Antecedents and Consequences of Parental Psychological Control and Autonomy Support: The Role of Psychological Basic Needs

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Abstract

Research suggest that psychologically controlling and autonomy supportive parenting can be described within the SDT's framework. Two studies were conducted to examine: (a) the role of parental need frustration as a predictor of parental psychological control, (b) the role of parental need satisfaction as a predictor of parental autonomy support and (c) the role of parents' psychological control and autonomy support in the intergenerational transmission of satisfaction and frustration of the psychological basic needs. Study-1 provided evidence, in a sample of 203 Italian coupled parents, that needs frustration and needs satisfaction represent distinct antecedents of psychological control and autonomy support. Study-2, showed that in 135 families, the intergenerational association between parents' and adolescents' need frustration was partial mediated by psychological control and autonomy support. Results clearly showed that parents who experienced high level of psychological needs frustration are more likely to use psychological control and in turn to promote a feeling of need frustration in their adolescents; differently, parents who experienced high levels of psychological needs satisfaction tend to exert more autonomy support in their relationship with their children and in turn adolescents tend to perceive higher level of needs satisfaction. These findings are discussed in light of SDT and underline the importance of needs in the parenting context and have implications for interventions.

Key words: need frustration; need satisfaction; parental autonomy support; parental psychological control; self-determination theory.

Introduction

Self-Determination Theory (SDT; Ryan, & Deci 2017) represents a broad framework for the study of human motivation, personality, and social development. Central to SDT is the articulation of three basic psychological needs: autonomy, competence, and relatedness. In SDT, these needs are considered universal nutriments that must be satisfied for effective functioning, well-being, growth, and integrity (Ryan, & Deci 2017). When exposed to controlling, critical, or rejecting social contexts, humans expiries a feeling of need frustration, while supportive environments provide an experience of need satisfaction (Ryan, & Deci 2017).

When autonomy is satisfied people act with a sense of volition and experience that their behaviour is freely chosen and coherent with their values. People with high level of satisfaction for autonomy, fully approve the actions in which they engage, and experience a sense of coherence between their behaviours and values (Vansteenkiste, Niemiec, & Soenens, 2010). When the need for autonomy is frustrated, people experience a sense of pressure and coercion. Regarding the need for relatedness, when satisfied, people feel connected to others who care for them; when frustrated, instead, people have experiences of social alienation and loneliness. Finally, when the need for competence is satisfied, people feel effective and skilful in the activities they undertake. When frustrated, people feel inferior and inadequate in their daily activities. In according with SDT the satisfaction of all these three basic psychological needs is highly correlated with well-being and behavioural adjustment and social context (e.g., parents) could have a relevant role to support or thwart these psychological basic needs (Ryan, & Deci 2017).

Soenens and Vansteenkiste (2010) suggested that parental psychological control is a need thwarting form of parenting dimension that parents use to make their child comply with their expectations and also to change the child's emotions, opinions, and thinking patterns (Barber, 1996). Psychological control is considered a destructive form of parental control rendering

adolescents vulnerable to maladjustment (Costa, Hausenblas, Oliva, Cuzzocrea, & Larcan, 2016; Frazer, & Fite, 2016; Ingoglia, Inguglia, Liga, & Coco, 2017; Soenens & Vansteenkiste, 2010).

The opposite pole of psychological control is autonomy support (Deci & Ryan, 2000). Autonomy-supportive parenting is one important dimension of a need-supportive parenting style. It characterizes parents who take their children's frame of reference by encouraging volitional behaviours, by supporting capacity to be self-initiating and by providing a relevant rationale when introducing rules. It has been shown that autonomy-supportive parenting is a strong predictor of well-being in offspring (Chirkov, Ryan, & Sheldon, 2010; Inguglia, Ingoglia, Liga, Lo Coco, & Lo Cricchio, 2015; Thøgersen-Ntoumani, Ntoumanis, & Nikitaras, 2010). Whereas psychologically controlling parental behaviours seem to represent need thwarting behaviours, autonomy-supportive behaviours seem to represent need supportive behaviours (Soenens & Vansteenkiste 2010; Vansteenkiste & Ryan 2013). Recent research in SDT (Bartholomew et al., 2011; Vansteenkiste & Ryan, 2013) has begun to report the relevance of measuring both need thwarting behaviours (as expressed for instance in psychological control) and need support behaviours (as expressed for instance in autonomy-support), taking into account the possibility for parents to be concurrently engaged in both supportive and thwarting parental behaviours.

Although researchers have found that parental psychological control as a feature of need-thwarting parenting style could frustrate all the three needs (Ahmad, Vansteenkiste, & Soenens, 2013; Costa, Soenens, Gugliandolo, Cuzzocrea, & Larcan, 2015; Liga et al., 2017), and parental autonomy support satisfy autonomy, competence and relatedness (Cordeiro, Paixão, & Lens, 2015; Inguglia, et al., 2015), research on psychological basic needs as antecedents of parental psychological control and autonomy support are relatively scarce (Soenens, & Vansteenkiste, 2010). According to SDT, Soenens and Vansteenkiste (2010) suggested that parents are likely to engage in controlling and pressuring parenting when they feel pressured themselves by not having their psychological needs for autonomy, competence, and relatedness satisfied (Grolnick, 2003). In SDT literature, these suggestions were confirmed by several studies examining the antecedent role

of basic needs as predictor of autonomy support and control in contexts such as coaching (Stebbings, Taylor, Spray, & Ntoumanis, 2012) and teaching (Taylor, Ntoumanis, & Standage, 2008). Results remarked that psychological basic needs satisfaction and frustration could promote respectively adaptive and maladaptive interpersonal style. Van der Kaap-Deeder et al. (2015) also showed that need satisfaction of mothers was related to child perception of maternal autonomy support, and that child perception of maternal autonomy support could represent a mediation variable in the intergenerational relation between mothers and children's psychological need satisfaction. Unfortunately, in this study, maternal autonomy support was measured only by children perceptions and fathers were not involved.

