

## Informant discrepancies in perceived parental psychological control, adolescent autonomy, and relatedness psychological needs

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### ARTICLE INFO

#### Keywords:

Informant discrepancies  
Autonomy and relatedness  
Self-determination theory  
Parent-adolescent relationships  
Psychological control  
Latent difference score modeling

### ABSTRACT

Framed from Self-Determination Theory and Family Systems Theory, the present multi-informant study sought to contribute to a better understanding of the relations between discrepancies in parents' and adolescents' perceptions of parental psychological control and satisfaction of adolescents' needs for autonomy and relatedness. Participants were 190 Italian intact families in which an adolescent was present ( $M_{\text{age}} = 16.47$  years,  $SD_{\text{age}} = 1.41$ ). Our findings highlighted that: (1) adolescents generally tended to perceive higher levels of psychological control than their parents reported; (2) adolescents tended to rate mothers' psychological control higher than the mothers themselves, whereas adolescent reports of fathers' psychological control were not higher than the fathers' self-reports; (3) the discrepancies between fathers and adolescents in their perceptions of fathers' psychological control were associated with lower levels of satisfaction of the adolescents' need for relatedness, while the discrepancies between mothers and adolescents were associated with lower levels of satisfaction of the adolescents' need for autonomy.

### Introduction

Many authors have underlined the necessity to include multiple informants in research on parent-child relationships (e.g., De Los Reyes et al., 2015; Nelemans et al., 2016). As these scholars have showed, the points of view of parents and children about the same behavior (e.g., adolescent problem behavior or parenting behavior) may be different and both of them may provide useful information to better understand the examined behavior (de Haan, Prinzie, Sentse, & Jongerling, 2018; De Los Reyes et al., 2015). Hence, the use of multiple informants is considered a key component of the best practices of psychological assessment (Hunsley & Mash, 2008).

However, when multiple informants are included in the studies, they may also disagree in their perceptions and their assessment of the variable of interest. For example, research has highlighted low levels of agreement between assessment provided by different informants (e.g., mothers, fathers, teachers) of child and adolescent behavioral and emotional problems (Achenbach, McConaughy, & Howell, 1987; De Los Reyes et al., 2015; Duhig, Renk, Epstein, & Phares, 2000). This phenomenon is generally known as "informant discrepancies" (Nelemans et al., 2016).

Informant discrepancies have been usually attributed to unreliability or bias in the informants' reports (De Los Reyes et al., 2011; De Los Reyes & Kazdin, 2005, 2006), and conceptualized as measurement error (Nelemans et al., 2016). Nevertheless, over the past two decades, scholars have argued that disagreements and discrepancies between informants may provide significant information (De Los Reyes et al., 2013). In some cases, discrepancies can help us to understand how the same behavior changes in different contexts (e.g., school or family or peer group), as well as to underline some differences in the way in which the different informants observe and interpret the examined behavior (De Los Reyes & Kazdin, 2005; Nelemans et al., 2016). Even more, when informants disagree about some behaviors that daily occur in their own life, like parenting behaviors or the quality of parent-child relationships, such discrepancies may have important implications for the interactions between informants as well as for the development of the children (De Los Reyes et al., 2013; De Los Reyes & Kazdin, 2006; Ferdinand, van der Ende, & Verhulst, 2004).

#### Discrepancies in parental psychological control

The study of informant discrepancies in the family functioning

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domain has underlined that parents and adolescents often provide discordant reports on parenting behaviors and these discrepancies are important because they may reflect difficulties in parent-child relationships and may be associated with youths' maladjustment (De Los Reyes & Ohannessian, 2016; Korelitz & Garber, 2016; Steinberg & Morris, 2001). For instance, some authors have underscored that different perspectives between parent and children on relevant behaviors acted in the family context (e.g., parenting practices, parental psychological control, parental monitoring) may predict negative outcomes with regard to children's adjustment (for a review see De Los Reyes, 2011). To better understand these differences, it is useful referring to the conceptual framework provided by Family System Theory (FST; Kerig, 2019; Minuchin, 1985; Nelemans et al., 2016; Restifo & Bögels, 2009).

In the FST, family is seen as a complex relational system in which members are interconnected implying that any change in one individual is likely to influence the entire system and may cause change in other members (Gilbertson & Graves, 2018). Hence, behaviors of family members can be analyzed taking into account different system levels: the individual level including personal factors of children or parents; the parent-child level including parenting dimensions like those related to issues of psychological control or autonomy granting; the marital level including dimensions of the spousal relationship; and the whole family level, including triadic relationships (i.e., mother, father, and child) (Restifo & Bögels, 2009).

In light of this framework, the current study was focused on parent-child level, taking into account two main dimensions: the differences between parents and adolescents' perceptions of the same parenting behavior, and the differences between the father-adolescent and mother-adolescent dyads with regard to the same parenting behavior. The first dimension was chosen in light of the fact that parents and adolescents may hold different opinions and ideas about parenting behaviors and this can lead to a mismatch between the needs of the developing adolescent and the opportunities provided by parents (Nelemans et al., 2016). The second dimension was chosen because father-adolescent and mother-adolescent relationships "represent distinct subsystems within the family" (Nelemans et al., 2016, p. 2052) and some scholars have provided support for the gendered nature of parenting, underlining that parenting is quite different between fathers and mothers (Chuang & Su, 2009; Crapo, Miller, Bradford, & Higginbotham, 2021; Palkovitz, Trask, & Adamsons, 2014). For instance, Crapo et al. (2021) posited that, due to macro-cultural gendered parenting ideologies, mothers and fathers may hold different beliefs and values about parenting, and this may influence their behaviors and the way in which these behaviors are interpreted.

One interesting dimension of parenting behavior to study through this approach is psychological control. According to some authors (Barber & Harmon, 2002; Soenens, Vansteenkiste, & Luyten, 2010), psychological control is "characteristic of parents who pressure their children to comply with their own agenda through insidious and manipulative tactics, such as guilt induction, shaming, and love withdrawal" (Inguglia et al., 2016, p. 419). In particular, psychologically controlling parents tend to carry out manipulative and intrusive behaviors like curiosity inhibition, devaluation, judgment, withholding, or showing indifference (Barber, 1996; Hauser et al., 1991).

Literature on psychological control has underlined the importance of adolescents' perceptions to be psychologically controlled by parents (Barber & Harmon, 2002; Lansford et al., 2014), that is how we operationalized psychological control in the present study. One useful framework to study psychological control is Self-Determination Theory (SDT; Deci & Ryan, 2000), according to which all individuals have three universally basic psychological needs (namely autonomy, relatedness, and competence), whose satisfaction is associated with high levels of psychological functioning. In particular, autonomy refers to the need to choose one's own life direction and to feel efficacious and capable of achieving desired outcomes; relatedness reflects the necessity to

establish close relationships with people; competence refers to the need to feel adequate of achieving goals and to effectively carry out activities (Deci & Ryan, 2000; Inguglia, Liga, Lo Coco, Musso, & Inguglia, 2018).

In the framework of SDT, perceived parental psychological control is negatively related to children's fulfillment of basic psychological needs (Ahmad, Vansteenkiste, & Soenens, 2013; Inguglia et al., 2018; Liga et al., 2017; Mabbe, Soenens, Vansteenkiste, & Van Leeuwen, 2015). In particular, some scholars have specifically focused their attention on the relationships between psychological control and the satisfaction/frustration of autonomy and relatedness needs (Fousiani, Dimitropoulou, Michaelides, & Van Petegem, 2016; Inguglia et al., 2018) because autonomy and relatedness are very relevant issues in the context of parent-child relationships, even more than competence (Kağıtçıbaşı, 2005). For this reason, we choose to focus the present study on autonomy and relatedness needs.

