

**The Role of Parental Reflective Functioning in The Relation Between Parents'
Self-Critical Perfectionism and Psychologically Controlling Parenting Towards
Adolescents**

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SYNOPSIS

Objective. Parental self-critical perfectionism has been identified as an important source of parents' psychologically controlling parenting. Nevertheless, it remains unclear how this well-established association can be explained. This study aims to advance insight in the association between parental self-critical perfectionism and psychological control by addressing the role of parental reflective functioning among parents of adolescents. **Design.** This cross-sectional study included 268 adolescents ($M_{\text{age}} = 15.14$ years, 50.7% female), mothers ($M_{\text{age}} = 45.83$ years), and fathers ($M_{\text{age}} = 47.77$ years). Parents completed questionnaires assessing self-critical perfectionism, parental reflective functioning, psychologically controlling parenting, and their child's problem behaviors. In addition, adolescents rated their parents' use of psychological control. **Results.** Self-critical perfectionism related both directly and indirectly, via parents' pre-mentalization, to psychological control among mothers and fathers. Most associations remained significant when controlling for adolescent problem behaviors. **Conclusions.** This incapacity to reflect on the adolescent's mental world, and the tendency to make maladaptive attributions about the adolescent's internal states, make parents with high levels of self-critical perfectionism vulnerable to rely on psychologically controlling parenting.

KEYWORDS: Parental Reflective Functioning, Psychological Control, Self-Critical Perfectionism, Adolescence, Parenting.

INTRODUCTION

Parental psychological control, an intrusive and pressuring type of parenting, negatively affects adolescents' psychosocial development (Barber & Xia, 2013). Due to the negative consequences of psychological control, researchers started to investigate the origins of parents' engagement in psychologically controlling practices (Soenens & Vansteenkiste, 2010). Parental self-critical perfectionism is an important antecedent of psychological control (Soenens, Vansteenkiste, Duriez, & Goossens, 2006). Yet, the mechanisms behind this association remain poorly understood. This study aims to gain insight into dynamics of the link between parental self-critical perfectionism and the use of psychological control by exploring the role of parental reflective functioning (Slade, 2005). Parental reflective functioning involves parents' metacognitive ability to reflect on and to understand themselves and their child in terms of mental states, such as thoughts and feelings (Sharp & Fonagy, 2008).

Psychological Control and Parental Self-Critical Perfectionism

Parental psychological control refers to parenting that is manipulative, intrusive, and constraining in nature (Barber, 1996). Psychologically controlling parents engage in insidious strategies such as guilt-induction, shaming, and love withdrawal to pressure their children to act, think, and feel in specific ways and to dominate their children's psychological world (Barber & Harmon, 2002; Soenens & Vansteenkiste, 2010). Because parents who rely on psychological control focus on their own personal standards or status, they are nonresponsive to their child's psychological needs and violate their child's self-worth (Barber & Harmon, 2002). Therefore, psychologically controlling parenting is considered detrimental for children's emotional and psychological development (Barber, 1996; Barber & Harmon, 2002; Scharf & Goldner, in press; Soenens & Vansteenkiste, 2010). Parental psychological control is related to psychosocial problems and maladjustment in children, especially during

adolescence (Aunola, Tolvanen, Viljaranta, & Nurmi, 2013; Barber, Olsen, & Shagle, 1994; Barber & Xia, 2013; Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2008).

Psychologically controlling parenting is predictive of internalizing problems, such as depression, anxiety, and low self-esteem, externalizing problems, such as aggression and delinquency, and social problems, such as relational aggression (Barber & Harmon, 2002; Pinquart, 2017a, b).

Given the maladaptive outcomes associated with psychologically controlling parenting, it is important to uncover determinants of this parenting behavior. Why are some parents more prone to rely on psychological controlling strategies than others? There is increasing evidence that various sources of influence affect the use of psychological control, including contextual determinants (e.g., inter-parental conflict; Gong, Paulson, & Wang, 2016), child characteristics (e.g., poor school achievement; Pomerantz & Eaton, 2001), and parent characteristics (e.g., personality; Prinzie, Stams, Dekovic, Reijntjes, & Belsky, 2009; Soenens et al., 2005). Of these sources of influence, parents' own psychological characteristics have been argued to be most proximally related to the use of psychological control (Barber, Bean, & Erickson, 2002).

Parents' self-critical perfectionism, which can be defined as the tendency to set excessive standards for achievement combined with an inclination to engage in harsh self-scrutiny (Blatt, 1995; Frost, Marten, Lahart, & Rosenblate, 1990), is a particularly strong personality-based predictor of psychological control among parents of adolescents (Ahmad & Soenens, 2010; Amitay, Mongrain, & Fazaa, 2008; Bleys et al., 2016; Greblo & Bratko, 2014; Soenens et al., 2005, 2006; Thompson & Zuroff, 1998). Soenens et al. (2006) showed that parents' self-critical perfectionism was related to more parent and adolescent-reported psychological control in both mothers and fathers. An important question is how this well-established association between parental self-critical perfectionism and psychologically

controlling parenting can be explained. Here, we argue that the association may be partly direct and partly indirect (i.e., accounted for by intervening mechanisms). Parental self-critical perfectionism may translate into controlling parenting directly because parents high on self-critical perfectionism might treat their children much like they treat themselves. That is, these parents are likely to set unrealistic demands for themselves and evaluate themselves harshly, and they expect outstanding and excessive achievements from their children and engage in intrusive practices to impose these excessive standards (Greblo & Bratko, 2014).

In addition to this direct process, we reason that indirect underlying mechanisms may also be involved in the association between self-critical perfectionism and psychological control (Soenens et al., 2005). Insight in such underlying processes is informative for the development of interventions that specifically target these mechanisms and that aim to reduce the risk of parental engagement in psychological control (Bleys et al., 2016). One such potential mediating factor representing a workable mechanism in interventions is parental reflective functioning (Slade, 2007). Although there is indirect evidence indicating that self-critical perfectionism undermines individuals' reflective functioning (Lundh, Johnsson, Sundqvistn, & Olsson, 2002; Rodríguez et al., 2017), an ability which in turn affects the quality of interpersonal behavior, including parenting (Camoirano, 2017; Ordway, Webb, Sadler, & Slade, 2015), this study is the first to examine the mediating role of parental reflective functioning in the association between parents' self-critical perfectionism and psychologically controlling parenting.

Parental Reflective Functioning and Parent-Child Interaction

Parental reflective functioning refers to parents' ability to reflect on and to comprehend their own and their child's internal mental states (such as feelings and beliefs) and to consider factors that influence these mental experiences (Luyten, Nijssens, Fonagy, & Mayes, 2017; Sharp & Fonagy, 2008). Parental reflective functioning involves the capacity to

understand (1) the opacity of mental states, (2) the effect that mental states can have on behavior, and (3) the personal differences in mental states, even during shared experiences. Initially, parental reflective functioning was described as a unidimensional concept, but findings now point to its complexity and multidimensionality (Luyten, Mayes, Nijssens, & Fonagy, 2017a; Luyten et al., 2017). Specifically, three theoretically distinct and clinically meaningful dimensions have been identified: (1) Interest and curiosity in mental states encompasses parents' active attention and preparedness to reflect on their child's mental experiences. (2) Certainty of mental states refers to parents' ability to acknowledge the opacity of the child's subjective thoughts and feelings. Whereas parents who score high on this factor are overly certain about their child's internal world, parents with low scores are very unsure about their child's mental states (Luyten et al., 2017). (3) The pre-mentalizing mode refers to parents' denial that their children have a mind of their own (i.e., have mental states that underlie their behavior) or their incapacity to reflect on their child's mental world. This mode also includes maladaptive (e.g., hostile) attributions about the child's thoughts, feelings, or behaviors (Luyten et al., 2017).