Although researchers have made relevant advances in describing the association between parental psychological control and parental autonomy support and child and adolescent adjustment (Soenens, & Vansteenkiste, 2010), little attention has been placed on understanding why parents engage in psychologically controlling and autonomy supportive behaviours. Focusing on the sport context, Matosic, Ntoumanis, and Quested (2016) reviewed previous studies identifying three broad categories (contextual factors, perceptions of others' behaviors and motivation, and personal factors) of several potential antecedents of coaches' interpersonal style suggesting that psychologically basic needs could be relevant personal factors antecedents of autonomy support and control. Parents who experienced high levels of need satisfaction in their lives may be more likely to express high levels of autonomy support because they can initiate interactions with their children (autonomy), to be skilful in disclosing information to others (competence), and to offer emotional support (relatedness; Costa, Ntoumanis, et al., 2015). Furthermore, when parents' needs are satisfied they may be more likely to engage in adaptive behaviours (e.g., autonomy support) which focus on maximising positive psychological experiences and outcomes. Parents who experienced high levels of autonomy satisfaction could feel to be the origin of their parenting behaviour and they could use autonomy support to promote the volitional functioning of their children. Moreover, the satisfaction of their need for relatedness garners greater attention of parents to the needs of their

children: parents may express high levels of autonomy support to provide help and encouragement their children.

When parents' needs were frustrated, their involvement in children's life may be expressed by controlling behaviours pouring on children all their frustration. Psychologically controlling behaviour may actually be the natural consequence of parents' feelings of pressure and tension. By controlling their children, parents may facilitate child development of negative outcomes (e.g. internalizing and externalizing behaviours) (Grolnick, Gurland, DeCourcey, & Jacob, 2002). In fact, parents who experienced high levels of autonomy frustration could perceive less personal choice and initiative when they interact with their children, and they may use parental psychological control as a rapid response to pressure (Weinstein, Przybylski, & Ryan, 2012). Furthermore, parents who experienced high levels of competence frustration could perceive themselves inadequate in their role of parents and could exert a psychologically controlling parenting to obtain compliance by their child and to impose their authority (Matosic, Ntoumanis, & Quested, 2016) or to improve their success in different tasks, even if such behaviour might be counterproductive. Parents who experienced high levels of relatedness frustration instead could be characterised by fears about abandonment and separation and they could exert a psychologically controlling parenting to make their children dependent of their love (Soenens, Vansteenkiste, Duriez, & Goossens, 2006).

In this perspective, the purpose of this study was to identify psychological basic needs as potential antecedents of psychologically controlling and autonomy supportive parenting behaviour. Furthermore, given that paternal psychological control and paternal autonomy support would be related to the satisfaction and frustration of psychological need satisfaction in the adolescents, this study would also examined the intervening role of parenting practices (psychological control and autonomy support) in the intergenerational similarity in parents' and adolescents' satisfaction and frustration of psychological basic needs. Understanding possible antecedents of parenting is a relevant topic in allowing defining and planning preventive training effective to improve quality of

life of parents and children well-being and to reduce inadequate parenting strategies (Raby, et al., 2015; Sanders, Kirby, Tellegen, & Day, 2014).

Specifically, this study aimed to take previous research a step further and simultaneously test the predictive role of psychological basic needs satisfaction and frustration of both parents (mothers and fathers) in the use of both maternal and paternal psychological control and autonomy support, using the actor partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006). Parenting could be affected not only by parents' psychological needs (actor effect), but it could be influenced also by the psychological needs of their partners (partner effect). Specifically evaluation of the APIM using SEM consist in the incorporation of mother and father variables in the same model with observed variables: (a) estimating the effects of paternal and maternal psychological basic needs (predictor variables) respectively to psychological control and autonomy support (outcome variables) of the same member (actor effects); (b) estimating the effects of paternal and maternal psychological basic needs (predictor variables) to psychological control and autonomy support (outcome variables) of the other member (partner effects); (c) correlating each other the psychological basic needs of mother and father; (d) correlating each other psychological control and autonomy support of mother and father. Majority of studies on parenting have typically conducted separate analyses for mother and fathers, or create a combined score for both parents or used only one parent (Bleys et al., 2016), this study instead would extend previous results integrating the importance of considering the interdependence that exists between dyad members (fathers and mothers). Therefore, this study could contribute to the understanding of personal and partner factors that may interact with the development of parenting practices and may have consequences on child's adjustment.

Another way in which this study aimed to contribute to extant research was by examining the relative contribution of psychological need satisfaction and need frustration in the prediction of both parental psychological control and parental autonomy support. In line with this reasoning, need frustration would be more strongly (and perhaps even uniquely) predictive of parental psychological

control, as it involves negative parental behaviour, while need satisfaction would be more strongly (and perhaps even uniquely) predictive of parental autonomy-support, which reflects a positive form of parental behaviour.

Finally, in line with previous reasoning (e.g., Ahmad et al., 2013; Costa, Cuzzocrea, Gugliandolo, & Larcan, 2016), parental psychological control, as it involves an active thwarting of children's needs, would be more strongly predictive of children's need frustration, while parental autonomy-support, which reflects a form of need support would be more predictive of need satisfaction. In sum, parents who feel their needs are frustrated would tend to use more psychological control that could create more frustration to the psychological basic needs of children. Instead, the feeling of satisfaction of the basic needs of parents could increase the use of parental autonomy support that could improve the satisfaction of the psychological basic needs of children. To date, there is a lack of studies that investigated the intergenerational transmission of psychological basic needs from both parents and offsprings, and the mediation role of parenting (measured by both parents' and adolescents' reports) in this relation. For these reasons, more research could be useful and this study could provide a contribution.

The Present Studies

The general purpose of this research programme was to examine, in a SDT framework, the role of psychological basic needs as antecedents of parental psychological control and autonomy support and to examine the mediation role of parental autonomy support and parental psychological control in the intergenerational similarity in parents' and adolescents' psychological basic needs (Fig. 1). The main aim of Study-1 was to examine whether need satisfaction and need frustration of both parents predict both same-parent and other-parent parental autonomy support and psychological control. In Study-2, we extended the results of Study-1 by also examining the influence of parental psychological control and parental autonomy support on the psychological basic needs frustration and psychological basic needs satisfaction of adolescents. We also expected an association between psychological basic needs satisfaction and psychological basic needs

frustration of parents with those of adolescents. Furthermore, this association was also expected to be mediated by parental psychological control and parental autonomy support. Moreover, in Study-2, both parents' and adolescents' reports of psychological control and autonomy support were included in the model.

Therefore, the present study was aimed to investigate (a) the role of parental need frustration as a predictor of parental psychological control, (b) the role of parental need satisfaction as a predictor of parental autonomy support and (c) the role of parents' psychological control and autonomy support in the intergenerational transmission of satisfaction and frustration of the psychological basic needs.

