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Parental autonomy support and honesty: The mediating role of identification with the honesty value and perceived costs and benefits of honesty



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A B S T R A C T

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Previous research emphasizes the importance of honesty (or the absence of lying) in adolescent-parent communication as it is ultimately linked to adolescent non-delinquency (Engels, Finkenauer, & van Kooten, 2006). Empirical evidence also suggests that positive parental practices may prevent adolescents' lying (Darling, Cumsille, Caldwell, & Dowdy, 2006; Jensen, Arnett, Feldman, & Cauffman, 2004). This study tests an integrated model where perceived parental autonomy support and controlling parenting are expected to have opposite effects on adolescent's honesty in the parent-adolescent relationship via differential identification to the honesty value and perceived costs/benefits of being honest. Using structural equation modeling, results from 167 parent-adolescent dyads showed that autonomy support was associated with adolescents' identification to the honesty value and perceived low costs/high benefits of honesty. Opposite relations were observed with controlling parenting. Higher honesty value identification and low costs/high benefits of honesty in turn predicted adolescents' honesty. The importance of autonomy-supportive parenting in creating honest family settings is discussed.

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Adolescence entails various interpersonal transitions (Stattin & Magnusson, 1989) as adolescents develop new interests, meet new friends, and spend more time away from the family (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). These changes may affect parent-adolescent communication (Cumsille, Darling, & Martínez, 2010) by giving adolescents more occasions and potential reasons to hide information from their parents and even to lie to them (Smetana, 2008). Previous research shows that adolescents' lying to parents is associated with adolescents' maladaptive behavior (tolerance of deviance and reduced self-restraint; Jensen et al., 2004). Adolescent lying is also associated with less parental knowledge of adolescents' activities (Darling et al., 2006; Marshall, Tilton-Weaver, & Bosdet, 2005; Smetana, 2008), which is an important protective factor from adolescents' delinquency (Stattin & Kerr, 2000). In light of the importance of adolescents' honesty (or absence of lies), the present research draws on Self-determination Theory (SDT; Deci & Ryan, 1985, 2000) to address what parents can do to encourage honesty from their early adolescents.

Adolescents' honesty

Adolescents' honesty within parent-adolescent communication refers to adolescents' behaviors of telling the truth and refraining from lying to their parents. While telling the truth is defined as stating an information that corresponds to reality,

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lying refers to sending a message that is intentionally deceptive (Bok, 1999). Previous research has mostly looked at adolescents' lying as a strategy for not disclosing information. In this context, Jensen et al. (2004) have found that, across various topics, 30%–70% of high school students report lying to their parents.

Empirical evidence suggests that parents play a major role in influencing their adolescents' lying. For example, adolescents who believe that parental authority is legitimate are less likely to lie to their parents (Cumsille et al., 2010). Furthermore, the adolescents who lie the most have mothers who display less warmth and who are more actively monitoring them (Cumsille et al., 2010). Previous studies have also linked adolescents' lying to negative parental socialization practices (Cumsille et al., 2010; Darling et al., 2006) and have shown positive parenting practices to be a strong negative predictor of lying (Darling et al., 2006). These studies converge in suggesting that parental autonomy support and controlling parenting (Grolnick, Deci, & Ryan, 1997), as defined by SDT, should be important predictors of adolescents' honesty.