Although no studies to date have investigated the intervening role of reflective functioning in associations between parental self-critical perfectionism and psychologically parenting, there is indirect evidence for such an intervening role from two distinct lines of research, one of which deals with the association between self-critical perfectionism and reflective functioning and one of which deals with the role of reflective functioning in parenting.

First, self-critical perfectionism is generally related to lower quality reflective functioning. Although no study to date directly investigated the association between parental self-critical perfectionism and parental reflective functioning, several studies have examined relations between self-critical perfectionism and constructs that are typically subsumed under

or related to the umbrella term of reflective functioning, such as emotion recognition and empathy (Luyten et al. 2012). These studies showed that self-critical perfectionism relates negatively to different constructs akin to reflective functioning. Lundh et al. (2002), for example, found that self-critical perfectionism was related to difficulties identifying and describing emotions in samples of students and adults. Rodríguez et al. (2017) reported that college students with higher levels of self-critical perfectionism displayed lower capacities for emotion recognition, which is considered a basic feature of reflective functioning (Luyten, Fonagy, Lowyck, & Vermote, 2012). de la Parra, Dagnino, Valdés, and Krause (2017) also found that self-critical perfectionism was associated with more difficulties in the perception of one's self and others and in affect differentiation. Stoeber, Noland, Mawenu, Henderson, and Kent (2017) showed that self-critical perfectionism was negatively associated with university students' ability to empathize with others' feelings and point of view. Although these studies did not directly examine the association between self-critical perfectionism and parental reflective functioning, the findings indicate that self-critical perfectionism hampers the ability to understand and reflect on internal mental states such as emotions (i.e., general reflective functioning).

We hypothesized that parents who are highly self-critical will be less able to reflect on and to comprehend their own and their child's internal mental states (i.e., parental reflective functioning). This study addresses specific associations between self-critical perfectionism and the three dimensions of parental reflective functioning among parents of adolescents. Our primary hypothesis dealt with the association between self-critical perfectionism and pre-mentalization. There are clear theoretical reasons to expect a positive association between the two constructs. That is, parents high on self-critical perfectionism are likely to be overly focused on their own expectations or experiences, limiting their insight in and understanding of the complexity of the child's mental world (i.e., feelings, thoughts, intentions). Their

tendency to have excessive standards and to evaluate their child's behavior in a negative or harsh way likely makes these self-critical perfectionistic parents more prone to make maladaptive attributions about their child's inner world. Thus, we hypothesized that self-critical perfectionism would relate positively to parents' pre-mentalization. To illustrate the potential role of pre-mentalization consider the following example. When a father expects outstanding achievements from his adolescent son, he might not be able to reflect adequately on the adolescent's own thoughts, feelings, or intentions in case of failure at school. Rather, the father's preoccupation with high standards might cause him to focus on his own disappointment and embarrassment and even to attribute the failure to his malevolent intentions (e.g., "My son failed his exams on purpose to provoke me.") (i.e., high level of pre-mentalization).

The associations between self-critical perfectionism and the two other dimensions of parental reflective functioning (that is, interest and curiosity in mental states and certainty about mental states) are somewhat less straightforward. Therefore, we formulated our hypotheses about the associations of parental self-critical perfectionism with these dimensions more tentatively. We expected associations between parental self-criticism and interest and curiosity in mental states, if any, to be negative. This is because parents high on self-critical perfectionism might be too preoccupied with their own standards to pay appropriate interest and attention to the mental states of their child. These parents are likely to have a desire to be good parents. Driven by the goal of being a good (or even perfect) parent, these parents may at times also display an interest and openness for the adolescent's perspective. We also expected the association between parental self-critical perfectionism and certainty about mental states, if any, to be positive. Much as self-critical perfectionistic parents tend to interpret their own successes and failure in a black-and-white fashion, they might quickly jump to conclusions regarding their children's mental states, thereby claiming great certainty

and disregarding the opacity of the child's mental states (i.e., high level of certainty about mental states). Self-critical perfectionistic parents are also likely to regularly doubt their competence as a parent. Therefore, they may be more unsure about their understanding of their child's thoughts and feelings (i.e., low scores on certainty of mental states).

A second line of research relevant to our hypotheses documented the pivotal role of reflective functioning in parenting behavior. The capacity for reflective functioning allows parents to understand mental states occurring specifically during parent-child interactions in a meaningful, understandable, and predictable way (Luyten et al., 2017). The extent to which parents are capable "to keep their own and their child's mind in mind" has been linked with quality of parent-child interaction and parenting behavior (Camoirano, 2017; Ordway et al., 2015). Several studies, mostly among parents of infants and young children, have showed that parents' capacity for parental reflective functioning is positively related to adaptive parenting and negatively to dysfunctional parenting (Grienenberger, Kelly, & Slade, 2005; Rostad & Whitaker, 2016; Rutherford et al., 2013, 2015, Smaling et al., 2016; Stacks et al., 2014). Luyten, Mayes, et al. (2017a), for example, found that parental reflective functioning related to parents' emotional availability. More specifically, parents' level of pre-mentalization was negatively related with their emotional availability towards their infant, whereas the dimensions of certainty about mental states and interest and curiosity were positively associated with emotional availability.

Research has begun to demonstrate the importance of parental reflective functioning for quality of parenting during infancy and early childhood, but studies of its role in parenting during adolescence are scarce. This is unfortunate because adolescence is a developmental period marked by changes in parents' roles, by children's increased strivings for independence, and by changes in emotional arousal (Soenens, Vansteenkiste, & Beyers, 2019; Steinberg & Morris, 2001). As such, adolescence is a developmental stage in which parents'

reflective abilities may be challenged and in which these abilities are at the same time particularly important for adolescents' social and emotional well-being and for the parent-adolescent interaction (Benbassat & Shulman, 2016; Milan, Ramirez, & Carlone, 2017; Kobak, Abbott, Zisk, & Bounoua, 2017). By examining the role of parental reflective functioning among parents of adolescents, rather than among parents of young children, it becomes possible to include the adolescents' perception of parenting behavior. As there can be discrepancies between parent and child reports of parenting behavior (Korelitz & Garber, 2016), a multi-informant approach allows for new and methodologically improved ways to examine the importance of parental reflective functioning for parenting.

This study is – to our knowledge- the first to examine parental reflective functioning for parenting by including both parent- and child-reported parenting behaviors. Furthermore, the importance of parental reflective functioning has not yet been examined specifically with regard to psychologically controlling parenting. We reasoned that understanding and interpreting an adolescent's thoughts, feelings, and intentions allows parents to refrain from intrusive and pressuring responses (Camoirano, 2017; Ordway et al., 2015). For example, when a mother understands that her adolescent makes a scene in a clothes shop because s/he does not find the right outfit for a party which really matters to him/her, the mother may be better able to withhold critical and guilt-inducing comments and, instead, be responsive to her adolescent's feelings. In contrast, when a mother in this situation assumes with excessive certainty that she knows what the adolescent wants, or when a mother is not able to recognize the adolescent's mental states (and instead assumes that the adolescent's behavior is an attempt to embarrass her), she is likely to resort more quickly to pressuring and domineering practices. Thus, we anticipate that poor parental reflective functioning will be related to more psychologically controlling parenting.

