through its prospective effect on maladaptive perfectionism.

A second important way in which this study contributed to the literature is by its reliance on a multi-informant assessment of psychological control. This latent factor composed of adolescents' and parents' reports of psychological control was significantly related to adolescents' maladaptive perfectionism, both concurrently and longitudinally. It was also significantly related to depression scores, albeit only at the cross-sectional level. As this multi-informant measure taps the variance that is common to parents' and adolescents' reports of psychological control, the findings in this study suggest that the relations between (psychologically) controlling parenting, perfectionism, and distress obtained in past research are not entirely due to a general response tendency or to distortions in adolescents'

perceptions of their parents caused by adolescents' own functioning. Instead, our findings allow one to conclude with greater certainty that the actual level of psychological control in families is related to adolescents' development of a maladaptive perfectionist orientation and subsequent distress.

A final interesting finding is the relative consistency of the findings across parents' and adolescents' gender. There was only one exception to this general pattern, namely the lack of a prospective relation between maternal psychological control and daughters' maladaptive perfectionism. Accordingly, it was found that maladaptive perfectionism did not function as an intervening variable in associations between psychological control and depression in mother-daughter dyads. Intriguingly, these findings are in line with a recent study by Soenens, Luyckx, et al. (2006) which found that maternal psychological control predicted increased levels of depression in sons but not in daughters. Together these findings may suggest that the detrimental effect of maternal psychological control is less pronounced in daughters than in sons. Another possibility, however, is that maternal psychological control indirectly carries over into daughters' depression through a qualitatively different process. Apart from perfectionism, the theory of Blatt (2004) distinguishes another fundamental pathway linking socialization experiences to vulnerability to depression, that is, a pathway characterized by dependency.

Dependency has been defined as typical of individuals with strong concerns involving interpersonal relations. Dependent individuals intensely rely on others to provide and maintain a sense of well-being, resulting in anxiety about separation and loss (Blatt, 2004). Dependency is thought to develop in children whose parents manipulate the attachment bond with the child and use their love and care to control the child. Love and acceptance are made contingent on undue loyalty, excessive conformity, and dependency (Blatt & Homann, 1992). Hence, conditionally approving and intrusive parenting is thought to be involved in this type of vulnerability as well, although the type of psychological control that leads to dependency may be expressed in a different fashion than the type of psychological control that leads to perfectionism (Soenens, Vansteenkiste, Luyten, & Goossens, 2006). Interestingly, it has been argued and documented by Blatt (2004) that a dependent orientation would not only be more

typical of females, but also that mothers are more strongly involved in the development of a dependent orientation than fathers. In other words, dependency may represent a relatively specific pathway linking controlling parenting to depression in mother-daughter dyads. Additional research is clearly needed to replicate the findings of this study as well as to test our speculations about dependency as an alternative pathway through which mothers' psychological control is related to daughters' depression.

Limitations and Directions for Future Research

Although this study provides support for a prospective relation between psychologically controlling parenting and maladaptive perfectionism and thus suggests an influence of psychological control on subsequent development of perfectionism, it should be noted that the opposite direction of effects could not be tested in this study. As parent and adolescent reports of psychological control were only available at the first wave of data collection, we could not examine whether initial levels of maladaptive perfectionism increase parents' use of psychological control over time. The possibility indeed exists that maladaptive perfectionists, because of their own hostile and dismissing interpersonal style, evoke more intrusive reactions in their parents (i.e., an evocative transaction; Caspi & Roberts, 1999). To provide a more complete picture of the dynamics involved in the relation between psychological control and maladaptive perfectionism, future research would do well to test this opposite direction of effects as well.

Another important avenue for future research may be to explore in greater depth the association between maladaptive perfectionism and adolescents' distress (see e.g., Dunkley, Sanislow, Grilo, & McGlashan, 2006). A possible framework guiding the search for mediators of this association may be offered by self-determination theory's distinction between three basic psychological needs that serve as nutriments for people's optimal functioning, that is, the needs for autonomy, relatedness, and competence (Deci & Ryan, 2000). First, the internal pressure for perfect achievement experienced by maladaptive perfectionists is antithetical to the experience of psychological freedom, volition and autonomy and may as such also contribute to decreased well-being and lower performance (Miquelon,

Vallerand, Grouzet, & Cardinal, 2005; Ryan, Deci, Grolnick, & LaGuardia, in press). Second, maladaptive perfectionists are known to develop a fearful attachment style (Blatt, 1995; Flett et al., 2002) as well as to engage in hostile, domineering, and relationally aggressive interpersonal styles (Habke & Flynn, 2002). These factors are likely to impair their social functioning and undermine their need for relatedness, which makes maladaptive perfectionist people vulnerable to lower satisfaction in social relationships and loneliness (e.g., Dunkley, Sanislow, et al., 2006; Flett, Hewitt, & De Rosa, 1996). Third, the detrimental effects of maladaptive perfectionism may occur because maladaptive perfectionists, as a consequence of their continuous self-doubts and self-scrutiny, seldom feel that they meet their own unrealistic goals and thus develop a pervasive sense of incompetence (O'Connor & O'Connor, 2003). In short, maladaptive perfectionistic people might display poorer psychological well-being and lower performance because their perfectionistic orientation dynamically provided them with limited opportunities for satisfaction of their basic needs for autonomy, competence, and relatedness.