Empirical evidence has been already provided that the higher are the levels of perceived parental psychological control, the less the adolescents report to be autonomous and to have good relationship quality (Inguglia et al., 2018; Inguglia, Inguglia, Liga, Lo Coco, & Lo Cricchio, 2015; Koepke & Denissen, 2012; Vansteenkiste & Ryan, 2013). In general, according to SDT mothers and fathers who rely on pressuring or intrusive strategies such as guilt induction, shaming, and love withdrawal tend to actively thwart children's attempts to satisfy their need for autonomy and relatedness (Mabbe, Soenens, Vansteenkiste, van der Kaap-Deeder, & Mouratidis, 2018; Vansteenkiste & Ryan, 2013). For instance, Inguglia et al. (2018) have found that perceived psychological control from mothers was positively associated with frustration of both needs for autonomy and relatedness among Italian adolescents. Hence, adolescents who perceived their mothers as exerting psychological control tended to feel forced to do things they would not choose to do and to see people who are important to them as cold and distant. Several studies have highlighted that, in general, adolescents and their parents tend to differ significantly with regard to the perceptions of their relationships and of their parenting behaviors (De Los Reyes, 2011; Korelitz & Garber, 2016; Mastrotheodoros, Van der Graaff, Deković, Meeus, & Branje, 2020). For instance, Korelitz and Garber (2016) performed a meta-analysis on congruence of parents' and children perception of parenting showing that children, on average, reported higher levels of psychological control than their mothers and fathers did. This is in line with research that showed that both mothers and fathers tend to evaluate their parenting behaviors more favorably than their children (e.g., Ohannessian, Lerner, Lerner, & von Eye, 2000; Shercensor, Parke, & Coltrane, 2011).

These discrepancies between parents' and adolescents' perceptions of psychological control may be considered as a risk factor for youths' developmental outcomes during adolescence, also with regard to the satisfaction of needs for autonomy and relatedness (De Los Reyes et al., 2013; De Los Reyes & Kazdin, 2006; Nelemans et al., 2016). For instance, research has already found that divergent perceptions of psychological control between parents and adolescents are negatively associated with the quality of parent-adolescent relationships, self-determined motivation and sense of competence (e.g., Juang, Syed, & Takagi, 2007; Maurizi, Gershoff, & Aber, 2012; Yaban, Sayil, & Tepe, 2014).

Moreover, mothers and fathers seem to differ in the ways in which they are perceived from their children to exert psychological control. Although findings of research investigating differences between adolescents' reports of psychological control of fathers and mothers are controversial (as an example of research showing the opposite pattern, see Mastrotheodoros, Van der Graaff, Deković, Meeus, & Branje, 2019), scholars have generally found that mothers are perceived by their children as more psychologically controlling than fathers (Barber & Harmon, 2002; Shek, 2007; Soenens et al., 2010; Van Lissa, Hawk, Koot, Branje, & Meeus, 2017). Few studies which have focused on the discrepancies between mother-child and father-child dyads with regard to perceived psychological control have found that children reported

higher levels of psychological control as compared to their mothers, but not their fathers (Korelitz & Garber, 2016).

However, these topics need to be further investigated in order to deepen our knowledge about the discrepancies between in mother–child and father–child dyads and as far as we know no studies have tried to understand how such discrepancies are related to children’s satisfaction of needs for autonomy and relatedness. Therefore, the current study was aimed to shed light on these processes.

#### *Psychological control and the satisfaction of needs for autonomy and relatedness*

The issues of autonomy and relatedness are very relevant in child–parent relationships during adolescence. Indeed, in this phase of the life cycle adolescents start being less influenced by parents and other adults and acquire more opportunities to determine their own behaviors and they become more independent in the ways of thinking and behaving. At the same time, there is empirical evidence that they also need to feel emotionally connected with significant others including parents who continue to play an important role in the life of teens as reference figures (Benito-Gomez, Williams, McCurdy, & Fletcher, 2020; Buhl, 2008; Inguglia et al., 2015; McCurdy, Williams, Lee, Benito-Gomez, & Fletcher, 2020; Van Petegem, Vansteenkiste, & Beyers, 2013). Thus, one of the most challenging developmental tasks for adolescents is trying to get a balance between the two issues of autonomy and relatedness.

Although there are different conceptualizations of autonomy in the literature (Benito-Gomez et al., 2020; McCurdy et al., 2020), in the current paper we focus on the definition provided by SDT that is referred to volition and reflects the desire of individuals to be the origin or source of their own behavior (Deci & Ryan, 1985). According to this definition, an autonomous adolescent is able to make his/her own decisions and choices from his/her will and to volitionally engage in behaviors. Moreover, in line with SDT relatedness is defined as the feeling of being connected with significant others. Hence, it is conceptualized as the perception of being loved and cared for by the people with whom the adolescent spends more time, or the feeling to belonging to given social milieu (Ryan & La Guardia, 2000).

As reported in the previous section, the satisfaction of adolescents’ needs for autonomy and relatedness has been shown to be negatively associated with the perception of parents as psychologically controlling. Despite the acknowledgment of the role of mothers and fathers in this process, to our knowledge no research has investigated how discrepancies in children’s and parents’ perceptions of parental psychological control are associated with adolescents’ satisfaction of needs for autonomy and relatedness. And not even scholars have explored what are the relations between discrepancies in mother–adolescent and father–adolescent dyads with regard to perceptions of parental psychological control, on the one hand, and adolescents’ satisfaction of needs for autonomy and relatedness, on the other hand. The only point that was addressed by a limited number of studies is the relation between adolescents’ perceptions of mothers and fathers’ parental psychological control and the satisfaction of their needs for autonomy and relatedness (Costa, Cuzzocrea, Gugliandolo, & Larcán, 2016; Soenens & Vansteenkiste, 2005). However, the majority of research on this topic had not differentiated between parents (Costa, Soenens, Gugliandolo, Cuzzocrea, & Larcán, 2015; Inguglia et al., 2016; Mabbe et al., 2015) or focused only on mothers (Ahmad et al., 2013; van der Kaap-Deeder, Vansteenkiste, Soenens, & Mabbe, 2017).

Among the studies that have investigated the differential roles of fathers and mothers, Soenens and Vansteenkiste (2005) compared the predictive power of adolescents’ perceptions of mothers’ and fathers’ parenting style with regard to adolescents’ autonomy among teens living in Belgium. Autonomy was conceptualized in terms of self-determined regulation, namely individual’s tendency to experience a sense of autonomy and choicefulness in one’s actions across different life

domains (i.e., friendships, school, job-search). The authors found that fathers’ psychological control perceived by teens did not contribute significantly to their sense of autonomy in the domains of friendships and school, while it was negatively associated with job-search self-determined regulation. Instead, psychological control perceived from mothers was negatively associated with adolescents’ self-determined regulation in the domains of friendships and school, while it did not contribute significantly to job-search self-determined regulation.

Moreover, Costa et al. (2016) have investigated the associations between perceived maternal and paternal psychological control - in terms of behaviors inducing guilt, cultivating performance goals, and threatening (example of item: ‘My father/mother used guilt to control me’) - with satisfaction of needs for autonomy and relatedness among Italian adolescents. They found moderate but significant negative correlations between paternal psychological control and both satisfaction of autonomy and relatedness needs, as well as between maternal psychological control and satisfaction of need for autonomy. Maternal psychological control was not significantly associated with satisfaction of need for relatedness.