The Present Study

Self-critical perfectionism can preclude one's ability and readiness to understand and reflect on internal mental states (i.e., general reflective functioning). Whether parental self-critical perfectionism also hinders parents' understanding of their adolescent's mental states, resulting in lower parental reflective functioning has not been examined. Given that poor parental reflective functioning may foster parental engagement in psychologically controlling parenting, this study aims to explore the intervening role of parental reflective functioning in the relation between parents' self-critical perfectionism and psychological control. We primarily examined the possibility that pre-mentalization (which reflects low capacity for reflective functioning) would account for (i.e., mediate) the association between self-critical perfectionism and psychologically controlling parenting. We also explored more tentatively the role of two other dimensions of parental reflective functioning that have a less straightforward association with parental self-critical perfectionism (i.e., interest and curiosity in mental states and certainty of mental states). Their intervening role was examined both for maternal and paternal parenting (providing us with an opportunity to examine whether the hypothesized associations would replicate across parental gender) and using a multi-informant approach to assess parenting (so as to increase confidence that associations obtained do not reflect shared method variance).

METHOD

Participants and Procedure

Participants were 268 Belgian adolescents ($M_{\text{age}} = 15.14$ years, $SD = 1.98$, range = 11.74 - 18.80, 50.7% female) and their mothers ($M_{\text{age}} = 45.83$ years, $SD = 4.25$, range = 33.8 - 56.55) and fathers ($M_{\text{age}} = 47.77$ years, $SD = 4.71$, range = 33.49 - 62.74). In terms of educational level, 2.6% of the adolescents were in elementary school, 90.7% were attending secondary school, and 6.3% were in the first year of college or university. One adolescent was no longer in school. Parents' educational level was relatively high, with 69.4% of the mothers and 59.7% of the fathers having a college or university degree, 28.6% of the

mothers and 38.1% of the fathers had a degree of secondary school, and 1.5% of the mothers and 1.1% of the fathers had only finished primary school. All parents were living together and 93% of them were married.

Families were recruited as part of a broader research project focusing on gene-environments interactions (Bleys et al., 2016). Recruitment was part of an undergraduate course in developmental psychology, in which students invited two families (who were not families/friends of the student) for this study. Due to the general study aims of the broader project, only intact families were recruited. Students were trained to contact the families and to instruct families about the questionnaires. The questionnaires were provided by the students during a home visit and were filled in by the participants afterwards, in absence of the student. Both parents and adolescents were instructed to complete the questionnaires separately. The informed consent of the adolescent also stated that their parents would not receive information about their responses. Participants had to return the filled-in questionnaires to the student in separate, sealed envelopes. The study received ethical approval from the Ethical Committee of the Faculty of Psychology and Educational Sciences of Ghent University.

Instruments

Self-critical perfectionism. Parents completed the subscales concerns about mistakes (9 items, e.g., “I should be upset 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.”) from the Frost Multidimensional Perfectionism Scale (FMPS; Frost, Marten, Lahart, & Rosenblate, 1990). Items of both scales were scored on a 5-point Likert scale ranging from (1) *Totally not agree* to (5) *Totally agree*. Both subscales were created by calculating the mean score of all corresponding items. In addition, parents completed the Depressive Experiences Questionnaire (DEQ; Blatt, D’Afflitti, & Quinlan, 1976). The DEQ has several subscales, but we only used the scale for self-criticism (e.g., “I tend to be very critical of myself.”). This

subscale was scored on a 7-point Likert scale ranging from (1) *Totally not agree* to (7) *Totally agree*. The scale was computed using standard scoring procedures of the DEQ (Zuroff, Quinlan, & Blatt, 1990). These three scales are strong markers of the construct of self-critical perfectionism (Dunkley, Zuroff, & Blankstein, 2003). The internal consistencies of the subscales concerns about mistakes and doubts about actions in this study were, respectively, .87 and .77 in the maternal data and .85 and .76 in the paternal data. Cronbach's alpha could not be computed for the DEQ because of its complex scoring procedure.

Parental reflective functioning. Parents filled out the 18-item Parental Reflective Functioning Questionnaire for Adolescents (PRFQ-A; Luyten, Mayes, Nijssens, & Fonagy, 2017b). The PRFQ-A is an adaptation of the Parental Reflective Functioning Questionnaire (PRFQ; Luyten, Mayes, et al., 2017a), which was originally designed for parents of children between 0 and 5 years of age. In the PRFQ-A, the wording of the original items is slightly adjusted so as to be more suitable for parents of children aged between 12 and 18 years. The PRFQ-A measures parents' ability and interest to reflect on and to understand their own and their child's internal mental states and includes three subscales, each consisting of six items: interest and curiosity in mental states (e.g., "I try to see situations through the eyes of my child."), certainty of mental states (e.g., "I always know why my child acts the way he or she does."), and pre-mentalizing modes (e.g., "When my child is being difficult he or she does that just to annoy me."). Items were scored on a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*. Each subscale was created by calculating the mean score of its corresponding items.

Because this study is among the first to use the PRFQ-A, confirmatory factor analyses (CFA) were conducted to investigate its factor structure using *Mplus* 7.3 (Muthén & Muthén, 1998-2012). As missing data were MCAR for the included items (Little's MCAR test: $\chi^2(196) = 151.83, p = .99$), full information maximum likelihood was used. Model fit was evaluated

with the ratio of chi-square/degrees of freedom (χ^2/DF), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). A good model fit is indicated by as χ^2/DF around 2 or lower, a RMSEA value of .08 and a SRMR value of .08 or lower (Hu & Bentler, 1999; Kline, 2010). The expected three-factor solution had an acceptable fit: $\chi^2/DF = 2.08$, RMSEA = .06, SRMR = .08 and $\chi^2/DF = 2.46$, RMSEA = .07, SRMR = .09 for, respectively, the maternal and paternal models. Modification indices suggested to add some correlations between errors of items, which led to an even better model fit, $\chi^2/DF = 1.87$, RMSEA = .06, SRMR = .08, and $\chi^2/DF = 2.08$, RMSEA = .06, SRMR = .08, for, respectively, the maternal and paternal models. All items had significant ($p < .001$) loadings on their respective factors ($M_{\text{loading}} = .54$ for both the maternal and paternal models). Internal consistencies ranged between .62 and .78 (see Table 1).

Psychologically controlling parenting. Parents' use of psychological control was assessed with two questionnaires rated by the parents and the adolescents. Parents rated the parent version (Soenens et al., 2006) of the 8-item Psychological Control Scale (PCS; Barber, 1996) (e.g., "I tend to be less friendly to my son/daughter if he/she does not see things like I do."). In addition, parents filled out the 9-item Achievement-Oriented Psychological Control Scale from the Dependency-Oriented and Achievement-Oriented Psychological Control Scale (DAPCS; Soenens et al., 2010) (e.g., "I am less friendly with my son/daughter if s/he performs less than perfectly."). Adolescents rated their parents' use of psychologically controlling strategies on child-report versions of the same scales (e.g., "My father/mother is less friendly with me if I do not see things his/her way." for the PCS and "My father/mother is less friendly with me if I perform less than perfectly." for the DAPCS). All scales were scored on a 5-point Likert scale ranging from (1) *Totally not agree* to (5) *Totally agree*. The scores of the two scales were highly correlated (mean r across informants = .62). Exploratory factor analyses indicated that one underlying factor explained most of the variance in the items and

CFA indicated that a one-factor solution had an acceptable fit for all models and that all items had significant ($p < .001$) loadings on the underlying factor. Therefore, the two scales were combined for parents and adolescent into a composite score for psychologically controlling parenting by calculating the mean score of all items. Internal consistencies of these combined scales ranged between .84 and .92 (see Table 1).