STUDY-1

Accordingly, the purpose of Study-1 was to propose and test an integrative SDT model that examines the role of psychological basic needs as antecedents of parental behaviours (e.g., perceived parental psychological control and parental autonomy support). Specifically, the goal of this research was to test the SDT-based model in which parental perception of psychological basic needs frustration was hypothesised to predict parental psychological control. Contrastingly, in the same model, parental perception of psychological basic needs satisfaction was hypothesised to predict parental autonomy support. Furthermore, we expect to found primarily same-parents relations between psychological needs and parenting. In line with SDT, we also hypothesised that perceptions of need satisfaction would primarily predict parental autonomy support and that perception of need frustration would primarily predict parental psychological control.

Method

Participants

The sample consisted of 203 Italian married couple of parents (Male = 203; Female = 203), with fathers aged between 37 and 57 (M = 48.71; SD = 5.10) and mothers aged between 35 and 54 (M = 45.33; SD = 4.86), that were married and had children (115 males and 88 females) aged between 10 and 20 (M = 15.14; SD = 2.97). 250 participants reported that they had a higher

secondary education diploma, 120 had a lower secondary education diploma, 5 had a primary education level, 71 had a degree and 5 participants did not report this information. Parents varied in number of children: 55% of the parents had two children, 18% had three children, 20% had only one child, 5% had four children and 2% of the parents had more than four children.

Procedure

All participants voluntarily decided to take part in the research. Our convenience sample was recruited by soliciting volunteers through friends and appeals to community groups such as clubs, associations, and organisations in Sicily and Calabria (Italy). The researchers asked several community groups to contact their affiliates to present the research project and directly contact some participants through friends and acquaintances. Parents were free to provide their willingness to complete the questionnaires. After describing the study's purpose, parents signed the informed consent to participate in the study. Privacy and the anonymity of their answers were guaranteed. Mothers and fathers completed questionnaires separately in different rooms under the supervision of an experimenter. The questionnaires took about 20 minutes to complete.

Measures

Psychological Control. Psychological control was measured with the Italian translation of the 8-item Psychological Control Scale (PCS; Barber, 1996; 'I try to change how my son/daughter feels or thinks about things'). Barber (1996) provided evidence for the validity of the factor structure of this scale. Subjects responded on a 3-point Likert-type scale ranging from 1 '*not like me*' to 3 '*a lot like me*'. Items were rated separately for mothers and fathers. Psychometrics characteristics of the PCS has been demonstrated in previous cross-cultural research (Barber et al., 2005), and in the present study the internal consistency was good (see Table 1).

Parental Autonomy Support. Parental autonomy support was measured using the autonomy support subscale of the Italian translation of the Perceptions of Parent Scale (POPS; Robbins, 1994; e.g., 'I listen to my son's/daughter's opinion or perspective when he/she has got a problem'). In the present study, the internal consistency was sufficient (see Table 1). Because in this study we aimed

to compare the associations of autonomy-supportive and psychologically controlling parenting with parental psychological basic needs, we used only the items tapping directly into autonomy-support and we excluded the three reverse-scored items that measured controlling parenting. Responses to the remaining six items were made on a 7-point Likert-type scale, ranging from 1 (*not at all true*) to 7 (*very true*).

Basic Psychological Needs. We administered the Italian translation of the Psychological need thwarting scale and Psychological need satisfaction scale used by Costa, Ntoumanis et al. (2015). In the present study the internal consistency was sufficient (Table 1). Psychological need thwarting scale contains 12 items that captures the frustration of the psychological needs in one's life in general (e.g., 'I feel pushed to behave in certain ways'). Psychological need satisfaction contains 12 items that captures the satisfaction of the psychological needs in one's life in general ('I feel like I am free to decide for myself how to live my life'). Participants responded to both using a 7-point Likert scale ranging from 1 (not true at all) to 7 (very true).

Results

Actor Partner Interdependence Model

The descriptive statistics, Cronbach's alpha values, and correlations for the study variables are presented in Table 1. To examine whether psychological basic need satisfaction and need frustration could predict autonomy support and psychological control, we used Structural Equation Modeling (SEM) with the actor partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006). The APIM takes into account the nonindependent nature of dyadic data and uncovers interpersonal as well as intrapersonal associations between variables in distinguishable dyads. The model was defined with paternal need satisfaction and need frustration that predict both paternal and maternal psychological control and autonomy support. In the same way maternal need satisfaction and need frustration predict both maternal and paternal psychological control and

autonomy support. Maternal and paternal need satisfaction and frustration was correlated each other and similarly maternal and paternal psychological control and autonomy support was correlated each other. In this model, adolescents' gender was included as a control variable adding a path from adolescents' gender to all the variables. In both the studies analysis of the covariance matrices was conducted and solutions were generated on the basis of maximum-likelihood estimation. The SEM results were evaluated using chi-square, CFI, and RMSEA, that are commonly used fit indexes; a non-significant Chi-square represent an adequate fit, CFI which should be equal to or higher than 0.95 for a good fit, and RMSEA which should be equal or lower than 0.06 for a good fit (Hu, & Bentler, 1999).

Estimation of the saturated model, and therefore no fit indices were reported, showed significant paths. In according with common procedure to test the saturated model (Kline, 2011) all nonsignificant paths were removed and several indices indicated that the data fit the final model (Fig. 2), $\chi 2$ (18) = 19.93, $p > .05$, CFI = .97, RMSEA = .03 (90% CI = .00–.07). Furthermore paternal need satisfaction was positively related with paternal autonomy support ($\beta = .29$; $p < .05$). Moreover, similarity to the saturated model, maternal need frustration was positively related to maternal psychological control ($\beta = .20$; $p < .05$), maternal need satisfaction was positively related with maternal autonomy support ($\beta = .24$; $p < .05$), and paternal need frustration was positively related with paternal psychological control ($\beta = .26$; $p < .05$).

STUDY-2

The results of Study-1 provided preliminary evidence that psychological basic needs frustration and psychological basic needs satisfaction represent distinct antecedents of parental psychological control and parental autonomy support. The first question addressed in Study-2 was whether this relation could be generalised to adolescents' perception of their parents' rearing style. In Study-2, in fact, both parents' and children's reports of psychological control were used as separate indicators of the parental psychological control and autonomy support.

Second, we deepened the hypothesised relationships of need satisfaction and need frustration of parents with parental autonomy support and psychological control, also examining the influence of parental autonomy support and parental psychological control on the psychological basic needs satisfaction and psychological basic needs frustration of adolescents. We also expected associations between need satisfaction and need frustration of parents with the psychological basic needs satisfaction and psychological basic needs frustration of adolescents. Furthermore, this association was also expected to be mediated by parental psychological control and parental autonomy support. In examining these hypothesised associations, we relied on both adolescents' and parents' reports of psychological control and autonomy support, and we used all the reports as separate variables.