Conclusion

The present prospective study provides evidence that maladaptive perfectionism represents an important process through which earlier experiences of psychologically controlling parenting carry over into later levels of internalizing problems. Psychological control appears to make adolescents vulnerable to both concurrent and later experiences of depression because it leads adolescents to become increasingly self-critical, doubting, and concerned with failure.

References

Asendorpf, J. B., van Aken, M. A. G. (2003). Personality-relationship transaction in adolescence: Core versus surface personality characteristics. *Journal of Personality, 71*, 629-666.

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67,* 3296-3319.

Barber, B. K., Bean, R. L., & Erickson, L. D. (2002). Expanding the study and understanding of psychological control. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 263-289). Washington, DC: American Psychological Association.

Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 15-52). Washington, DC: APA.

Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development, 65,* 1120-1136.

Barber, B. K., Stolz, H. E., Olsen, J. A., & Maughan, S. L. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, method, and culture. *Monographs of the Society for Research in Child Development, 70*, 1-151.

Bieling, P. J., Israeli, A. L., & Antony, M. M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36,* 1373-1385.

Blatt, S. J. (1995). The destructiveness of perfectionism. *American Psychologist, 50,* 1003-1020.

Blatt, S.J. (2004). *Experiences of depression: Theoretical, research and clinical perspectives.* Washington, DC: American Psychological Association Press.

Blatt, S. J., & Homann, E. (1992). Parent-child interaction in the etiology of depression. *Clinical Psychology Review, 12,* 47-91.

Burkholder, G. J., & Harlow, L. L. (2003). An illustration of longitudinal cross-lagged design for larger structural equation models. *Structural Equation Modeling, 10,* 465-486.

Burns, D. D. (1980). *Feeling good: The new mood therapy.* New York: New American Library.

Caspi, A., & Roberts, B. W. (1999). Personality continuity and change across the life course. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 549-575). New York: Guilford Press.

Chang, E. C., & Rand, K. L. (2000). Perfectionism as a predictor of subsequent adjustment: Evidence for a specific diathesis-stress mechanism among college students. *Journal of Counseling Psychology, 47*, 129-137.

Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modelling. *Journal of Abnormal Psychology, 112*, 558-577.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 319-338.

Dunkley, D. M., Blankstein, K. R., Masheb, R. M., & Grilo, C. M. (2006). Personal standards and evaluative concerns dimensions of "clinical" perfectionism: A reply to Shafran et al. (2002, 2003) and Hewitt et al. (2003). *Behavior Research and Therapy, 44*, 63-84.

Dunkley, D. M., Sanislow, C. A., Grilo, C. M., & McGlashan, T. H. (2006). Perfectionism and depressive symptoms 3 years later: Negative social interactions, avoidant coping and perceived social support as mediators. *Comprehensive Psychiatry, 47*, 106-115.

Enns, M. W., & Cox, B. J. (2005). Perfectionism, stressful life events, and the 1-year outcome of depression. *Cognitive Therapy and Research, 29*, 541-553.

Enns, M. W., Cox, B. J., & Clara, I. (2002). Adaptive and maladaptive perfectionism: Developmental origins and association with depression proneness. *Personality & Individual Differences, 33*, 921-935.

Flett, G. L., Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research and treatment* (pp. 5-31). Washington, DC : APA.

Flett, G. L., Hewitt, P. L., & De Rosa, T. (1996) Dimensions of perfectionism, psychosocial adjustment, and social skills. *Personality and Individual Differences, 20*, 143-150.

Flett, G. L., Hewitt, P. L., Oliver, J. M., & MacDonald, S. (2002). Perfectionism in children and their parents: A developmental analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 89-132). Washington, DC : APA.

Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. L., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14,* 119-126.

Frost, R. O., Marten, P., Lahart, C. M., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14,* 449-468.

Garber, J., Robinson, N. S., Valentiner, D. (1997). The relation between parenting and adolescent depression : self-worth as a mediator. *Journal of Adolescent Research, 12,* 12-33.

Grolnick, W. S. (2003). *The psychology of parental control: How well-meant parenting backfires*. Mahwah, NJ: Erlbaum.

Habke, A. M., & Flynn, C. A. (2002). Interpersonal aspects of trait perfectionism. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 151-180). Washington, DC : APA.

Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15,* 27-33.

Hambleton, R. K. (1994). Guidelines for adapting educational and psychological tests: A progress report. *European Journal of Psychological Assessment, 10*, 229-244.

Hewitt, P. L., & Flett G. L. (1991). Perfectionism in the self and social contexts: conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology, 60*, 456-470.

Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65,* 599-610.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.

Jöreskog, K. G., & Sörbom, D. (1996). *LISREL 8: Structural equation modeling with the SIMPLIS command language.* Chicago: Scientific Software International.