Child problem behavior. When testing the hypothesized model, it was deemed important to control statistically for the adolescent's problem behaviors because, in principle, associations between parental reflective functioning and parenting may be spurious due to associations with the child's problem behaviors as a third variable. Adolescents' display of problem behavior may undermine parents' capacity for reflective functioning (Camoirano, 2017) and elicit more controlling parenting (Pettit, Laird, Dodge, Bates, & Criss, 2001; Soenens et al., 2008), thereby causing a (spurious) association between reflective functioning and controlling parenting. To rule out this possibility, we controlled statistically for the adolescents' problem behaviors. Both parents rated their child's behavioral problems on the Child Behavior Checklist/6-18 (CBCL; Achenbach & Rescorla, 2001). The CBCL assesses problem behavior over the past 6 months (e.g., "Destroys his/her own things.") on a 3-point Likert scale ranging from (0) *not true* to (2) *very true*. The scales encompass 113 items and include: anxious/depressive behavior, withdrawn/depressive behavior, somatic complaints, social problems, attentional problems, thought problems, other problems, aggressive behavior, and rule-breaking behavior. The first three scales represent internalizing problem behaviors, and the last two scales represent the externalizing problem behaviors. Both subscales were created by calculating the mean score of all corresponding items. Internal consistencies of these subscales ranged between .87 and .88 (see Table 1).

Plan of Analyses

Before conducting the primary analyses, we conducted descriptive analyses using SPSS Statistics 21. Preliminary analyses examined relations between demographic characteristics, such as child age and gender and parents' age and education, and the study variables. To address the main research questions, structural equation modeling (SEM) with latent variables was conducted using *Mplus*7.3 (Muthén & Muthén, 1998-2012). As missing data were missing at random (Little's MCAR test: $\chi^2(60) = 69.21$ $p = .20$), full information maximum likelihood (FIML) was used. The different research questions were examined in two steps. First, we investigated the direct effect of self-critical perfectionism on psychological control. Subsequently, we examined the intervening role of parental reflective functioning in the relation between self-critical perfectionism and psychologically controlling parenting. Mediation was tested by combining (1) model comparisons and (2) testing indirect effects. As for the model comparisons, we followed Holmbeck's guidelines (1997) by testing both a full mediation model (i.e., a model with only indirect paths between the independent and dependent variable via the mediator) and a partial mediation model (i.e., a model with both an indirect and a direct path between the independent variable and the dependent variable). Full mediation is shown when the fit of the partial mediation is not better than the fit of the full mediation model (Holmbeck, 1997). As for testing indirect effects, we used bootstrapping (using 1000 samples) to account for potential deviations from multivariate normality (Preacher & Hayes, 2008).

RESULTS

Descriptive Statistics and Preliminary Analyses

Table 1 presents the Cronbach alphas, means, and standard deviations of the study variables for both mothers and fathers. Mothers' age was related negatively to the dimension certainty of mental states, and adolescents' age was related negatively with fathers' and mothers' certainty of mental states (Table 1). We conducted analyses of variances (ANOVAs)

to examine the effect of the child's gender and the level of parental education on the study variables. Mothers of boys ($M = 2.24$) scored higher on the scale doubts about actions than mothers of girls ($M = 2.02$), $F(1,265) = 4.09$, $p < .05$, $d = .25$. No other gender effects were observed. Fathers' level of education related to parent-reported psychologically controlling parenting, $F(3,261) = 2.596$, $p = .05$, with fathers with a secondary degree scoring lower than fathers with a university degree. In addition, mothers' level of education related to pre-mentalizing, $F(3,261) = 3.365$, $p < .05$. Mothers with lower levels of education scored higher. Based on these findings, we controlled for the child's age and gender and for parents' age and educational level in the primary analyses.

Table 1 also presents the correlations between the study variables. The scales measuring self-critical perfectionism correlated positively with parents' self-reported psychological control (r s ranging between .29 and .39, all $ps < .001$), but not with adolescents' reports on perceived psychological control. The three scales measuring self-critical perfectionism correlated with both mothers' and fathers' pre-mentalizing capacity (r s ranging between .18 and .26, all $ps < .01$). The relations between the three scales measuring self-critical perfectionism and certainty about mental states and interest and curiosity in mental states were, however, less consistent and smaller (r s ranging between .02 and -.11, all $ps > .05$ for certainty about mental states, r ranging between .08, $p = .18$, and .16, $ps < .01$ for interest and curiosity in mental states). Of the three subscales measuring parental reflective functioning, pre-mentalization correlated most strongly with psychological control, as reported by both parents and adolescents (r s ranging between .24 and .44, all $ps < .001$). The dimensions certainty about mental states and interest and curiosity in mental states, on the other hand, correlated less consistently with psychological control (r s ranging between -.13, $p < .05$, and .08), with most associations being non-significant. Because pre-mentalizing was the only dimension of parental reflective functioning with strong and consistent relations with

parents' self-critical perfectionism and psychological control, we included only this dimension in the further analyses.

Correlations with adolescents' problem behaviors show that both externalizing and internalizing problem behavior correlate positively with parents' self-critical perfectionism, pre-mentalizing capacity and psychological control. Therefore, we included both types of behavioral problems as control variables in the final retained models.

Primary Analyses

Measurement models. Prior to estimating the structural models, we examined measurement models for maternal and paternal data separately, with latent factors for self-critical perfectionism, pre-mentalizing, and psychological control. The latent factor for self-critical perfectionism was represented by the scales doubts about actions, concerns about mistakes and self-criticism. The latent factor for psychological control was represented by adolescent-reported and parent self-reported psychological control. The loadings of the adolescent- and self-reported indicators of psychological control were set equal to ensure that both informants would contribute equally to the content of the latent factor. The latent factor for pre-mentalizing was represented by three parcels which were created through random selection of items. Using parcels is advised as a suitable technique for creating latent factors from unidimensional scales (Little, Cunningham, Shahar, & Widaman, 2002). All indicators were controlled for the child's age and gender and parent's age and educational level. To do so, we created residual scores for each of the scales or parcels by regressing each scale/parcel on the demographic variables and by saving the obtained unstandardized residual scores. These unstandardized residual scores were then included as indicators of the latent factors.

The initial measurement models did not include correlations between indicators of factors, but inspection of the modification indices suggested that adding a correlation between doubts about actions and self-criticism in the maternal model was needed to improve the

model fit. In the final maternal and paternal models, all indicators loaded ($p < .001$) on their respective latent factors with loadings ranging from .54 to .82 for the maternal model and from .51 to .80 for the paternal model. Both models showed good model fit ($\chi^2/DF = 1.64$, RMSEA = .05, SRMR = .05 and $\chi^2/DF = 2.08$, RMSEA = .06, SRMR = .06 for, respectively, the maternal and paternal model).

Structural models. First, we examined the direct relation between parents' self-critical perfectionism and psychological control. The results of this direct model indicated that self-critical perfectionism relates positively to psychological control in both the maternal and the paternal model ($\beta = .52$; $p < .001$; $\chi^2/DF = 4.81$, RMSEA = .12, SRMR = .07 and $\beta = .57$; $p < .001$; $\chi^2/DF = 4.49$, RMSEA = .12, SRMR = .08, respectively).

Second, pre-mentalizing was added to the model to investigate its mediating role in the relation between self-critical perfectionism and psychological control. The full mediation model (i.e., a model only including indirect relations between the independent and dependent variable through pre-mentalization) showed that parents' self-critical perfectionism was positively associated with pre-mentalizing modes ($\beta = .48$; $p < .001$, for maternal model, $\beta = .42$; $p < .001$, for paternal model), which was, in turn, positively associated with psychological control ($\beta = .83$; $p < .001$, for maternal model, and $\beta = .78$; $p < .001$, for paternal model). The indirect association (tested with bootstrapping) between self-critical perfectionism and psychological control via pre-mentalization was significant in both the maternal and paternal model ($\beta = .40$; 95%CI = [.21; .59]; $p < .001$, and $\beta = .32$; 95%CI = [.12; .53]; $p < .01$, respectively). The fit of this full mediation model was $\chi^2/DF = 1.98$, RMSEA = .06, SRMR = .05 for the maternal model and $\chi^2/DF = 2.80$, RMSEA = .08, SRMR = .07 for the paternal model.