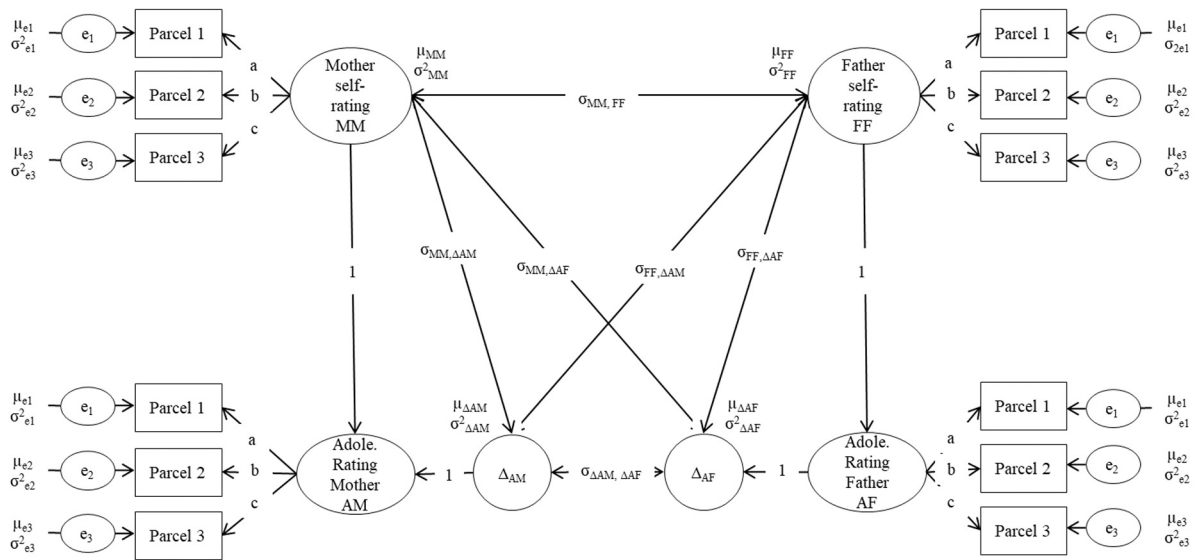
However, the differential role of psychological control exerted by mothers and fathers in fulfilling the needs of their children requires to be further investigated by future studies. These studies should also consider the existence of potential discrepancies in the perceptions of parents and children with regard to parental psychological control and how these discrepancies may be associated with the satisfaction of adolescents’ needs for autonomy and relatedness.

#### *The present study*

In light of the previous observations, the present multi-informant study tried to contribute to a better understanding of the relationships between discrepancies in parents’ and adolescents’ perceptions of parental psychological control and satisfaction of adolescents’ needs for autonomy and relatedness. Framed from a conceptual framework based on SDT (Ryan & Deci, 2000) and FST (Minuchin, 1985; Nelemans et al., 2016), the study analyzed the associations between discrepancies in both mother-adolescent and the father-adolescent relationship, and satisfaction of adolescents’ needs for autonomy and relatedness.

More specifically, the first aim was to analyze the relations between adolescents’ and parents’ perceptions of parental psychological control. On the basis of literature, it was hypothesized that adolescents and their parents would differ significantly with regard to the perceptions of the psychological control exerted by parents, with adolescents ratings reporting higher levels of perceived psychological control than those showed by their parents’ self-reports (Korelitz & Garber, 2016; Ohanessian et al., 2000; Sher-Censor et al., 2011). In this regard, the study explored also the existence of differences between mothers and fathers in the ways in which they are perceived from their children to exert psychological control. In line with some scholars (Barber & Harmon, 2002; Shek, 2007; Soenens et al., 2010; Van Lissa et al., 2017), it was expected that mothers would be perceived by their children as more psychologically controlling than fathers.

Additionally, the study examined how far mother–adolescent dyads and father–adolescent dyads disagree with regard to parental psychological control, as well as the degree to which mother–adolescent and father–adolescent discrepancies are interrelated (see Fig. 1). In line with FST framing of father-adolescent and mother-adolescent as distinct subsystems, as well as evidence of greater discrepancies between informants of mothers’ psychological control, we expected to notice differences between the father–adolescent and mother–adolescent dyads since mothers and fathers may hold different beliefs about parenting that affect their behaviors and the way in which these behaviors are interpreted by their children (Crapo et al., 2021; Nelemans et al., 2016). In particular, in light of previous studies that showed discrepancies in levels of psychological control perceived by adolescents with regard to their mothers but not to their fathers (i.e., Korelitz & Garber, 2016), it



**Fig. 1.** Hypothesized bivariate LDS Model for Informant Discrepancies about perception of parental control in mother-adolescent and father-adolescent dyads (Model 1 addressing the first aim of the study). Note. Correlations between residual variances of same parcels across Informants were also estimated, but not shown for clarity of presentation. Constraints are indicated by similar labels for the factor loadings, error intercepts, and residual error variances.

was expected that discrepancies in mother-adolescent dyads would be more pronounced than those in father-adolescent dyads.

Furthermore, the study was aimed to examine how mother-adolescent and father-adolescent discrepancies were associated with the satisfaction of adolescents' needs for autonomy and relatedness (see Fig. 2). More precisely, in line with the literature stating that discrepancies between parents' and adolescents' perceptions of parenting behaviors may be considered as a risk factor for youths' developmental outcomes (De Los Reyes et al., 2013; De Los Reyes & Kazdin, 2006; Nelemans et al., 2016), it was hypothesized that higher mother-adolescent and father-adolescent discrepancies would be associated with lower levels of satisfaction of both needs.

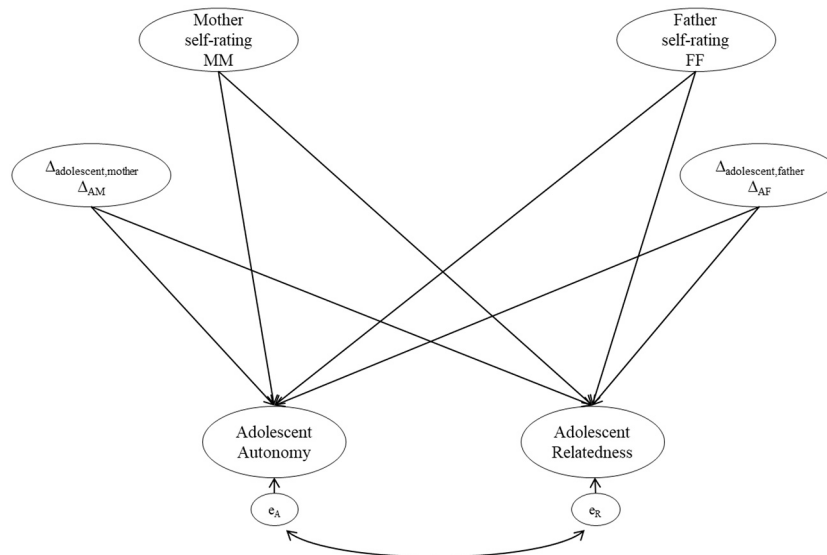
Finally, in order to explore the potential role as covariates of parents' level of education and age, and adolescents' gender and age, the association of these variables with study variables was preliminarily

examined. Indeed, previous studies have found some differences related to parents' education and age (e.g., Jubber, Olsen Roper, Yorgason, Poulsen, & Mandleco, 2013; Rogers, Padilla-Walker, McLean, et al., 2020; van Der Kaap-Deeder et al., 2019), and adolescents' gender and age (Boudreault-Bouchard, Dion, Hains, Laberge, & Perron, 2013; Claes & Lacourse, 2001; McKinney & Renk, 2008) in the perceptions of psychological control of both adolescents and parents.

**Method**

*Participants*

Participants were 190 co-living family units composed by mothers ( $M_{age} = 46.87$  years,  $SD_{age} = 5.02$ , range 35–59 years), fathers ( $M_{age} = 50.47$  years,  $SD_{age} = 5.84$ , range 36–67 years) and adolescents



**Fig. 2.** Hypothesized multivariate LDS Model for Informant Discrepancies about perception of parental control in mother-adolescent and father-adolescent dyads and adolescents' satisfaction of autonomy and relatedness needs (Model 2 addressing the second aim of the study). Note. The specification of the LDS part model is identical to that of Model 1, but not shown for clarity of presentation.