Parental autonomy support and controlling parenting

Autonomy support (AS) and controlling parenting have been identified as core parental dimensions (Ryan, Deci, Grolnick, & La Guardia, 2006), especially in the context of value internalization (Grolnick et al., 1997) and within SDT, a theory of human motivation. SDT proposes that to function optimally and experience well-being, human beings must experience self-determination (Ryan & Deci, 2000). In this framework, to be self-determined is to endorse one's actions at the highest level of reflection. SDT also states that to foster self-determination, parents must be autonomy supportive. AS consists of considering children as distinct individuals and showing respect for their unique needs and feelings (Grolnick & Ryan, 1989). When parents are autonomy supportive towards their children, they acknowledge their child's feelings, give a rationale for rules and demands, and provide choice and opportunities for initiative taking (Joussemet, Landry, & Koestner, 2008; Koestner, Ryan, Bernieri, & Holt, 1984; Mageau et al., 2014). These behaviors have been shown to support children's inner motivational resources and foster their self-determination (Joussemet et al., 2008). In contrast, controlling parenting may be defined as the use of pressuring, dominating, and intrusive tactics that force adolescents to think, feel, and be in specified ways regardless of their own needs and feelings (Grolnick & Pomerantz, 2009; Ryan, 2005), thus undermining their self-determination. In past research, controlling parenting has most often been operationalized using the concept of psychological control (Becker, 1964; Schaefer, 1965a, 1965b), which includes behaviors such as love withdrawal, guilt-inducements and threats (Barber, 1996). However, Grolnick and Pomerantz (2009) have recently argued that it is not so much the target of the parent's control (i.e., children's thoughts or behaviors) that makes parenting controlling but the fact that parenting practices are pressuring, intrusive, and dominating. The term "controlling parenting" is thus preferred over the term "psychological control" because it encompasses psychological control while allowing for the possibility that parents may also be controlling regarding children's behaviors (e.g., forcing a child to play the piano to impress guests, regardless of his/her feelings).¹ In the present research, controlling parenting is operationalized using three specific controlling behaviors: the use of threats, guilt inducing criticisms, and the promotion of performance goals.

Previous research on socialization practices similar to AS (e.g., authoritativeness, maternal support) shows a negative link between autonomy-supportive practices and adolescents' lying. For example, Darling et al. (2006) showed that authoritative parents had children that lied less while Cumsille et al. (2010) showed that maternal support was less associated with a pattern of lying. The present research aims at replicating the relation between socialization practices and lying with the constructs of AS and controlling parenting. Another purpose of this study is to investigate the mechanisms accounting for the links between parenting practices and honesty.

Mediating variables of the links between parenting practices and honesty

Although past research has looked at the effect of socialization practices on lying, little is known about what explains this relation. The present research proposes two potential mechanisms. First, past research suggests that adolescents with more autonomy-supportive and less controlling parents should identify with their parents' values to a greater extent (Grolnick et al., 1997). Second, autonomy-supportive parenting should also create a family setting in which there are less costs and more benefits for adolescents to be honest.

Identification with the honesty value

Values are desirable and trans-situational goals that act as guiding principles in people's lives (Schwartz, 1992). In the present study, we consider that adolescents identify with the honesty value when they define themselves using this value and when they are self-determined in their motivation to act in accordance with this same value.² We thus assess identification

¹ Please note that in Grolnick and Pomerantz's (2009) framework, parenting behaviors aimed at offering guidance for the child's behaviors (e.g., setting limits, enforcing rules) are labeled "structure" instead of "behavioral control". This nomenclature clarifies the fact that parents can provide structure (e.g., set limits) without being controlling (e.g., Koestner et al., 1984).

² Some people may define themselves as being honest without being self-determined when acting honestly. It is also possible that some people are self-determined when being honest without considering that honest behaviors define who they are. In both of these cases, people would identify with the honesty value to a lesser extent than people who would both define themselves using the honesty value and be self-determined in their motivation to be honest.

with the honesty value using two indicators: participants' ratings on the honesty trait (Ashton, Lee, & Son, 2000) and their motivation to be honest (Deci & Ryan, 2000).

Lee and Ashton (2004) measure the honesty trait using the HEXACO Personality Inventory, which consists of six dimensions of personality (Honesty-Humility, Emotionality, eXtraversion, Agreeableness, Conscientiousness, Openness to Experience). The Sincerity and Fairness subscales specifically assess honest behaviors and attitudes; these subscales are part of the Honesty-Humility dimension of the HEXACO. Sincerity is defined as the tendency to be genuine in interpersonal relations, whereas fairness is the tendency to avoid fraud and corruption, two behaviors that imply lying. Past research shows that the Honesty-Humility dimension, which includes the sincerity and fairness subscales but also the greed avoidance and modesty subscales, has been positively linked to moral behavior (Meurs, Perrewé, & Ferris, 2011).