Next, we tested partial mediation models in which a direct path between self-critical perfectionism and psychological control was added back into each model. In both the

maternal ($\chi^2/DF = 1.78$, RMSEA = .05, SRMR = .05) and the paternal models ($\chi^2/DF = 2.12$, RMSEA = .07, SRMR = .06), self-critical perfectionism was directly associated with psychological control ($\beta = .24$; $p < .05$, for the maternal model, $\beta = .38$; $p < .001$, for the paternal model). The indirect effect of self-critical perfectionism via pre-mentalizing was significant in both models ($\beta = .28$; 95% CI = [.10; .47]; $p < .01$, for the maternal model and $\beta = .19$; 95% CI = [.07; .32]; $p < .01$, for the paternal model). Chi-square difference tests indicated that the partial mediation model fitted the data better than the full mediation model for both mothers ($\chi^2 \Delta (1) = 5.47$, $p < .05$) and fathers ($\chi^2 \Delta (1) = 15.17$, $p < .001$). The final maternal and paternal models are presented in Figures 1 and 2. The maternal and paternal model explained, respectively, 65% and 61% of psychologically controlling parenting.

As a final step, we controlled for adolescent externalizing and internalizing problem behaviors (rated, respectively, by mothers or fathers) in the final retained models. We added a correlation between both types of problem behavior (which were allowed to correlate) and self-critical perfectionism and added paths from both types of problem behavior to pre-mentalization and psychological control. For the maternal model ($\chi^2/DF = 1.65$, RMSEA = .05, SRMR = .05), both internalizing and externalizing problem behavior correlated with parents' self-critical perfectionism (respectively, $\beta = .42$; $p < .001$, and $\beta = .19$; $p < .05$) and externalizing problems related to mothers' pre-mentalization ($\beta = .56$; $p < .001$), but not to psychological control ($\beta = .14$; $p = .35$). Internalizing problems did not relate to mothers' pre-mentalization ($\beta = -.11$; $p = .30$) or maternal psychological control ($\beta = -.06$; $p = .57$). The direct and the indirect effect of self-critical perfectionism on psychological control, via pre-mentalizing, continued to be significant ($\beta = .24$; $p < .05$ for the direct effect and $\beta = .23$; 95% CI = [.04; .26]; $p < .05$ for the indirect effect). For the paternal model ($\chi^2/DF = 1.80$, RMSEA = .06, SRMR = .05) similar results were found: Both internalizing and externalizing problem behavior correlated with fathers' self-critical perfectionism (respectively, $\beta = .26$; $p <$

.01, and $\beta = .25$; $p < .001$) and externalizing problems related to fathers' pre-mentalization ($\beta = .45$; $p < .001$). The direct association between fathers' self-critical perfectionism and psychological control remained significant ($\beta = .39$; $p < .001$), but the indirect association via pre-mentalizing became marginally significant ($\beta = .12$; 95% CI = [-.04; .24]; $p = .06$). Overall, most associations remained significant when controlling for adolescent problem behaviors.

Additional analyses. First, we tested the mediation models including all subscales of parental reflective functioning (rather than pre-mentalizing modes only). For both maternal and paternal data, self-critical perfectionism was positively associated with pre-mentalizing modes ($\beta = .49$; $p < .001$, for maternal model, $\beta = .41$; $p < .01$, for paternal model), but not with certainty about mental states ($\beta = -.07$; $p = .58$, for maternal model, $\beta = -.02$; $p = .83$, for paternal model) and interest in mental states ($\beta = .12$; $p = .29$, for maternal model, $\beta = .16$; $p = .14$, for paternal model). In addition, the only significant indirect association (tested with bootstrapping) was between self-critical perfectionism and psychological control via pre-mentalization (respectively, $\beta = .42$; 95% CI = [.20; .64]; $p < .001$, and $\beta = .33$; 95% CI = [.12; .51]; $p < .01$).

Second, we tested the mediation models including a separate factor for achievement-oriented psychological control (using the adolescent-reported and parent-reported scores as indicators) and general psychological control (again using the adolescent-reported and parent-reported scores as indicators). To ensure that the model would converge, a correlation between the two adolescent reports had to be included. The relations between the study variables remained similar when the composite factor for psychological control was replaced by the two specific factors. That is, in both maternal ($\chi^2/DF = 1.91$, RMSEA = .06, SRMR = .07) and the paternal ($\chi^2/DF = 2.53$, RMSEA = .08, SRMR = .09) models, self-critical perfectionism was related directly and indirectly, via pre-mentalization, to both achievement-oriented psychological control and general psychological control. Because the findings were

essentially similar across these two measures of psychological control, we used a combined score in the main analyses.

Third, we tested a full mediation model including only adolescents' reports of psychologically controlling parenting. To this aim, we created a latent factor for adolescent-reported psychologically controlling parenting consisting of the two scales achievement-oriented psychological control and psychological control scale. The full mediation model showed that parents' self-critical perfectionism was positively associated with pre-mentalization ($\beta = .40$; $p < .01$, for maternal model, $\beta = .33$; $p < .01$, for paternal model), which in turn related positively to psychological control as reported by the adolescent ($\beta = .45$; $p < .001$, for maternal model, $\beta = .27$; $p < .01$, for paternal model). In both the maternal and paternal models, the indirect association (tested with bootstrapping) between self-critical perfectionism and psychological control via pre-mentalization was significant (respectively, $\beta = .18$; 95% CI = [.07; .28]; $p < .001$, and $\beta = .09$; 95% CI = [.003; .18]; $p < .05$). The fit of this full mediation model was $\chi^2/DF = 1.39$, RMSEA = .04, SRMR = .04, for the maternal model and $\chi^2/DF = 1.16$, RMSEA = .03, SRMR = .04, for the paternal model. These results indicate that the indirect association between self-critical perfectionism and psychologically controlling parenting (through) parents' pre-mentalization shows up when relying only on adolescent reports of psychologically controlling parenting.

Fourth, we formally tested whether the structural associations in the maternal and paternal models were similar or different by conducting multi-group analyses. We compared a constrained model (i.e., a model in which the parameters were constrained to be invariant between mothers and fathers) to an unconstrained model (i.e., a model in which the parameters for the structural paths were allowed to vary between mothers and fathers) by evaluating the Satorra–Bentler scaled χ^2 -difference test (SBS $\chi^2 \Delta$). Comparison of the fit of the unconstrained and constrained models indicated that there was no significant difference

between models (SBS $\chi^2 \Delta(3) = 4.63, p = .20$). Thus, relations among self-critical perfectionism, pre-mentalization, and psychologically controlling parenting are similar among mothers and fathers. In addition, we also tested the potential moderating impact of child gender and parents' educational level through a series of multi-group analyses. For the multi-group analyses regarding parents' educational level we created two groups: (0) parents with a primary or secondary degree and (1) parents with a college or university degree. The multi-group analyses indicated that child gender and parental education do not moderate the relations among self-critical perfectionism, pre-mentalization, and psychologically controlling parenting (regarding child gender: SBS $\chi^2 \Delta(3) = 1.08, p = .78$, for the maternal model, SBS $\chi^2 \Delta(3) = 6.23, p = .10$, for the paternal model; regarding parents' educational level: SBS $\chi^2 \Delta(3) = 1.08, p = .78$, for the maternal model, SBS $\chi^2 \Delta(3) = 6.23, p = .10$, for the paternal model).