(47% boys,  $M_{age} = 16.47$  years,  $SD_{age} = 1.41$ , range 14–19 years). The participants were all Italians, living in southern Italy.

With regard to parents' education, 29% of fathers and 28% of mothers had a high school diploma, 41% of fathers and 52% of mothers had a college degree or higher and 30% of fathers and 20% of mothers had a middle school diploma or less; both fathers' and mothers' years of education ranged from 5 to 23 years (for fathers,  $M = 13.21$ ,  $SD = 4.43$ , for mothers,  $M = 13.44$ ,  $SD = 3.76$ ). With regard to adolescents' education, 16% of them attended the 9th grade, 16% the 10th grade, 22% the 11th grade, 22% the 12th grade, and 26% the 13th grade. Cases with complete data on all study variables were 97% of the whole sample. The missing data were dealt with through full-information maximum likelihood (Enders & Bandalos, 2001) for analyses with latent variables.

## Measures

### Psychological control

We used the Italian translation of the Psychological Control Scale (PCS; Barber, 1996) to assess psychological control in the mother–adolescent and father–adolescent relationship as perceived by adolescents, mothers, and fathers. The scale consists of 8 items; a sample item reads “My mother/father is a person who is always trying to change how I feel or think about things” for psychological control perceived by the adolescent in the mother–adolescent and father–adolescent relationship, respectively. In this study, we obtained four reports of psychological control in the relationship with adolescent, specifically, a Mother self-report (MM), a Father self-report (FF), an Adolescent report of Mother (AM), and an Adolescent report of Father (AF). All items were rated on a 3-point Likert scale, ranging from 1 (not like me/her/him) to 3 (a lot like me/her/him). Barber (1996) provided evidence for the validity of the factor structure of this scale. In the present study, the scale showed adequate internal consistency; Cronbach's alpha ranged from 0.64 to 0.76. More information about the psychometric properties of these scales are provided below, in the data analysis approach paragraph.

### Autonomy and relatedness satisfaction

Adolescents completed two subscales from the Italian version of the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS; Chen et al., 2015; Costa et al., 2018; Liga et al., 2020), Autonomy satisfaction (4 item; e.g., “I feel a sense of choice and freedom in the things I undertake”) and Relatedness satisfaction (4 item; e.g., “I feel that the people I care about also care about me”). Items were rated on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). To test the factorial validity of the scale in the present study, we run a CFA model with two factors (Autonomy satisfaction and Relatedness satisfaction) assessed by four items each; it was analyzed using the MLR estimator. The model showed a good fit to the data,  $SB\chi^2(19) = 17.33$ ,  $p = .57$ , robust CFI = 1.00, RMSEA = 0. The model-based composite reliability was 0.83 for Autonomy satisfaction and 0.81 for Relatedness satisfaction.

## Procedure

The participants were recruited among graduated trainees in psychology by means of student associations in the local area as well as advertising on social networks and in the university networks. Instruments were administered only to those families whose all members separately (father, mother and adolescent) signed informed consent and checked the availability to participate in the research. In some cases, both parents also provided informed consent documents for their underage son/daughter. Mothers, fathers, and adolescents voluntarily completed questionnaires separately in paper-pencil mode under the supervision of a trainee psychology graduate. Privacy and anonymity of their answers were guaranteed and the research obtained the authorization of the local ethics committee. The present study followed the ethical standards of the 1964 Helsinki Declaration and its later

amendments or comparable ethical standards.

## Data analysis approach

In order to simplify the models to be tested in face of a small sample size, we decided to specify the factor of psychological control for each Informant using the parcelling procedure; as outlined by Little, Rhemtulla, Gibson, and Schoemann (2013), the benefit of more reliable indicators and fewer parameters to estimate can make the difference between a model converging or not. Firstly, we tested the unidimensionality of the scales assessing psychological control using item-level Confirmatory Factor Analysis (CFA) across Informants. We run four separate models with one latent variable assessed by eight indicators. Taking into account the ordinal level of the items, models were analyzed using the Weighted Least Square Mean and Variance adjusted (WLSMV) estimator. Preliminary analyses suggested the deletion of item 4 (“My Mother (Father) is a person who acts like she (he) knows what I'm thinking or feeling”) since its factor loadings for MM and AF were not significant. The four CFA models with one factor and seven items had a good fit to the data (supplementary online material, Appendix A). The model-based composite reliability was 0.65 for MM, 0.76 for FF, 0.74 for AM, and 0.76 for AF.

Secondly, we derived three parcels assessing the factor of psychological control for each Informant; using a balancing approach (Little et al., 2013) and making reference to the scale MM, the item with the highest item-scale correlation was paired with the item that had the lowest item-scale correlation. The next highest and next lowest items were paired in the second parcel. The last three items formed the third parcel. The parcels for other scales (FF, AM and AF) were computed making reference to the same set of items. Therefore, for each Informant, we derived three parcels, two obtained as the mean of two items and one obtained as the mean of three items.

Thirdly, measurement invariance of the psychological control factor across all four Informants (AM; AF; MM; FF) was assessed by comparing increasingly stringent models, reflecting configural (M0), metric (M1), scalar (M2), and full uniqueness (M3) invariance (Van de Schoot, Lugtig, & Hox, 2012). Models were analyzed using the robust Maximum Likelihood (MLR) estimation. If imposing invariance constraints resulted in a significant increase in the Satorra-Bentler scaled chi-square value and, additionally, in  $\Delta CFI \geq -0.01$  supplemented by  $\Delta RMSEA \geq 0.015$ , the respective constraint was not tenable (Chen, 2007). In all models, residual variances of parallel items across Informants were allowed to correlate (Marsh & Hau, 1996). Results show that the hypothesis of scalar invariance held, it was, however, necessary to freely estimate intercepts of three parcels (supplementary online material, Appendix B).

In order to examine informant discrepancies, we used the approach of Latent Difference Scores (LDS) modeling recently proposed by de Haan et al. (2018). This approach was adapted by de Haan and colleagues from similar approaches used in various disciplines (McArdle, 2009; Scalas, Marsh, Morin, & Nagengast, 2014). As outlined by de Haan et al. (2018), in order to test discrepancies between different informants' perceptions of the same behavior (self-report vs. other-report), LDS models use second-order latent factors. Firstly, latent factors representing individual informant reports are specified as measured by the observed scores. Secondly, LDS ( $\Delta$ ) are specified as second-order latent factors measured by the latent factors representing individual informant reports, as follows:

$$Y_{\text{other-rating}} = 1 * Y_{\text{self-rating}} + 1 * \Delta_{\text{self,other}}$$

The results of a subtraction are simulated by constraining the factor loadings of  $Y_{\text{self-rating}}$  and  $\Delta_{\text{self,other}}$  to be equal to 1; the difference score represents the portion of the score of  $Y_{\text{other-rating}}$  that is not identical to  $Y_{\text{self-rating}}$  (de Haan et al., 2018; McArdle, 2009). Following this specification, the difference score gives information about differences in perceptions within a dyad (in this study, Mother-Adolescent and Father-Adolescent) while taking into account the effect of the self-report. The