Method

Participants

A total of 135 families took part in the study. Data were collected from both biological parents but from only one adolescent per family (67 males and 68 females). Age of offspring varied between 12 and 16 years (Male: M = 14.96, SD = .94). Age of fathers ranged from 33 to 68 years (M = 48.46, SD = 5.83), and age of mothers ranged from 32 to 58 years (M = 45.23, SD = 5.08). All participants in this study lived in Italy, were of Italian nationality, and Italian-speaking. All parents were married and families varied in numbers of children: 61% of the families had two children, 19% had only one child, 14% had three children, and 6% had more than three children. In terms of education level, the majority of parents (55%) reported that they had a higher secondary education diploma, 24% had a degree, 19% had a lower secondary education diploma, 3% had a primary education level. In terms of order of birth of offspring, 64 offspring were first-born, 54 were second-born, 13 were third-born, 2 were fourth-born, while 2 did not respond.

Procedure

Participants took part in the research voluntarily. Our convenience sample was recruited by soliciting volunteers through friends and appeals to community groups, such as churches, clubs, associations and local organisations in Messina (Italy). Only families with children between 12 and 16 years were selected, if there was more than one adolescent in the family that fell within the age range and that provided willingness to complete the questionnaires, the youngest was selected. This procedure was selected because younger adolescents usually have more problems in the question-answer process (Diersch, & Walther, 2016) and in line with common procedure (Crespo, Ayala, Vercammen-Grandjean, Slymen, & Elder, 2011; Gugliandolo, Costa, Cuzzocrea, & Larcan, 2015; Reedtz, Handega, & Mørch, 2010) in the few case of two children eligible in the same family the selection of the youngest one could help to reduce the risk to have less valid respondents of young age. Parents signed the informed consent forms on behalf of their children. Mothers, fathers, and adolescents completed questionnaires separately in different rooms under the supervision of an experimenter. Privacy and the anonymity of their answers were guaranteed. The questionnaires took about 20 minutes to complete.

Measures

Psychological Control. We assessed psychological control using the Italian translation of the eight-item Psychological Control Scale—Youth Self-Report (Barber, 1996) that was described in study-1. Adolescents rated the items for both mother and father. Parents rated the items with respect to their own parenting behaviour. Cronbach's alphas scores were adequate (table 2).

Parental Autonomy Support. Parental autonomy support was measured using the autonomy support subscale of the Italian translation of the POPS (Robbins, 1994) that was described in study-1. Adolescents rated the items for both mother and father. Parents rated the items with respect to their own parenting behaviour. In the present study, Cronbach’s alphas scores were adequate (table 2).

Basic Psychological Need Satisfaction and Frustration. We administered the Italian version of the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS; Chen et al., 2015; Costa et al., 2017) both to parents and to adolescents. In the present study the internal consistency was good (table 2). BPNSFS contains 24 items, that captures, with a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree), the frustration and satisfaction of the psychological basic needs in one's life in general (e.g., "I feel a sense of choice and freedom in the things I undertake"). In this study have shown good reliability level (table 2).

Results

Actor Partner Interdependence Model

The descriptive statistics, Cronbach's alpha values, and correlations for the study variables are presented in Table 2. To examine whether parenting dimensions (parental autonomy support and parental psychological control) could mediate the associations between parental and adolescents' need satisfaction and need frustration, we used Structural Equation Modeling (SEM) with the actor partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006). Additionally, aligned with the recommendations outlined by Preacher and Hayes (2008) and Wu and Jia, (2013), confidence intervals of the indirect effects with 5000 bootstrap replication samples based on the original sample were used (Shrout & Bolger, 2002).

The saturated model was defined with the paternal need satisfaction and need frustration that predict paternal, maternal and adolescents report of paternal and maternal psychological control and autonomy support. In the same way maternal need satisfaction and need frustration predict paternal, maternal and adolescents report of paternal and maternal psychological control and autonomy support. Maternal and paternal need satisfaction and frustration were correlated each other and similarly paternal, maternal and adolescents report of paternal and maternal psychological control and autonomy support were correlated each other. Furthermore, adolescents' need satisfaction and

need frustration were predicted by paternal and maternal need satisfaction and need frustration, and by paternal, maternal and adolescents report of paternal and maternal psychological control and autonomy support. Adolescents' need satisfaction and need frustration were correlated each other. In this model, adolescents' gender was included as a control variable adding a path from adolescents' gender to all the variables.

Estimation of the saturated model, and therefore no fit indices were reported, showed significant paths. In according with common procedure to test the saturated model a trimming process was conducted (e.g., Kline, 2011) all nonsignificant paths were removed, and several indices indicated that the data fit the final model poorly, $\chi 2$ (63) = 122.95, $p < .05$, CFI = .90, RMSEA = .08 (90% CI = .06 – .11). For this reason, modification indices were used to improve the model, suggesting adding several paths. The new model reported good fit indices, suggesting that the data fit well the final model (Fig. 3), $\chi 2$ (60) = 78.03, $p > .05$, CFI = .97, RMSEA = .05 (90% CI = .00–.07).

The final model revealed that maternal need frustration was related positively to maternal report of psychological control ($\beta = .40$, $p < .05$), adolescents report of maternal psychological control ($\beta = .38$, $p < .05$), adolescents report of paternal psychological control ($\beta = .25$, $p < .05$). Paternal need frustration was instead related to paternal report of psychological control ($\beta = .34$, $p < .05$). Paternal need satisfaction was positively related with paternal report of autonomy support ($\beta = .62$; $p < .05$), with adolescent report of paternal autonomy support ($\beta = .18$; $p < .05$), and negatively related with adolescents report of paternal psychological control ($\beta = -.22$, $p < .05$). Maternal need satisfaction was positively related with maternal report of autonomy support ($\beta = .54$; $p < .05$), with adolescents report of maternal autonomy support ($\beta = .37$; $p < .05$), and with adolescents report of paternal autonomy support ($\beta = .29$; $p < .05$). Furthermore there were significant paths, also, from maternal need satisfaction ($\beta = .41$; $p < .05$), paternal need satisfaction ($\beta = .19$; $p < .05$), and adolescents report of maternal autonomy support ($\beta = .25$; $p < .05$) to adolescent need satisfaction.

Finally, there was a significant negative path from maternal need satisfaction (β = -.36; $p < .05$), and a significant positive path from adolescents report of maternal psychological control (β = .35; $p < .05$) to adolescent need frustration.