Fifth, we tested moderation models in which parental reflective functioning moderates the association between self-critical perfectionism and psychologically controlling parenting (rather than mediation models). For both maternal and paternal data, we tested the interaction between each subscale of reflective functioning and self-critical perfectionism (i.e., a composite of the three subscales) in the prediction of psychological control (i.e., a composite of the adolescent and parent report). In total, 6 regression analyses were conducted (i.e., 3 for the maternal data and 3 for the paternal data). These analyses indicated that there are no significant interaction effects between the subscales of reflective functioning and self-critical perfectionism in the prediction of psychological control and, thus, suggest that parental reflective functioning does not moderate the association between self-critical perfectionism and psychologically controlling parenting.

DISCUSSION

Although research has identified parents' self-critical perfectionism as an important determinant of psychologically controlling parenting, why exactly parents scoring high on this personality trait are more prone to rely on psychologically controlling strategies remains unclear. The current study aimed to advance our understanding of the link between parental self-critical perfectionism and psychological control by examining the role of parental reflective functioning. The results point to both indirect and direct pathways.

The Indirect Association Between Self-Critical Perfectionism and Psychological Control

First, the indirect pathway indicates that impaired parental reflective functioning represents an intervening mechanism in the association between parental self-critical perfectionism and psychological control among both mothers and fathers of adolescents. More specifically, this study identified parents' incapacity to reflect on their adolescents' mental world and their tendency to make maladaptive attributions about their adolescents' internal states and behaviors (i.e., pre-mentalization) as a partial mediator between parental self-critical perfectionism and psychologically controlling parenting.

Because of their focus on their own personal standards and their tendency to evaluate behavior and events in negative and harsh ways, parents with high levels of self-critical perfectionism are less able to comprehend and reflect on their adolescent's internal world and are more likely to make maladaptive attributions. The moderate size of the associations between self-critical perfectionism and pre-mentalization indicates that parents' self-critical perfectionism is likely only one of multiple determinants of pre-mentalizing and (parental) reflective functioning in general. Indeed, research has shown that reflective functioning is determined by several parental characteristics, such as their mental health (Bateman & Fonagy, 2010) and executive functioning (Rutherford et al., 2018), and by child characteristics such as child temperament (Demers, Bernier, Tarabulsky, & Provost, 2010).

The lack of consideration for the adolescent's mental states, or even the tendency to make hostile interpretations of the adolescent's mental states, in turn, renders parents vulnerable to rely on psychological control. These findings are consistent with previous studies documenting associations between impaired parental reflective functioning and dysfunctional parenting in early childhood (Grienenberger, Kelly, & Slade, 2005; Rostad & Whitaker, 2016; Rutherford et al., 2013, 2015, Smaling et al., 2016; Stacks et al., 2014), yet complement these studies focusing on early childhood by demonstrating a similar association between reflective functioning and parenting in adolescence. This generalization of effects in adolescence is important because adolescence is marked by high levels of emotional variability (Larson, Moneta, Richards, & Wilson, 2002; Soenens et al., in press), which may challenge parents' capacity for reflective functioning. Apparently, parents high on self-critical perfectionism are less able to handle the challenges posed to their mentalization skills during adolescence. This impaired capacity for reflective functioning may have important repercussions for adolescents' adjustment because adolescents face the difficult task of developing more mature modes of emotion regulation. Through their limited capacity for reflective functioning and by engaging in psychologically controlling practices, parents high on self-critical perfectionism are likely to hamper adolescents' healthy emotion regulation (Cui, Morris, Criss, Houlberg, & Silk, 2014; Roth, Assor, Niemiec, Ryan, & Deci, 2009).

The current results also indicate that two other dimensions of parental reflective functioning, interest and curiosity in mental states and certainty about mental states, did not function as intervening mechanisms in the relation between self-critical perfectionism and psychological control. This finding was somewhat unexpected because one could reason that self-critical perfectionism also relates to these dimensions of parental reflective functioning. More specifically, one might reason that parents high on self-critical perfectionism would be too self-absorbed to show interest in their child's internal world. However, the non-significant

association with interest and curiosity suggests that parents high on self-critical perfectionism, at least occasionally, show an interest in their adolescent's emotions. Future research relying on a diary design or using an experience sampling methodology could examine whether these parents show ups and downs in their interest for the adolescent's perspective (rather than low overall levels of interest). Possibly, these parents' interest decreases only when parents are confronted with a personal failure, which may elicit preoccupation with their own standards and hinder interest in the adolescent's perspective (van der Kaap-Deeder et al., 2016).

It would be interesting for future research also to examine the nature of parental interest displayed by parents high on self-critical perfectionism. Possibly, the interest displayed by these parents is not entirely genuine, with these parents showing an interest mainly because they want to know whether their child is feeling well and whether they are doing a good job as a parent safeguarding the child from negative emotions. Past research has shown that parents high on self-critical perfectionism tend to hinge their self-worth on their child's achievements and success (Wuyts et al., 2015). Because the items for interest and curiosity used in the present study do not clearly distinguish between a genuine and open interest in the adolescent's frame of reference and a more parent-driven anxious sort of interest, we could not test this possibility. Future research with a more refined set of items (tapping into different parental motives for being interested in the child's feelings) or using interview methods to assess parental reflective functioning could yield deeper insights in this seemingly complex association.

Initially, we hypothesized that, much as they interpret their own behavior in a black-and-white fashion, self-critical perfectionistic parents would display higher levels of certainty about their children's mental states. That is, they would more easily jump to conclusions, thereby disregarding the opacity of the child's mental states. Yet, our findings did not confirm this association. Apparently, self-critical parents' tendency to evaluate their own behavior in a

black-and-white fashion does not necessarily translate into strong levels of certainty about what is going on for their child. Possibly, these parents oscillate between moments when they are (overly) confident about their knowledge of the child's mental states and moments when they are highly insecure about this knowledge. Indeed, insecurity and feelings of incompetence about important roles in life (including one's role as a parent) are central elements of self-critical perfectionism (Blatt, 1995). These feelings may result, at least temporarily, in uncertainty about the child's mental states. The possibility that parents high on self-critical perfectionism display large variability in their certainty about the child's mental states could also be tested in future diary-based research, thereby charting overall levels of certainty (as was done in the present study) and short-term fluctuations in certainty about the child's mental states.

Our findings further suggest that psychologically controlling parenting is mainly determined by parents' incapacity to reflect on their child's mental world and by their maladaptive interpretation of their child's internal states (i.e., pre-mentalization) rather than by their interest and curiosity in mental states and certainty about mental states. Although somewhat unexpected, this finding generally accords with research showing that dynamics involved in dysfunctional parenting (including psychological control) are somewhat distinct from dynamics involved in constructive parenting (such as sensitivity and autonomy-support). An absence of dysfunctional parenting does not necessarily indicate the presence of constructive parenting, and vice versa (Vansteenkiste & Ryan, 2013). Moreover, dysfunctional parenting is predicted more strongly by the presence of risk factors in the parents' environment and personal functioning than by an absence of facilitative resources (e.g., Gurland & Grolnick, 2005; Mabbe et al., 2018). In contrast, for parents to engage in constructive parenting practices, more is needed than an absence of risk factors. Parents are particularly likely to display more sensitive and autonomy-supportive parenting when they

possess psychosocial strengths (rather than just the absence of vulnerabilities). Research in the context of parental reflective functioning is consistent with this reasoning, showing for instance that interest and curiosity in mental states (which can be considered a positive parental resource) is related primarily to constructive dimensions of parenting, such as emotional availability (Luyten, Mayes, et al., 2017a) and involvement, and communication (Rostad & Whitaker, 2016). Thus, future research could include more diverse types of (both dysfunctional and constructive) parenting behavior, as it is possible that the different dimensions of parental reflective functioning relate uniquely or differently to various types of parenting behaviors. Using a more elaborate set of parenting measures, future research could test a “dual pathway” model, with pre-mentalization being a particularly strong predictor of maladaptive parenting (including psychologically controlling parenting) and with interest and curiosity being more strongly and specifically predictive of adaptive dimensions of parenting such as sensitivity and autonomy-support.