**Table 1**  
Mean (M), standard deviation (SD), skewness (S), kurtosis (K), and Pearson correlation coefficients of study variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1 MM1	1																										
2 MM2	.21	1																									
3 MM3	.40	.29	1																								
4 AM1	.35	.11	.16	1																							
5 AM2	.27	.22	0.10	.42	1																						
6 AM3	.26	.17	.35	.40	.31	1																					
7 FF1	.21	.04	.24	.19	.12	.22	1																				
8 FF2	.23	.23	.29	.18	.16	.17	.43	1																			
9 FF3	.25	.07	.36	.31	.16	.23	.51	.43	1																		
10 AF1	.14	-.01	.23	.30	.17	.27	.34	.29	.18	1																	
11 AF2	.03	-.01	.07	.27	.49	.23	.15	.30	.21	.38	1																
12 AF3	.11	.00	.23	.23	.24	.47	.18	.15	.30	.43	.44	1															
13 AU1	-.19	-.14	-.16	-.26	-.35	-.29	-.07	-.05	-.07	-.15	-.20	-.24	1														
14 AU2	-.18	-.04	-.10	-.30	-.23	-.23	-.18	-.12	-.08	-.13	-.13	-.10	.55	1													
15 AU3	-.17	.02	-.09	-.30	-.16	-.17	-.13	-.03	-.03	-.15	-.12	-.02	.48	.68	1												
16 AU4	-.09	-.11	-.17	-.16	-.15	-.15	-.17	-.03	-.03	-.14	-.20	-.17	.46	.57	.58	1											
17 RE1	-.14	-.01	-.11	-.15	-.20	-.14	-.11	-.12	-.15	-.29	-.22	-.24	.22	.28	.20	.16	1										
18 RE2	-.12	-.19	-.14	-.27	-.24	-.21	-.17	-.16	-.20	-.27	-.25	-.25	.37	.32	.31	.21	.56	1									
19 RE3	-.14	-.01	-.16	-.22	-.19	-.10	-.09	-.04	-.16	-.29	-.24	-.24	.29	.32	.33	.27	.60	.71	1								
20 RE4	-.21	-.02	-.12	-.17	-.03	-.20	-.12	-.16	-.31	-.23	-.13	-.27	.16	.28	.21	.15	.38	.41	.47	1							
21 MAge	-.08	.00	.08	-.05	.00	.14	-.01	-.09	-.09	.04	-.04	.05	.01	-.02	-.02	-.14	-.07	.00	-.02	.02	1						
22 FAge	-.07	.05	.06	.00	-.02	.13	.00	-.08	-.06	.03	-.01	.00	.05	.00	-.05	-.11	-.07	-.03	-.03	.05	.82	1					
23 AAge	-.08	.01	.12	-.08	-.07	.12	.04	.03	.03	.14	.09	.14	.09	.01	-.010	-.13	-.06	.02	-.07	-.03	.23	.18	1				
24 MEdu	-.18	-.05	-.12	-.02	.07	.04	-.04	-.07	-.06	-.07	.03	.17	-.05	-.04	.00	-.07	-.08	.03	.01	.03	-.02	-.02	-.10	1			
25 FEdu	-.21	.04	-.14	-.01	.06	-.05	-.007	.00	-.010	.01	-.02	.05	.00	.00	-.06	-.03	-.09	-.03	-.03	-.04	.08	.02	.02	.62	1		
26 AGen	-.01	-.08	-.01	-.09	-.09	-.11	.00	-.03	.03	-.14	-.06	.05	.03	.02	.05	.01	.05	.02	.02	.03	.03	.01	.02	.05	0.07	1	
M	1.45	1.78	1.32	1.54	1.88	1.57	1.40	1.83	1.31	1.48	1.76	1.39	3.65	3.75	3.88	3.80	4.05	4.35	4.18	3.94	46.87	50.47	16.47	13.44	13.21	1.53	
SD	0.40	0.44	0.42	0.47	0.52	0.57	0.43	0.51	0.47	0.49	0.51	0.54	0.90	0.90	0.94	0.99	0.90	0.85	0.80	0.97	5.02	5.84	1.41	3.76	4.43	0.50	
S	0.78	-0.01	1.24	0.82	0.10	0.76	1.09	0.31	1.85	1.21	0.24	1.46	-0.29	-0.33	-0.66	-0.53	-0.54	-1.26	-0.66	-0.64	0.08	0.24	-0.38	0.18	0.36	-0.13	
K	0.51	-0.74	1.04	0.47	-0.81	-0.19	0.90	-0.53	3.34	1.21	-0.76	1.49	-0.01	-0.20	0.16	-0.14	-0.65	1.20	-0.21	-0.23	-0.26	0.06	-0.98	-0.38	-0.67	-2.00	

*Note.* MM1-MM3, parcels of Mother self-report psychological control; AM1-AM3, parcels of Adolescent report of Mother psychological control; FF1-FF3, parcels of Father self-report psychological control; AF1-AF3, parcels of Adolescent report of Father psychological control; AU1-AU4, Items of Adolescent Autonomy; RE1-RE4, Items of Adolescent Relatedness; MAge, Mother age; FAge, Father age; AAge, Adolescent age; MEdu, Mother education; FEdu, Father education; AGen, Adolescent Gender. Correlation coefficients lower than .16 were significant at  $p < .05$ .

difference scores contain means ( $\mu_{\Delta}$ ), variances ( $\sigma_{\Delta}^2$ ), and a covariance with the self-report ( $\sigma_{\Delta-self}$ ). The means of LDS give information about the extent to which informants disagree and the direction (which could be positive or negative) of disagreement: (a) positive LDS means reflect higher other-reports compared to self-reports, (b) negative LDS means reflect lower other-reports compared to self-reports. The variances of LDS give information about the extent to which different dyads within the sample differ in the extent to which they disagree. The covariance of LDS with the self-report gives information about the extent to which the discrepancies are related with self-ratings.

Both in Model 1 and Model 2, psychological control factors regarding mothers and fathers were included simultaneously. The models were specified to examine the extent to which (a) mother-adolescent and father-adolescent dyads disagree on psychological control, and (b) parent-adolescent discrepancies are associated with parents' self-reported psychological control as well as with the other dyad's perceptions of psychological control (both self-reported psychological control and parent-adolescent discrepancy). For model identification purposes, mean of mothers' self-reported psychological control, and means of child reports of mothers' and fathers' psychological control, were set to zero, and factor loadings of the first observed indicator were set to one for each informant. Moreover, in Model 2, the extent to which parental psychological control was associated with adolescents' autonomy and relatedness was examined. All analyses were performed using Mplus 7 (Muthén & Muthén, 1998–2012). In order to deal with missing data, all models were analyzed using the Full Information Maximum Likelihood (FIML) estimation method (Enders & Bandalos, 2001).

**Results**

*Preliminary analyses*

Means, standard deviations, skewness, kurtosis, and Pearson correlation coefficients of study variables at parcel and item level are presented in Table 1. Mother and father self-reports of psychological control were positively and significantly related with each other (for composite raw scores,  $r = 0.35, p < .001$ ); they were also positively and significantly related with adolescent reports (for composite raw scores,  $r_{MM-AM} = 0.39, p < .001, r_{FF-AF} = 0.38, p < .001$ ). Mother self-report was negatively and significantly related with both adolescent autonomy and relatedness (for composite raw scores,  $r_{MM-aut} = -0.20, p < .01, r_{MM-rel} = -0.18, p < .05$ ), while father self-report was negatively and significantly related only with adolescent relatedness (for composite raw scores,  $r_{FF-rel} = -0.22, p < .01$ ); finally, adolescent reports of mother and father psychological control were negatively and significantly related with both adolescent autonomy and relatedness (for composite raw scores,  $r_{AM-aut} = -0.36, p < .001, r_{AM-rel} = -0.29, p < .001, r_{AF-aut} = -0.23, p < .001, r_{AF-rel} = -0.38, p < .001$ ).

In order to examine gender differences in study variables, a series of *t*-tests was performed on mothers' and fathers' psychological control,

**Table 2**

Means and standard deviations of study variables (raw scores) of boys ( $n = 89$ ) and girls ( $n = 101$ ), and *t*-tests.