Examination of the direct and indirect paths from parental psychological needs (paternal need satisfaction, paternal need frustration, maternal need satisfaction, and maternal need frustration) to adolescents psychological needs (adolescent need satisfaction and adolescents need frustration) whilst controlling for the parenting dimensions (paternal, maternal and adolescents report of paternal and maternal psychological control and autonomy support) were examined (Table 3). A statistically significant indirect association between maternal need frustration and adolescent need frustration through adolescents report of maternal psychological control was showed (β = .13, $p < .05$). Furthermore a significant indirect association through adolescents report of maternal autonomy support was showed between maternal need satisfaction and adolescent need satisfaction (β = .09, $p < .05$).

Discussion

Two studies were used to test parental psychological basic needs as antecedents of paternal psychological control and autonomy support. Psychological basic needs were associated with psychological control and autonomy support in the anticipated directions. Specifically, parental perception of psychological need frustration predicted parental psychological control, while parental perception of psychological need satisfaction predicted parental autonomy support. Furthermore, the intergenerational association between parental and adolescent psychological basic needs was also partial mediated by parental psychological control and autonomy support. Finally, the use of both adolescent and parent reports increased the validity of our assessment and the generalizability across different sources. These findings are discussed in more detail below.

Regarding the first two aims of the study – examining the role of parental need frustration as a predictor of parental psychological control, and the role of parental need satisfaction as a predictor of parental autonomy support - results of the first study clearly showed that parents who felt

satisfaction of their needs were likely to use autonomy supportive practices with their children. Inversely, perception of frustration of psychological basic needs provided a feeling of pressure and coercion in the activities and in life in general that related with parents' use of psychological controlling practices with their children. Results confirmed Soenens and Vansteenkiste's (2010) suggestion that parents are likely to engage in psychological control when they feel pressured themselves by not having their psychological needs for autonomy, competence, and relatedness satisfied. For example, parents who experienced basic psychological needs satisfaction tend to be more autonomous in making decisions and certain of their parental skills, which implies that they may be more likely to promote in their children the ability to choose and a relevant rationale of rules (Matosic et al., 2016). Furthermore, parents who perceived their own need of competence as satisfied could be more likely to create a warmth relation with their children and to pursue their interests. In contrast, parents who experience needs frustration may tend to be more unsecure and force to perform well with their children, so that these feelings could promote the use parental psychological control as a rapid response to the pressure. Furthermore, they may tend to create a coercive context providing negative feedback and intimidation to their children (Matosic et al., 2016). The current findings also provide important insight into the motivational mechanisms associated with the psychological experiences of individuals in parents-children relationship. Specifically, the present study improves our understanding about the importance of psychological basic needs not only as consequential factors of parental practices but also as antecedents of parental psychological control and parental autonomy support. Indeed, previous studies have highlighted the possible role of psychological needs as antecedents of autonomy support and psychological control in several contexts (Stebbings et al., 2012; Taylor et al., 2008), but studies concerning parenting are still limited (Van der Kaap-Deeder et al., 2015).

Furthermore, to deepen our understanding of the construct of parenting in a SDT framework, our study examined the contribution of both need satisfaction and need frustration as distinct antecedents of parental autonomy support and psychological control. In line with the aims of

previous studies on SDT (Bartholomew et al., 2011a; Bartholomew et al., 2011b; Costa, Coppolino, Oliva, 2015; Vansteenkiste & Ryan, 2013), these findings supported the distinction of need frustration and need satisfaction. At the same time, context behaviours that are perceived as thwarting basic needs cannot be equated with behaviours that are perceived as being low on support for basic psychological needs (Bartholomew et al., 2011b; Costa, Soenens, et al., 2015; Vansteenkiste & Ryan, 2013). Consistent with this reasoning, we found that needs frustration was stronger associated with psychological control (need thwarting behaviours) while needs satisfaction was stronger associated with need support behaviours (autonomy support). Thus, we would suggest that need satisfaction and need frustration not only could predict different outcomes but also could have separate antecedents (Bartholomew et al., 2011a, 2011b; Vansteenkiste & Ryan, 2013).

Regarding the third aim of this research, that is to examine the role of parents' psychological control and autonomy support in the intergenerational transmission of satisfaction and frustration of the psychological basic needs, in the second study we found significant correlation between parents' and adolescents' psychological basic needs satisfaction, indicating that there was a significant level of intergenerational concordance in psychological basic needs responding. Moreover, results put in evidence that parental psychological control and parental autonomy support partial mediated the association between parental and adolescent psychological basic needs. Maternal need frustration, in fact, seems to be transmitted to adolescents through maternal psychological control, while maternal autonomy support seems to mediate the relationship of adolescent need satisfaction with maternal need satisfaction. Compared to the initial expectations, only adolescents' report of maternal autonomy support and maternal psychological control mediate the relationship between parental and adolescents psychological basic need. This may be due to the fact that adolescents could perceive mothers as being most involved in parenting rearing practices (Bornstein, 2015), while fathers could more increase adolescent need satisfaction through a direct effect of modelling. Another explanation could be also that father could use more other type of parental practices to support or thwart the adolescents' basic needs (Skinner, Johnson, & Snyder, 2005). Moreover our

results confirmed previous studies (Hautmann, Eichelberger, Hanisch, Plück, Walter, & Döpfner, 2015; Rousseau, & Scharf, 2017) indicating that the maternal parenting may be generally more strongly associated with offspring adjustment than the parenting of fathers. On the other hand, the direct association between paternal need satisfaction and adolescents need satisfaction confirmed that fathers have a relevant role in the adolescents' development (Lamb, 2010).

Findings of this study also extended van der Kaap-Deeder et al. (2015) results suggesting that parents pass down their frustration for psychological needs to their offspring through their rearing style. This finding is in line also with the literature on intergenerational transmission, in which it is generally assumed that parents' rearing style serves as a partial mediator through which parental characteristics are transmitted to their offspring (McAdams, et al., 2014).

Finally, although our findings have shown that parental psychological basic needs predicted same-parent, but not other-parent, psychological control and autonomy support, study-2 has also shown that adolescents' report of paternal psychological control was negatively predicted by paternal need satisfaction, and positively predicted by maternal need frustration, while adolescents' report of paternal autonomy support was positively predicted by maternal need satisfaction and paternal need satisfaction. In line with research reporting that usually mother's role in the family affect fathering rather than the opposite (Puhlman & Pasley, 2013; Rousseau, & Scharf, 2017), this result could be due (from the point of view of adolescents) by a tendency of maternal need frustration and satisfaction to "carry over" to fathers' use of psychological control and autonomy support toward the adolescent. These differences between study-1 and study-2, also reveal that criterion prediction can be improved using multisource ratings, since these are often differentially correlated with outcome variables (Gugliandolo, Costa, Cuzzocrea, Larcan, & Petrides, 2015).