The Direct Association Between Self-Critical Perfectionism and Psychological Control

A second finding of the current study is that parental self-critical perfectionism relates to psychological control directly in both mothers and fathers, with this association emerging on top of the indirect association through pre-mentalization. The tendencies of these parents to set unreasonable standards and to engage in negative and harsh self-evaluations apply to themselves, and extend to interactions with their children in a rather direct fashion. The use of intrusive practices appears to be an interpersonal expression of these parents' self-critical perfectionism. So, in line with previous research (Ahmad & Soenens, 2010; Bleys et al., 2016; Greblo & Bratko, 2014; Soenens et al., 2005, 2006), the current findings suggest that parents high on self-critical perfectionism rely on guilt-induction, shaming, or love-withdrawal to pressure their children to comply with high standards, to communicate that their love and

affection depend on the child's ability to attain the parents' expectations, and to express their disappointment when these standards are not met.

Although the current findings suggest that part of the association between parental self-critical perfectionism and psychologically controlling parenting is direct, future research may consider the possibility that additional mediating variables (beyond reflective functioning) account for the association between parental self-critical perfectionism and psychological control. Parental psychological needs experiences may represent one such candidate mediator. Self-critical perfectionism is related to frustration of individuals' needs for autonomy (as expressed in feelings of pressure and obligation), competence (as expressed in feelings of failure and inadequacy), and relatedness (as expressed in feelings of loneliness and social alienation; Boone, Vansteenkiste, Soenens, van der Kaap-Deeder, & Verstuyf, 2014, Luyten & Blatt, 2016). In turn, experiences of psychological need frustration predict more autonomy-suppressing and controlling parenting (Dieleman et al., 2018; Mabbe et al., 2018; van der Kaap-Deeder et al., 2015). Thus, in addition to parental reflective functioning, which may represent a more cognitive mechanism, psychological needs experiences, which entail a more affective mechanism, may help to explain the association between parental self-critical perfectionism and psychological control. It would be especially interesting to examine how one's capacity for reflective functioning and one's psychological needs interact as intervening mechanisms in the association between self-critical perfectionism and parenting.

Limitations and Suggestions for Future Research

When interpreting the results of the current study some limitations need to be taken into account. First, the generalizability of the findings is limited by the inclusion of intact families only and by the high educational level of the sample. As Luyten, Mayes, et al. (2017a) showed that parents with lower educational levels are more vulnerable to rely on pre-mentalization, it is important for future research to replicate current findings in a sample

characterized by more diversity in educational level. In addition, future research needs to include samples with more heterogeneity in terms of family structure or in at-risk groups (e.g., parents or adolescents with mental health problems). Our hypothesis is that in these samples, there will be higher scores and more variation in all three constructs. Given this presumable greater variation, it would be interesting to see whether the associations obtained in this study might be more pronounced in such high-risk samples.

Second, findings of this cross-sectional study do not speak to the issue of direction of effects, as reciprocal relations might exist among parental self-critical perfectionism, parental reflective functioning, psychologically controlling, and child features. To address the direction of effects, future research should use longitudinal or experimental designs. Longitudinal research would, for instance, allow researchers to examine how changes in specific facets of parental reflective functioning relate to changes in psychologically controlling parenting, which, in turn, forestall other facets of reflective functioning. Parents' pre-mentalizing mode of functioning may predict increased use of parental control, but this increased pressure may further forestall parents' readiness and capacity to curiously empathize with their children's viewpoint. In future research self-critical perfectionism could be primed experimentally (e.g., Shafran, Lee, Payne, & Fairburn, 2006) to examine its causal effect on parents' reflective capacities and parenting behavior (e.g., during a challenging task with the child). In addition, the current study only included dispositional (i.e., trait-like) measurements and did not take into account the dynamic day-to-day variations that have been reported in both perfectionism (Boone et al., 2012) and parenting behavior (van der Kaap-Deeder, Vansteenkiste, Soenens, & Mabbe, 2017). Therefore, it would be interesting for future research to use diary designs and to examine whether daily fluctuations in self-critical perfectionism relate to daily psychological control via daily parental reflective functioning.

Third, this study controlled for the adolescents' problem behaviors to avoid spurious relations between self-critical perfectionism, parental reflective functioning, and psychological control. Future research should examine the role of adolescents' (mal)adjustment in these associations more in depth. It might, for instance, be possible that children's behavioral problems undermine parents' reflective capacities across time, resulting in increases of psychological control which, in turn, evoke more problem behaviors. Future research should also explore the unique effects of different types of problem behaviors because internalizing and externalizing problem behaviors, for instance, might have different effects on parents' reflective capacities or parenting behaviors. A longitudinal design would also permit examination of bidirectional or reciprocal associations among parents' self-critical perfectionism, reflective functioning, psychological control, and adolescent (mal)adjustment. Future research might use the Actor-Partner Interdependence Model approach (Cook & Kenny, 2005) to take into account the long-term dyadic effects of parents' self-critical perfectionism, reflective functioning psychological control, and psychological control on the (mal)adjustment of adolescents. This would permit examination of whether the compatibility of parents' self-critical perfectionism, parental reflective functioning, and psychological control differently affects adolescents' development.

Fourth, self-critical perfectionism was related only to parent-reported psychological control and not adolescent-reported psychological control. Although this is a typical finding in multi-informant research, it seems to suggest that the association between parental self-critical perfectionism and psychological control is unreliable and in the eye of the beholder (the parent in this case). However, the fact that parental self-critical perfectionism was related to a latent factor combining parent- and adolescent-reported psychological control diminishes this concern because this latent factor contains only the variance shared between the two reporters, thus representing the true variance in psychological control and excluding reporter bias and

measurement error. Future research could take this multi-informant a step further by including observational measures of controlling parenting (e.g., Kenney-Benson & Pomerantz, 2005)

Finally, future research examining our model should include additional sources of influence. Although the current study controlled for the adolescent problem behaviors, other factors, such as child temperament, should also be taken into account when examining the associations among parents' self-critical perfectionism, parental reflective functioning, and psychological control. Like problem behaviors, child temperament might impact both parents' capacity for reflective functioning and their quality of parenting (Luyten et al., 2017).

IMPLICATIONS FOR PRACTICE

The current findings offer insight into the underpinnings of psychological controlling parenting and point to the importance of programs aiming to enhance parents' capacity for parental reflective functioning, especially for those parents who are highly self-critical perfectionistic. Diverse programs (e.g., "Minding the baby"; Slade et al., 2005) focusing on increasing parents' recognition of and attention for their own and their child's mental world have been shown to effectively enhance parents' reflective capacity and to improve parenting outcomes (i.e., less disruptive parent-child interaction, more sensitivity) (Luyten et al., 2017; Slade, 2007). Due to the focus on prevention or early intervention, current intervention programs enhancing parental reflective functioning only target parents of infants of young children (e.g., Kalland, Fagerlund, von Koskull, & Pajulo 2016; Sadler et al., 2013). However, research is starting to recognize the potential of parental reflective functioning during later developmental stages (Benbassat & Shulman, 2016; Milan et al., 2017; Kobak et al., 2017). Edginton et al. (2017), for example, developed an intervention aiming to enhance parental reflective functioning in parents of children aged between 5 and 11 years. Given the current findings, it is important for future research to develop and evaluate a similar program for parents of adolescents. When proven effective, extant parenting programs aimed at reducing controlling parenting and fostering more autonomy-supportive parental communication

among parents of adolescents (e.g., Joussemet, Mageau, & Koestner, 2014) could be strengthened by adding a module targeting parental reflective functioning.