	Boys		Girls		<i>t</i> (188)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
MM Mother self-report psychological control	1.56	0.31	1.53	0.31	0.70	.48
AM Adolescent report of Mother psychological control	1.73	0.39	1.63	0.39	1.69	.09
MM Mother self-report psychological control	1.54	0.39	1.53	0.36	0.20	.84
AM Adolescent report of Mother psychological control	1.59	0.39	1.53	0.40	0.99	.32
Adolescent autonomy	3.73	0.74	3.80	0.78	-0.63	.53
Adolescent relatedness	4.10	0.74	4.15	0.67	-0.50	.61

**Table 3**

Means and variances of mother and father self-reports and parent-child Latent Discrepancy Scores (LDS) for Model 1 (addressing the first aim).

Means				Variances			
Self-report		LDS		Self-report		LDS	
MM	FF	AM	AF	MM	FF	AM	AF
0 <sup>a</sup>	-.01 <sup>a</sup>	.15 <sup>b</sup>	.04 <sup>a</sup>	.04 <sup>***</sup>	.07 <sup>***</sup>	.06 <sup>***</sup>	.10 <sup>***</sup>

Note. MM mother self-report, FF father self-report, AM adolescent report of mother psychological control, AF adolescent report of father psychological control. Latent mean of mother self-report was set to zero for identification of the model. Different superscripts indicate significant mean-levels, indicated by non-overlapping 95% confidence intervals.

\*\*\*  $p < .001$ .

and adolescents' autonomy and relatedness; results showed no significant difference between boys and girls (see Table 2). Moreover, in order to examine whether gender differences exist in covariance patterns of study variables, Box's *M* test was performed: results showed no significant differences,  $M = 249.77, F(210, 93,401) = 1.05, p = .30$ .

Finally, in order to examine the association of study variables with parents' age and years of education, and adolescents' age, correlation coefficients were computed (see Table 1). Mother self-report was negatively and significantly related with their education (for composite raw scores,  $r = -0.16, p < .05$ ), even though this association was modest. No significant association was found for parents' and adolescents' age, and fathers' education. On the basis of these results, we decided not to further examine these variables as covariates.<sup>1</sup>

*Parent-adolescent discrepancies*

Model 1 addressed the first aim of the study. It showed adequate fit to the data,  $\chi^2(51) = 89.96, p < .001, CFI = 0.913, RMSEA = 0.063$ . Parameter estimates are shown in Table 3. Comparison of the 95% confidence intervals of the LDS means indicates that on average, adolescents rated mothers but not fathers higher on psychological control than parents themselves did (positive LDS means). Significant variances of all LDS indicate that there were significant differences between dyads in this sample, regarding how much adolescents and parents differed in their views. A negative and significant correlation between father self-reported psychological control and the corresponding LDS was found ( $r = -0.46, p < .001$ ): the negative sign of the correlation suggests that adolescents tended to overrate father psychological control less if fathers rated themselves higher on this behavior. The correlation between mother self-reported psychological control and the corresponding LDS was not significant ( $r = -0.09$  ns): the not significant correlation (together with the sign of the LDS mean above zero) suggests that adolescents tended to overrate mother psychological control regardless to the self-reported level of this behavior. Furthermore, the correlation between mother and father self-reports of psychological control was positive and significant ( $r = 0.57, p < .001$ ): thus, higher levels of mother self-reports were related to higher levels of father self-reports. Finally, the correlation between mother-adolescent and father-adolescent discrepant perceptions was also positive and significant ( $r = 0.36, p < .001$ ): thus larger mother-child discrepancies were related to larger father-child discrepancies.

*Parent-adolescent discrepancies and adolescent autonomy and relatedness*

Model 2 addressed the second aim of the study: mother and father self-reported psychological control and mother-adolescent and father-adolescent discrepancies were related to the satisfaction of adolescents'

<sup>1</sup> Model 1 and Model 2 were run with and without these covariates. No significant effect was found.

**Table 4**

Means and variances of mother and father self-reports and parent-child Latent Discrepancy Scores (LDS), and associations between parents' self-reports, parent-child discrepant views, and adolescent autonomy and relatedness in Model 2 (addressing the second aim of the study).

Means				Variances			
Self-report		LDS		Self-report		LDS	
MM	FF	AM	AF	MM	FF	AM	AF
0 <sup>a</sup>	-.01 <sup>a</sup>	.15 <sup>b</sup>	.04 <sup>a</sup>	.04***	.08***	.06***	.10***

	Autonomy			Relatedness		
	B	SE	β	B	SE	β
Mother self-report (MM)	-1.10	0.46	-.39**	-.54	0.51	-.17
Father self-report (FF)	0.18	0.36	.09	-.83	0.38	-.37*
LDS AM	-.81	0.36	-.35*	-.03	0.38	-.01
LDS AF	-.03	0.25	-.01	-.90	0.30	-.45**

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

<sup>a,b</sup>Different superscripts indicate significant mean-levels, indicated by non-overlapping 95% confidence intervals. \*\*\* $p < .001$ .

autonomy and relatedness needs. It showed adequate fit to the data,  $\chi^2(158) = 235.28$ ,  $p < .001$ , CFI = 0.927, RMSEA = 0.051. Parameter estimates are reported in Table 4.

Mother self-report was negatively and significantly related to autonomy: adolescents whose mothers report higher levels of psychological control tend to report lower levels of autonomy. Mother-adolescent discrepancies were negatively and significantly related to autonomy: larger mother-adolescent discrepancies of psychological control were related to lower autonomy. Father self-report was negatively and significantly related to relatedness: adolescents whose fathers report higher levels of psychological control tend to report lower levels of relatedness. Furthermore, father-adolescent discrepancies were negatively and significantly related to relatedness: larger father-adolescent discrepancies of psychological control were related to lower relatedness.

## Discussion

In the current study we examined how discrepancies in both the mother-adolescent and the father-adolescent relationship with regard to the perception of parental psychological control were associated with satisfaction of adolescents' needs for autonomy and relatedness, taking also into account how the perceptions of psychological control vary between mothers and fathers. Indeed, during adolescence the fulfillment of adolescents' needs for autonomy and relatedness is strongly affected by the psychological control exerted by parents, that have been shown to be negatively associated with adolescents' needs satisfaction (Ahmad et al., 2013; Costa et al., 2018; Inguglia et al., 2018; Mabbé et al., 2015). However, adolescents and parents often tend to evaluate psychological control quite differently and there are also differences between mothers and fathers in the ways in which they are perceived from their children to exert psychological control. Such discrepancies in perceptions of parental psychological control, even more than the perceptions themselves, may constitute a risk for adolescents' fulfillment of needs for autonomy and relatedness.

In line with previous research (e.g., Korelitz & Garber, 2016), the current study suggests that adolescents generally tend to perceive higher levels of psychological control than their parents. According to the "developmental or generational stake" hypothesis (Korelitz & Garber, 2016; Welsh, Galliher, & Powers, 1998), this tendency can be explained taking into account that parents and children have different developmental stakes during adolescence. Generally, adolescents try to achieve

autonomy and minimize closeness with their parents, whereas parents try to maintain closeness with their sons and daughters and to provide a nurturing environment for their sons and daughters' development. As a result of these different stakes, parental psychological control is perceived in different ways by parents and adolescents, with parents who tend to perceive their psychological control as a positive strategy to nurture their sons and daughters, and adolescents who see their parental psychological control as an attempt to obstruct their search for autonomy (Leung & Shek, 2014). Additionally, it has to be underlined that these results may be affected by social desirability because some parents' reports may be influenced by their desire to portray themselves in a favorable light, consequently they tend to refer to be less psychologically controlling than actually they are.