From an applied perspective, our data suggested that an important feature of effective parenting intervention programme has to be focused not only on parenting practices but also on parents' characteristics. Indeed, parents who perceived their needs for autonomy, competence, and relatedness as satisfied tend to exert more positive parenting (autonomy support) and in turn to be

more effective in promoting children's satisfaction of psychological basic needs. In the same way, parents who experienced psychological basic needs frustration tend to use more negative parenting (psychological control) that could similarly frustrate their children's needs above all during adolescence. In this perspective, it could be useful to integrate the concept of psychological basic needs into parenting interventions to improve the effectiveness of the training. Furthermore, the current study indicated that parental prevention should take into account the feeling of need satisfaction and need frustration of parents when addressing parenting. Parents of adolescents should be helped to identify their personal need frustration and to promote the satisfaction of their need of autonomy, competence and relatedness not only to reduce the risk of use of psychological control, but also to prevent the harmful effects on the psychological need of their adolescents. Parental preparation programs could also gain from the results of this study; alerting parents become aware of the satisfaction of their basic psychological needs because they could affect their parenting style but also promote satisfaction of the needs of their own children. In addition, from a practical point of view, parents should try to seek opportunities for their own life to promote autonomy-supportive style toward their children. In according with previous studies on psychological basic needs as antecedents in other contexts (Stebbings et al., 2012; Taylor et al., 2008), such implications can be generalized in other life domains, such as health-care, work and education.

The findings of this study should be viewed within the context of its limitations. First, although socialisation research typically assumes that parents' characteristics usually predict the use of parenting practices and that parenting exerts an influence on adolescent functioning and vulnerability to psychopathology, this direction of effects could not be adequately tested in our cross-sectional study. As such, our study provides a preliminary test of the hypothesised sequence of events. In fact, our work is limited by the cross-sectional nature of the data, which makes it impossible to disentangle the causal order of these variables, and illustrates the need for longitudinal research to replicate and extend these findings. Second, the relatively small sample size

does not allow the use of latent constructs and the investigation of the influence of several background variables. In future studies, it would be interesting to delve more deeply into the moderating influence of various family variables (e.g., presence of other children, birth order, and adolescents' gender) using multiple-groups SEM with larger sample sizes.

Finally, although the use of both adolescent and parent reports increases the validity of our assessment of psychological control and autonomy support, the possibility still exists that the strength of the association between parenting (psychological control and autonomy support) and psychological basic needs is overestimated. Family members may develop a common distorted perception of both the degree of psychological control and autonomy support within the family. Although studies that use observational assessments of controlling and supportive parenting are needed, in our view, it remains important to continue assessing family members' own perceptions and representations of the family climate, because these perceptions may most directly affect family members' functioning gathering information from a variety of sources in the assessment of behaviour, in fact, increases the reliability and validity of assessments, especially in children and adolescent samples (Shishido, & Latzman, 2017) and the use of APIM procedures integrate the differences in the meaning for different reporters (Galovan, Holmes, & Proulx, 2016).

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Tab.1: *Descriptive Statistics for Study-1*

	M	SD	Skew	Kurt	1	2	3	4	5	6	7	8
1. Psychological Control-Father	1.50	.31	.68	.33	α=.62							
2. Autonomy Support-Father	5.20	.91	-.48	-.30	-.19**	α=.63						
3. Psychological Control-Mother	1.45	.27	.91	1.21	.11	-.04	α=.60					
4. Autonomy Support-Mother	5.50	.92	-1.37	3.70	-.01	.26**	-.10	α=.70				
5. Need Frustration-Father	2.71	.95	.67	.77	.23**	.04	.02	.08	α=.81			
6. Need Satisfaction-Father	5.65	.80	-76	.64	.02	.27**	-.12	.07	-.23**	α=.86		
7. Need Frustration-Mother	2.91	.99	.12	-.53	.11	-.07	.20**	-.11	.17*	-.08	α=.83	
8. Need Satisfaction-Mother	5.53	.84	-.91	1.43	-.10	.18*	-.04	.25**	.01	.37**	-.29**	α=.85

Note: **p<0.01; *p<0.05; Skew=Skewness; Kur=Kurtosis.