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TABLE 1
Reliability, Descriptive Statistics, and Correlations ($N = 268$)
Figure Legends

| | α^M | α^F | M^M | M^F | SD^M | SD^F | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|------------|------------|-------|-------|--------|--------|--------|--------|--------|--------|---------|-------|--------|--------|--------|--------|--------|--------|------|--------|
| 1. Concerns about mistakes | .87 | .85 | 2.09 | 2.10 | .76 | .73 | | .53*** | .53*** | .26*** | -.01 | .12 | .05 | .38*** | .12 | .25*** | .02 | .08 | .07 | -.01 |
| 2. Doubts about actions | .77 | .76 | 2.13 | 2.13 | .90 | .88 | .54*** | - | .66*** | .18** | -.03 | .13* | .05 | .29*** | .15* | .33*** | .06 | -.03 | .12* | .02 |
| 3. Self-criticism | | | -1.16 | -1.05 | .94 | .86 | .63*** | .55*** | - | .26*** | -.11 | .08 | .04 | .30*** | .14* | .32*** | .09 | -.02 | .07 | .05 |
| 4. Pre-mentalization | .62 | .66 | 1.74 | 1.96 | .60 | .73 | .24*** | .22*** | .24*** | - | -.23*** | -.12* | .32*** | .44*** | .47*** | .31*** | .09 | .01 | .02 | -.18** |
| 5. Certainty of mental states | .78 | .73 | 4.09 | 3.89 | 1.06 | .95 | .02 | -.08 | -.03 | -.13* | - | .14* | -.04 | -.03 | -.18** | -.14* | -.17** | -.20** | .03 | -.04 |
| 6. Interest and curiosity in mental states | .71 | .74 | 5.20 | 4.75 | .85 | .92 | .16** | .14* | .12 | -.07 | .31*** | - | -.11 | -.13* | .09 | .21*** | .01 | .02 | .08 | .12* |
| 7. Psychological control – Adolescent report | .92 | .90 | 1.65 | 1.74 | .61 | .61 | .09 | .02 | .07 | .24*** | .02 | .01 | - | .34*** | .33*** | .14* | -.03 | .01 | .08 | .05 |
| 8. Psychological control – Parent report | .84 | .85 | 1.78 | 1.85 | .49 | .52 | .39*** | .35*** | .38*** | .41*** | -.04 | .08 | .31*** | - | .32*** | .26*** | -.03 | -.04 | -.03 | -.03 |
| 9. Externalizing child behavior | .87 | .88 | .13 | .14 | .14 | .16 | .16** | .23*** | .20** | .48*** | -.08 | .07 | .22*** | .26*** | - | .54*** | -.02 | -.13* | .11 | -.10 |
| 10. Internalizing child behavior | .87 | .87 | .19 | .17 | .19 | .18 | .16** | .23*** | .21** | .36*** | -.09 | .14* | .11 | .15* | .59*** | - | .05 | .03 | -.04 | -.15* |
| 11. Age parent | | | 45.83 | 47.77 | 4.25 | 4.71 | -.02 | .08 | -.02 | .05 | -.04 | -.02 | .01 | .10 | -.00 | -.05 | - | - | - | - |
| 12. Age adolescent | | | 15.14 | | 1.98 | | .05 | .07 | -.01 | .02 | -.14* | .07 | .08 | .05 | -.11 | .03 | - | - | - | - |
| 13. Gender adolescent (0 = female, 1 = male) | | | - | | - | | .00 | .06 | -.02 | -.02 | -.03 | .05 | .11 | .08 | .11 | .01 | - | - | - | - |
| 14. Educational level parent | | | - | | - | | .02 | -.04 | .10 | -.07 | -.03 | .08 | -.00 | .14* | -.05 | -.08 | - | - | - | - |

Maternal data are presented above the diagonal, paternal data are presented below the diagonal.

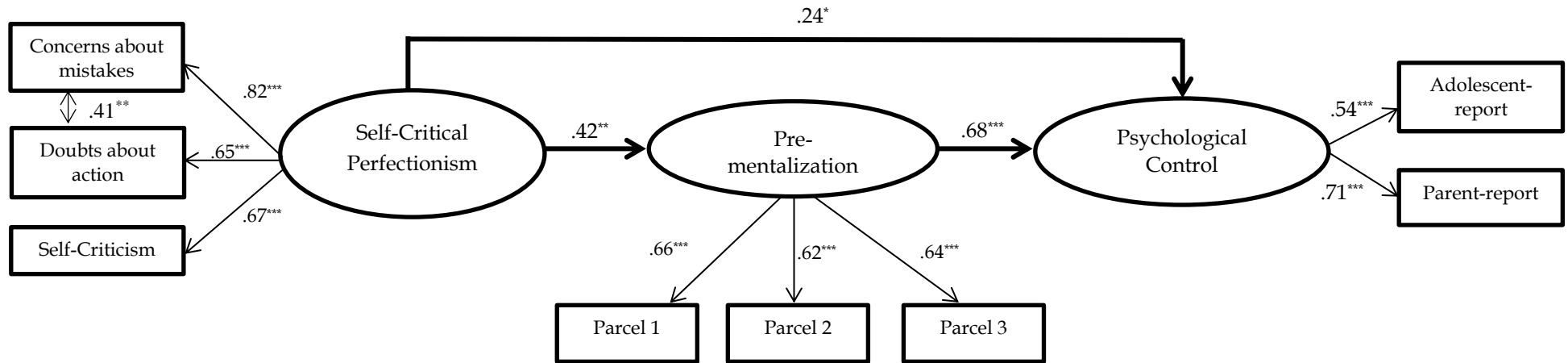
M = Mother, F = Father

* $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 1. Maternal model

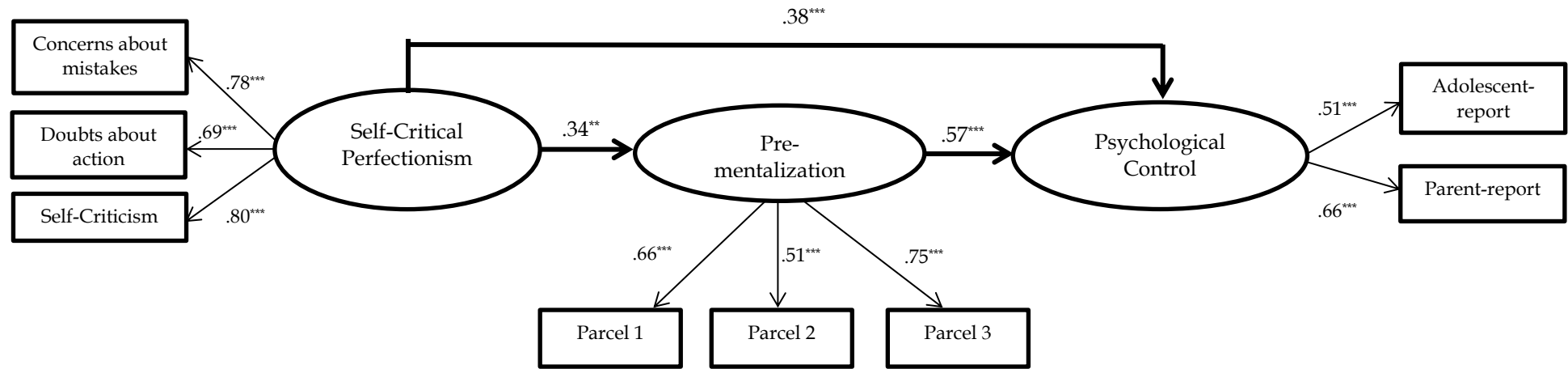
Figure 2. Paternal model

Figure 1. Maternal model



Note * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 2. Paternal model



Note * $p < .05$, ** $p < .01$, *** $p < .001$