Furthermore, we found a concordance between psychological control self-reported by mothers and fathers. According to Simons and Conger (2007) this is an important research topic because contrasting approaches to parenting may negatively affect children's development. Although FST posits that father-child and mother-child dyads represent distinct subsystems within the family and role theory suggests that fathers and mothers play different roles in the development of their children (Hosley & Montemayor, 1997; McKinney & Renk, 2008; Nelemans et al., 2016), our findings displayed a certain coherence between the levels of psychological control of the parental couple because within the families in which mothers showed higher levels of psychological control also fathers tended to do the same, especially when the correlations are computed on latent variables of mothers' and fathers' reports of psychological control.

This finding is in line with previous research that showed some similarities between fathers' and mothers' approaches to parenting, including psychological control (Beato, Pereira, Barros, & Muris, 2016; Bögels & Phares, 2008; Fliék, Daemen, Roelofs, & Muris, 2015; Inguglia et al., 2018). In order to explain such similarities, Luo and Klohn (2005) refer to the concept of "assortative mating" stating that partners who are similar in attitudes and behaviors tend to select into relationships with one another. In this way, they may select partners who adopt similar approaches to parenting and this may result in being more consistent in their responses to their children and having less reasons to dispute (Lansford et al., 2014).

Moreover, the present study explored the existence of differences between mothers and fathers in the ways in which they are perceived from their adolescent sons and daughters to exert psychological control. In this regard, it was found that adolescents tended to rate mothers' psychological control higher than the mothers themselves; whereas, adolescent reports of fathers' psychological control were not higher than the fathers' self-reports. In particular, the means of mothers and fathers' self-reports of psychological control were identical but adolescents' ratings of mothers were higher than those of fathers. These findings are consistent with the studies showing that mothers are perceived by their children as more psychologically controlling than fathers (Barber & Harmon, 2002; Korelitz & Garber, 2016; Lansford et al., 2014; Shek, 2007; Soenens et al., 2010).

The scholars who have already observed similar findings do not provide exhaustive explanations of the differential perceptions of mothers and fathers' psychologically controlling behaviors, rather they focus on differences between adolescents and parents without taking into account the role of each parent (Korelitz & Garber, 2016; Lansford et al., 2014). One possible explanation of such findings can be linked to adolescents' expectations about their parent behaviors with regard to their role in the family. According to the role theory (Hosley & Montemayor, 1997; McKinney & Renk, 2008) the functions of mothers and fathers in a family are traditionally and culturally established: generally, mothers are traditionally encouraged to provide warmth and care for



their children, whereas fathers are considered the providers and disciplinarians. These responsibilities may in turn lead to different expectations towards mothers and fathers' styles of parenting, with mothers who are expected to provide more warmth and support and fathers who are expected to exert control and authority (McKinney & Renk, 2008). In light of these expectations, it is possible that the adolescents tend to interpret the same behaviors of mothers and fathers in different ways. For instance, parents' attempts to discuss about and to change adolescents' feelings or ideas may be perceived as more psychologically controlling when they are carried out by mothers than when they are carried out by fathers producing such discrepancies between mothers' self-reports and adolescents' ratings of mothers' behaviors.

According to this line of thought, it is perhaps no wonder that adolescents tended to overrate mothers' psychological control regardless to the self-reported level of this behavior, whereas the discrepancy between adolescents' ratings of fathers' psychological control and fathers' self-reports of the same behaviors tended to decrease when fathers rated themselves as being more psychologically controlling. Additionally, it is likely that also parents may vary in their perceptions of their psychologically controlling behaviors according to their role in the family. Mothers generally think themselves as nurturing their children, enhancing family cohesion, and providing a healthy environment for the children; they could tend to apply some psychologically controlling strategies (e.g., to induce guilty if adolescents take decisions without their opinion in some contexts like friendship) considering them just as expressions of parental warmth, concern, and responsibility (Lo Cricchio, Lo Coco, Cheah, & Liga, 2019). Thus, mothers may have a tendency to portray their psychologically controlling behaviors as positive, as they have invested much time and effort in nurturing their children (Leung & Shek, 2014). On the other hand, adolescents focus on searching for self-identity and autonomy enlarging the differences involved. This discrepancy seemed to decrease between adolescents and fathers probably because fathers could be less reluctant to rate themselves as being psychologically controlling considering these practices as normative and sometimes useful in exercising their role.

The current study contributed to the literature also by exploring how informant discrepancies were associated with the satisfaction of adolescents' needs for autonomy and relatedness. Findings have only partially confirmed our predictions. In particular, the discrepancies between fathers and adolescents in their perceptions of fathers' psychological control were associated with lower levels of satisfaction of need for relatedness, while the discrepancies between mothers and adolescents in their perceptions of mothers' psychological control were associated with lower levels of satisfaction of need for autonomy. Contrary to our hypotheses, discrepancies between fathers' and adolescents' perceptions of psychological control were not significantly associated with adolescents' satisfaction of need for autonomy, nor discrepancies between mothers' and adolescents' perceptions of psychological control were significantly associated with adolescents' satisfaction of need for relatedness. Moreover, results showed that father's self-report of psychological control was negatively and significantly related to adolescents' satisfaction of need for relatedness (and not to need for autonomy), whereas mothers' self-report of psychological control was negatively and significantly related to adolescents' satisfaction of need for autonomy (and not to need for relatedness).

Taken together these findings provide some interesting insights. First, fathers and mothers seem to play different roles in the relationship between psychological control and adolescents' needs satisfaction, with fathers more involved in the satisfaction of need for relatedness while mothers seem more involved in the satisfaction of need for autonomy. These data are not easy to explain on the basis of previous research considering that a very limited number of studies have investigated the

differential associations between mothers' and fathers' psychological control, on the one hand, and adolescents' satisfaction of basic psychological needs, on the other hand, finding conflicting results (i.e., Costa et al., 2016; Soenens & Vansteenkiste, 2005). From a theoretical point of view, according to SDT (Deci & Ryan, 2000), no differences between parents would have been expected since this theory points out the negative associations between perceived psychological control and adolescents' satisfaction of psychological basic needs without differentiating between parents. Instead, in this case our findings are in line with Family Systems Theory (Restifo & Bögels, 2009) that suggests to distinguish between the father-adolescent and mother-adolescent dyads, as these relationships can be considered as distinct subsystems within the family. In our case, the subsystem father-adolescent seems to be focused on the issue of relatedness in line with several authors who underlined the importance of father-child relationship for children's social behavior and social life (Leidy, Schofield, & Parke, 2013; McDowell & Parke, 2009; Scharf & Mayseless, 2008; Van Lissa, Keizer, Van Lier, Meeus, & Branje, 2019). According to these authors fathers play a special role in fostering the social facets of the child's functioning and in developing socio-emotional skills to engage and be connected with significant others (Majdandžić, Möller, de Vente, Bögels, & van den Boom, 2014; Van Lissa et al., 2019). Hence, when adolescents perceive higher levels of fathers' psychological control they can feel thwarted in their need to establish socially supportive relations with significant others, both inside and outside family. Thus, the more the fathers are perceived as psychologically controlling the less their children feel satisfied with regard their need for relatedness.

Instead, the association between mothers' parenting behaviors – like perceived psychological control – and the satisfaction of adolescents' need for autonomy was underlined by several authors (Hare, Szewedo, Schad, & Allen, 2015; McElhane, Allen, Stephenson, & Hare, 2009; Van Lissa et al., 2019). The relationship with mothers retains important functions for the satisfaction of need for autonomy during adolescence. However, when adolescents perceive their mothers as psychologically controlling they can experience maternal involvement as a threat to their growing autonomy needs (Allen & Manning, 2007). If mothers exercise psychological control in domains which adolescents perceive to be personal, like intimate thoughts or emotional experiences, maternal efforts are likely to be counterproductive, leading to frustration of need for autonomy (Smetana & Daddis, 2002).