Tab.2: *Descriptive Statistics for Study-2*

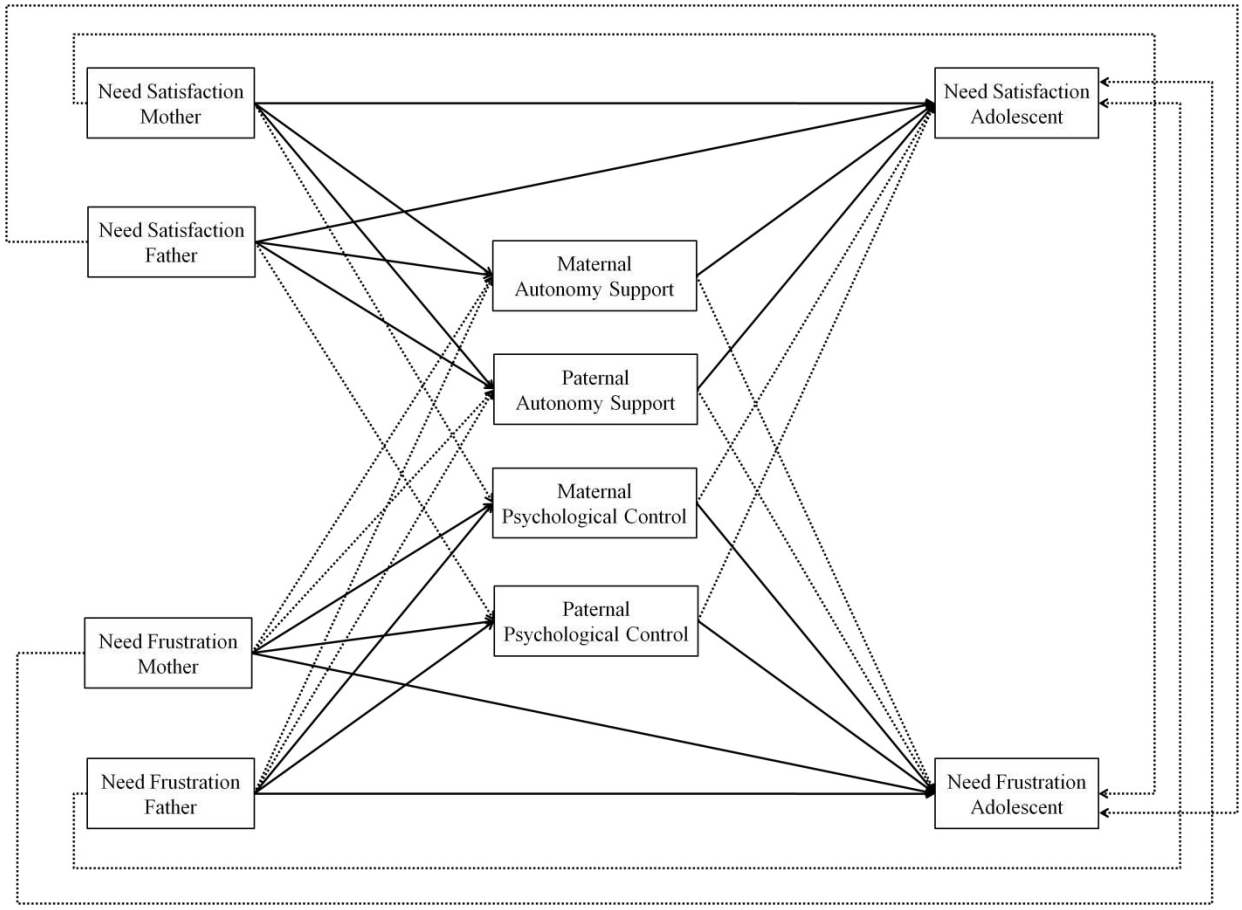
	M	SD	Skew	Kurt	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Need Frustration-Father/PR	2.08	.69	.54	-.33	α=.86													
2.Need Frustration-Mother/PR	2.06	.71	.87	.41	.49**	α=.84												
3.Need Satsfaction-Father/PR	4.09	.62	-.86	.65	-.57**	-.33**	α=.90											
4.Need Satisfaction-Mother/PR	4.12	.61	-.98	1.10	-.36**	-.55**	.46**	α=.89										
5.Psychological Control-Father/PR	1.53	.30	.59	-.10	.37**	.22**	-.33**	-.17	α=.60									
6.Psychological Control-Father/AR	1.52	.40	.95	.52	.33**	.32**	-.36**	-.32**	.38**	α=.73								
7.Psychological Control-Mother/PR	1.49	.29	.82	1.22	.34**	.40**	-.20*	-.32**	.36**	.29**	α=.62							
8.Psychological Control-Mother/AR	1.63	.42	.85	.39	.30**	.41**	-.22**	-.30**	.27**	.57**	.43**	α=.74						
9.Autonomy Support-Father/PR	5.18	1.11	-.80	.44	-.39**	-.24**	.63**	.40**	-.26**	-.30**	-.23**	-.13	α=.81					
10.Autonomy Support-Father/AR	4.96	1.34	-.99	.55	-.27**	-.21*	.31**	.37**	-.07	-.34**	-.08	-.27**	.39**	α=.87				
11.Autonomy Support-Mother/PR	5.43	.92	-.73	.31	-.24**	-.39**	.29**	.57**	-.16*	-.34**	-.29**	-.27**	.46**	.32**	α=.73			
12.Autonomy Support-Mother/AR	5.08	1.15	-.72	.50	-.22*	-.30**	.20*	.37**	-.01	-.29**	-.15	-.47**	.21*	.67**	.38**	α=.82		
13.Need Frustration-Adolescent/AR	1.92	.62	.73	-.03	.36**	.42**	-.35**	-.46**	.12	.38**	.26**	.46**	-.29**	-.35**	-.28**	-.35**	α=.83	
14.Need Satsfaction-Adolescent/AR	4.05	.66	-.68	-.03	-.40**	-.40**	.47**	.58**	-.11	-.30**	-.25**	-.30**	.43**	.46**	.37**	.46**	-.62**	α=.90

Note: **p<0.01; *p<0.05; Ske=Skewness; Kur=Kurtosis, PR=Parental-Report, AR=Adolescent-Report;

Tab.3: *Direct and Indirect Effects of Study-2*

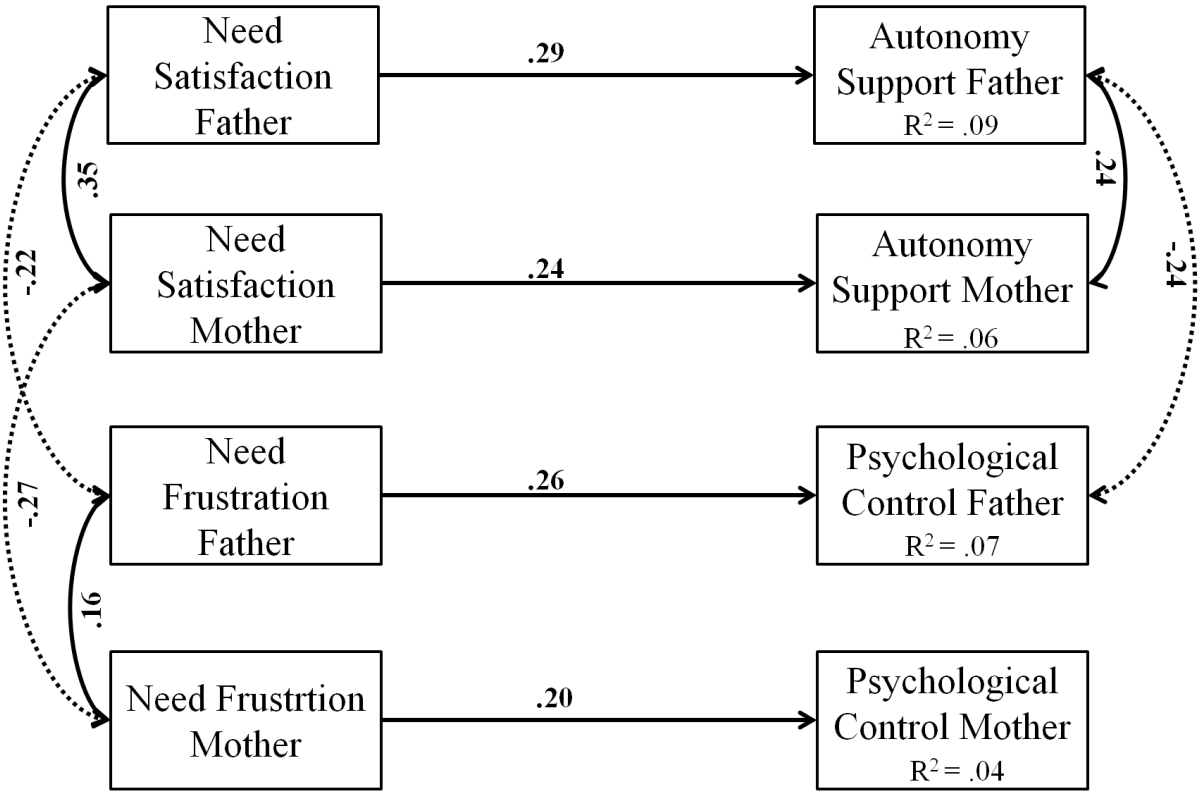
	β	Lower-bound(BC) CI-95%	Upper-bound(BC) CI-95%
Direct-Effect			
Needs Satisfaction-Mother → Needs Satisfaction-Adolescent	.41	.28	.54
Needs Satisfaction-Mother → Needs Frustration-Adolescent	-.36	-.52	-.20
Needs Satisfaction-Father → Needs Satisfaction-Adolescent	.19	.06	.32
Indirect-effect			
via Adolescents-report of Maternal Psychological Control			
Needs Frustration-Mother → Needs Frustration-Adolescent	.13	.05	.21
via Adolescents-report of Maternal Autonomy Support			
Needs Satisfaction-Mother → Needs Satisfaction-Adolescent	.09	.04	.15