Kenney-Benson, G. A., & Pomerantz, E. M. (2005). The role of mothers' use of control in children's perfectionism: Implications for the development of depressive symptoms. *Journal of Personality, 73,* 23-46.

Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Herzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology, 35*, 1268-1282.

Marsh, H. W., Hau, K. T., Balla, J. R., & Grayson, D. (1998). Is more ever too much ? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research, 33*, 181-220.

Miquelon, P., Vallerand, R. J., Grouzet, F M. E., & Cardinal, G. (2005). Perfectionism, academic motivation, and psychological adjustment: An integrative model. *Personality and Social Psychology Bulletin, 31*, 913-924.

O'Connor, R. C., & O'Connor, D. B. (2003). Predicting hopelessness and psychological distress: The role of perfectionism and coping. *Journal of Counseling Psychology, 50*, 362-372.

Parker, G. (1983). *Parental overprotection: A risk factor in psychosocial development*. New York: Grune & Stratton.

Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72,* 583-598.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385-401.

Randolph, J. J., & Dykman, B. M. (1998). Perceptions of parenting and depression-proneness in the offspring: Dysfunctional attitudes as a mediating mechanism. *Cognitive Therapy and Research, 22*, 377–400.

Rice, K. G., & Aldea, M. A. (2006). State dependence and trait stability of perfectionism: A short-term longitudinal study. *Journal of Counseling Psychology, 53*, 205-212.

Rogers, K. N., Buchanan, C. M., & Winchell, M. E. (2003). Psychological control during early adolescence: Links to adjustment in differing parent/adolescent dyads. *Journal of Early Adolescence, 23,* 349-383.

Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (in press). The significance of autonomy and autonomy support in psychological development and psychopathology. In D. Cicchetti & D. Cohen (Eds.) *Developmental Psychopathology: Vol. 1. Theory and Methods*. New York: Wiley.

Satorra, A., & Bentler, P.M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In A. von Eye, & C.C. Clogg (Eds.), *Latent variable analysis: Applications in developmental research* (pp. 399-419). Newbury Park, CA: Sage.

Shafran, R., & Mansell, W. (2001). Perfectionism and psychopathology: A review of research and treatment. *Clinical Psychology Review, 21*, 879–906.

Shahar, G., Blatt, S. J., Zuroff, D. C., Kuperminc, G. P., & Leadbeater, B.J. (2004). Reciprocal relations between depressive symptoms and self-criticism (but not dependency) among early adolescent girls (but not boys). *Cognitive Therapy and Research, 28*, 85-103.

Simons, R. L., Whitbeck, L. B., Conger, R. D., & Chyi-In, W. (1991). Intergenerational transmission of harsh parenting. *Developmental Psychology, 27,* 159-171.

Soenens, B., Elliot, A. J., Goossens, L., Vansteenkiste, M., Luyten, P., & Duriez, B. (2005). The intergenerational transmission of perfectionism: Parents' psychological control as intervening variable. *Journal of Family Psychology, 19*, 358-366.

Soenens, B., Luyckx, K., Vansteenkiste, M., Duriez, B., & Goossens, L. (2006). *Clarifying the link between parental psychological control and adolescents' depressive feelings: Testing reciprocal versus unidirectional models.* Manuscript submitted for publication.

Soenens, B., Vansteenkiste, M., Duriez, B., & Goossens, L. (in press). In search of the sources of psychologically controlling parenting: The role of parental separation anxiety and parental maladaptive perfectionism . *Journal of Research on Adolescence*.

Soenens, B., Vansteenkiste, M., Luyten, P., & Goossens, L. (2006, March). *Distinguishing among types of psychological control: Separation-anxious versus perfectionistic psychological control.* Poster presented at the Biennial Meeting of the Society for Research on Adolescence (SRA), San Francisco.

Soenens, B., Vansteenkiste, M., Luyten, P., Duriez, B., & Goossens, L. (2005). Maladaptive perfectionistic self-representations: The mediational link between psychological control and adjustment*. Personality and Individual Differences, 38, 487-498*.

Srinivasagam, N. M., Kaye, W. H., Plotnicov, K. H., Greeno, C., Weltzin, T. E., & Rao, R. (1995). Persistent perfectionism, symmetry, and exactness after long-term recovery from anorexia nervosa. *American Journal of Psychiatry, 152*, 1630-1634.

Vansteenkiste, M., Simons, J., Lens, W., Soenens, B., & Matos, L. (2005). Examining the motivational impact of intrinsic versus extrinsic goal framing and internally controlling versus autonomy-supportive communication style upon early adolescents' academic achievement. *Child Development, 76*, 483-501.

Zuroff, D. C., Blatt, S. J., Sanislow, C. A., III, Bondi, C. M., & Pilkonis, P. A. (1999). Vulnerability to depression: Re-examining state dependence and relative stability. *Journal of Abnormal Psychology, 108*, 76-89.

Zuroff, D. C., Mongrain, M., & Santor, D. A. (2004). Conceptualizing and measuring personality vulnerability to depression: Comment on Coyne and Whiffen (1995). *Psychological Bulletin, 130*, 489-511.