The differential role of fathers and mothers is also observed with regard to the findings on discrepancies between parents' and adolescents' perceptions of psychological control because discrepancies about fathers' psychological control are negatively associated with adolescents' satisfaction of need for relatedness, whereas discrepancies about mothers' psychological control are negatively associated with adolescents' satisfaction of need for autonomy. Hence, our results are partially in line with evidence coming from the studies that show negative associations between parental psychological control and adolescents' needs satisfaction may be exacerbated by the discrepancies between parents' and adolescents' perceptions of psychological control (Butner et al., 2009; Zhang, Slesnick, & Feng, 2018). As Leung, Shek, and Lin (2017) have noted when adolescents perceive higher levels of parental psychological control than their parents report, these discrepancies may represent parent-child differences and conflicts on the issues of parenting and control. It may indicate that parents feel that they are exercising low levels of psychological control to their children, whereas adolescents may experience that parents exercise too much psychological control and restriction to their autonomy. Thus, the negative associations between parental psychological control and adolescents' satisfaction of needs for autonomy and relatedness are likely to be worsened by these different perceptions between adolescents and parents.

However, our study has an exploratory nature and future studies have to deepen these issues.

### Limitations and conclusion

The current study should be considered in light of some limitations. First, its cross-sectional nature does not allow us to clearly draw directional causal inferences concerning the associations among the study variables. Thus, future longitudinal studies following the same dyads during adolescence are needed in order to come to clearer conclusions about the causal associations between these variables and about the developmental processes involved. Such studies are needed even because the roles of mothers and fathers continue to change over time. Second, for sake of clarity we focused only on the satisfaction of needs, whereas many recent studies have recognized that satisfaction and frustration of basic psychological needs may have a different impact to adolescents' adjustment (Chen et al., 2015; Cordeiro, Paixão, Lens, Lacante, & Luyckx, 2016; Inguglia et al., 2018; Vansteenkiste & Ryan, 2013). In this sense, future research needs to disentangle satisfaction from frustration of basic psychological needs in the analysis in order to provide more information about the processes underlying the relationships between psychological control and basic psychological needs. Third, although our study is grounded in SDT, we did not consider the need for competence that refers to the desire to feel effective and skillful in activities (Baumeister & Leary, 1995) and it is considered as one of the three universal psychological needs that must be satisfied for children effective psychological functioning.

In the current study, we took into account only the needs for autonomy and relatedness like previous research focusing on the associations between these needs and parental psychological control (Fousiani et al., 2016; Inguglia et al., 2018). However, further studies should focus also on need for competence to examine the effects of discrepancies on this variable. Moreover, our data showed a substantial variance between the dyads with regard to the agreement rates between parents and children, with some dyads showing higher levels of disagreement than others. Future research should contribute to explain what factors and processes may explain this variance and the potential moderator role played by discrepancies on the relation between parental self-reported psychological control and adolescents' autonomy and relatedness satisfaction.

Another interesting topic to be addressed in further studies is related to the negative association that we found between mothers' self-reports and mothers' education level. Even though this association was statistically modest, it could represent an interesting suggestion for future directions for this line of work in order to understand how the perception of psychologically controlling behaviors may vary according to the educational background of the mothers. Furthermore, upcoming studies should assess more in detail how each parent may differentially contribute to children's satisfaction of needs for autonomy and relatedness. Finally, further studies are also needed to try to find empirical support for our explanations about the adolescents' differential perceptions of mothers and fathers' psychologically controlling behaviors. For instance, studies are needed to test if children's expectations about their parent behaviors with regard to their role in the family (Hosley & Montemayor, 1997; McKinney & Renk, 2008) are associated with

different perceptions of fathers' and mothers' behaviors.

Despite the limitations highlighted above, our study contributes meaningfully to the literature on the relationships between psychological control and basic psychological needs because it analyzes the associations between parent-adolescent discrepancies and the satisfaction of adolescents' need for autonomy and relatedness. To our knowledge it is the first study that investigates this topic by considering self-report of parental psychological control from both mothers and fathers as well as reports of parental psychological control as perceived by the adolescents. Moreover, the current study differentiated between mother-adolescent and father-adolescent dyads differently from previous studies that mainly focused on mother and adolescent reports or did not distinguish between mother and fathers among parent-child dyads. Doing so, the current study was able to disentangle the different associations between mother-adolescent and father-adolescent discrepancies in perceived psychological control with adolescents' satisfaction of needs for relatedness and autonomy.

The findings of our study provide some empirical support to the predictions of SDT that parental psychological control is negatively related to adolescents' satisfaction of needs for autonomy and relatedness, taking also into account parents' self-reports of psychological control and not only adolescents' reports as many studies do. Furthermore, our results are partially in line with Family Systems Theory (Restifo & Bögels, 2009), stating that it is important to distinguish between the mother-adolescent and father-adolescent relationship, as these relationships represent distinct subsystems within the family. In this light, the findings may have practical implication for psychological counselling programs because they suggest that practitioners have to take into account the separate contribution of each parent to adolescents' satisfaction of basic psychological needs. Moreover, such programs in the attempt to lessen parents' pressure to adolescents' lives should deem the possible differences in the perceptions of psychological control between parents and adolescents, trying to mediate between them and reach an optimal balance within the family.

### Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

### CRediT authorship contribution statement

**Inguglia Sonia:** Conceptualization and design of the study, Writing, Analysis and interpretation of data, Methodology, Review and Editing;

**Francesca Liga:** Conceptualization, Methodology, Acquisition of data, Writing, Review and Editing;

**Alida Lo Coco:** Interpretation of data, Writing, Review and Editing;

**Inguglia Cristiano:** Conceptualization and design of the study, Writing, Methodology, Supervision, Review and Editing.

### Disclosure of interest

The authors report no conflicts of interest.

## Appendix A. Goodness of fit indices of the Confirmatory Factor Analysis Models of psychological control for each Informant separately

Models	$\chi^2$	df	p	CFI	RMSEA
Mother self-report psychological control (MM)	22.48	14	0.07	0.959	0.057
Father self-report psychological control (FF)	23.91	14	0.05	0.976	0.061
Adolescent report of Mother psychological control (AM)	26.13	14	0.02	0.964	0.068
Adolescent report of Father psychological control (AF)	36.28	14	<0.001	0.949	0.092

## Appendix B. Goodness of fit indices of the Confirmatory Factor Analysis Models with Configural (M0), Metric (M1), Scalar (M2), and Full Uniqueness (M3) Measurement Invariance across Informants

Model	Model fit indices					Model comparisons				
	SB $\chi^2$	df	ScF	Robust CFI	RMSEA	$\Delta\chi^2$	df	$\Delta$ CFI	$\Delta$ RMSEA	
M0 Configural	43.27	30	1.04	0.971	0.048	–	–	–	–	
M1 Metric	56.30	39	1.09	0.962	0.048	M1 vs M0	13.02	9	–0.013	0
M2Scalar	108.41	48	1.08	0.866	0.081	M2 vs M1a	53.74***	9	–0.088	0.033
<b>M2a Partial Scalar</b>	67.20	45	1.08	0.951	0.051	M2a vs M1a	11.04	6	–0.003	<b>0.003</b>
M3 Full Unique	83.72	51	1.09	0.927	0.058	M3 vs M2a	16.03*	6	–0.029	0.007

Note. Letters in bold indicate the model of measurement invariance that was obtained. SB, Satorra-Bentler, ScF, Scaling correction Factor, CFI Comparative Fit Index, RMSEA, Root Mean Square Error of Approximation.

\* $p < .05$ . \*\*\* $p < .001$ .

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.appdev.2021.101333>.

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