Fig.1: - Hypothesized Model.



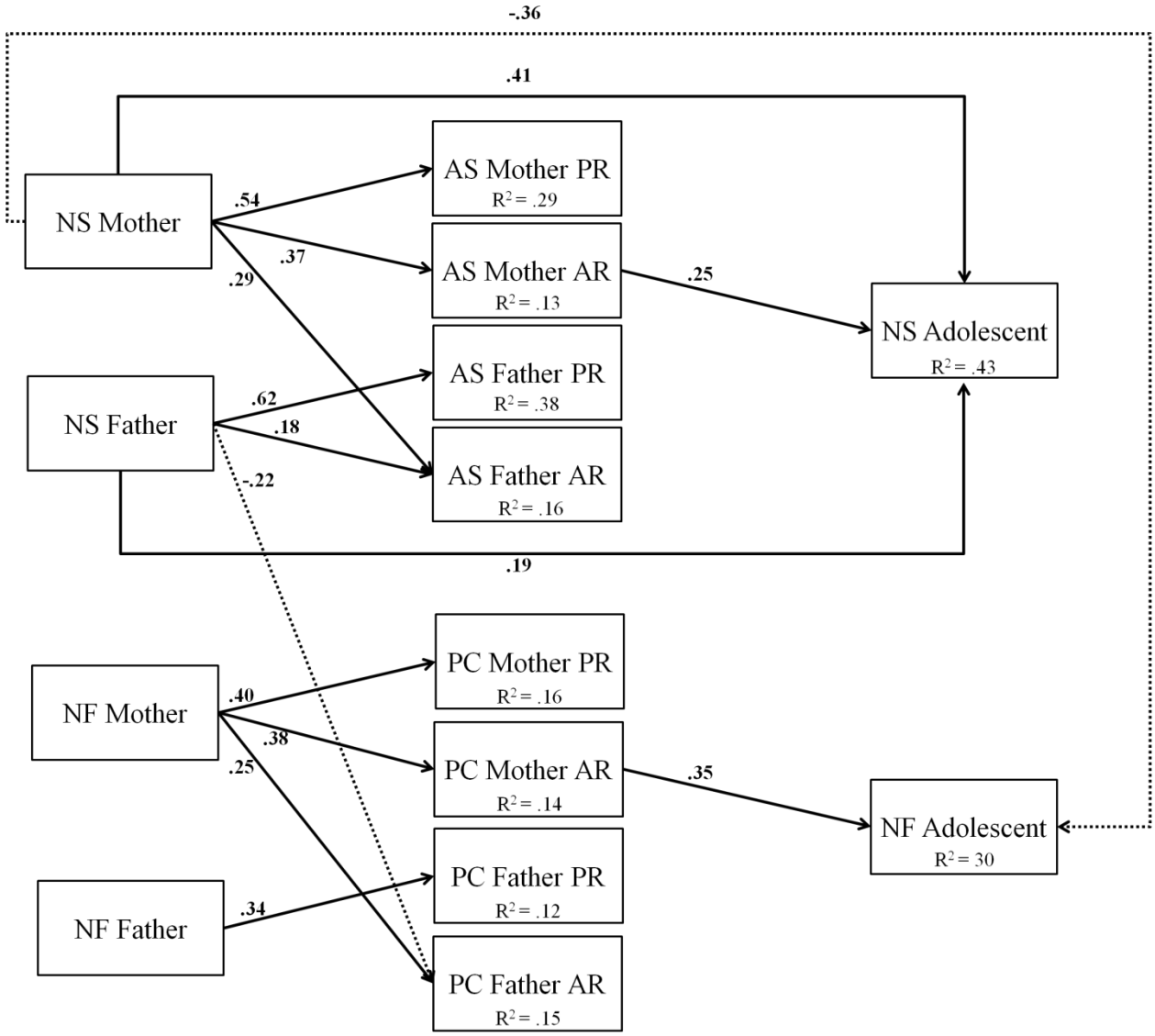
Note: Dotted-lines represent negative relations. Correlations between variables were not presented for presentation simplicity purposes.

Fig.2: Structural model of Study-1



Note: Coefficients shown are standardized path coefficients. Dotted-lines represent negative relations.

Fig.3: Structural model of Study-2



Note: PC=Psychological Control; AS=Autonomy Support; NF=Need Frustration; NS=Need Satisfaction; PR=Parental Report; AR=Adolescent Report; Standardized path coefficients; Correlations were not presented for presentation purposes and are: PC-Father-PR/PC-Mother-PR: .20; PC-Father-PR/PC-Father-AR: .17; PC-Mother-PR/PC-Father-AR: .15; PC-Mother-PR/PC-Mother-AR: .28; PC-Father-AR/PC-Mother-AR: .48; PC-Mother-AR/AS-Mother-AR: -.25; AS-Father-PR/AS-Mother-PR: .36; AS-Mother-PR/AS-Mother-AR: .16; AS-Father-AR/AS-Mother-AR: .59; NF-Father/NF-Mother: .49; NF-Father/NS-Father: -.57; NF-Father/NS-Mother: -.36; NF-Mother/NS-Father: -.33; NF-Mother/NS-Mother: -.55; NS-Father/NS-Mother: .46; NF-Adolescent/NS-Adolescent: -.46.