Another indicator of the identification with the honesty value is the extent to which adolescents are self-determined in their motivation to act in accordance with the honesty value. According to SDT, the more people endorse the value that underlies a behavior, the more they will feel a sense of ownership toward the behavior and thus the more self-determined their motivation will be (Amiot, Blanchard, & Gaudreau, 2008). Motivations toward behaviors that are not enjoyable in themselves are typically assessed by evaluating three types of regulation that differ in the degree of self-determination they convey (Deci & Ryan, 2000; Grolnick et al., 1997): identified, introjected and external regulation. *Identified regulation* represents a self-determined form of motivation because the behavior reflects the person's values and beliefs. People that tell the truth because of identified reasons thus tend to regard honesty as an important personal value and tend to feel a sense of volition when being honest. In contrast, *introjected and external regulations* represent non-self-determined forms of motivation. When introjected, people do not endorse the importance of the behavior. Rather, they behave out of internalized pressures such as shame or guilt. When externally regulated, people have not internalized the reasons why they are rewarded (or punished) for their action. As such, they may not be expected to do the behavior when reward (or punishment) contingencies are absent from their social environment. Self-determined motivation toward specific behaviors predicts objective assessment of these behaviors (Deci & Ryan, 2000).

Research has shown that AS predicts more self-determined motivation (Kins, Beyers, Soenens, & Vansteenkiste, 2009; Koestner et al., 1984) and that parenting influences children's personality, through its interaction with children's temperament (Belsky & Barends, 2002). AS and controlling parenting are thus expected to predict identification with the honesty value as indicated by a more honest personality and a more self-determined motivation to be honest.

Given that value transmission occurs in hierarchical relationships (Maierhofer, Griffin, & Sheehan, 2000; Whitbeck & Gecas, 1988), parents' valuation of honest behaviors will be included to control for its possible influence on adolescents' identification with the honesty value. More precisely, the extent to which parents value their children's honesty should also predict the adolescents' identification with the honesty value.

Costs vs. benefits of honesty

The way adolescents anticipate sharing information with their parents should also influence their honesty. Darling et al. (2006) have shown that adolescents lie mostly because of fear of possible consequences (e.g., parents' anger, punishment) or potential negative emotional outcomes (e.g., parents' disappointment, adolescent's embarrassment). It thus seems that adolescents lie because sharing truthful information would be costly. Yet, adolescents may also choose not to lie because of specific benefits that telling the truth would bring. We thus postulate that different costs and benefits may affect adolescents' decision to tell the truth or to lie. Specifically, we assess costs (of telling the truth and of lying) and benefits (of telling the truth³) that pertain to the adolescent (i.e., feeling truthful with parents, feeling deceitful with parents, being punished for telling the truth) and to the adolescent–parent relationship (i.e., maintaining parent's confidence by telling the truth, losing parent's love by telling the truth). We postulate that parental autonomy support should create a social context where there are more benefits and less costs of being honest (and more costs of lying). Indeed, adolescents with autonomy-supportive parents can trust that their parents will take their feelings into account and act without interfering unnecessarily with their autonomy (e.g., harsh punishment). When adolescents are able to predict that consequences for disclosing a misdeed will be fair and respectful, they should be more prone to sharing truthful and sensitive information with their parent, leading to a family setting where the costs and benefits of honesty favor honesty. We propose that the costs and benefits adolescents perceive with regard to telling the truth or lying, which are based on previous experiences with their parents, should impact their honesty even when controlling for value identification. This would mean that even when adolescents identify with the value of honesty, they may still decide to lie if, for example, the costs of honesty are too high in a specific relationship.

The present research

The integrated model summarizing the proposed hypotheses appears in Fig. 1. In this model, perceived autonomy support should positively predict adolescent's honesty in the parent–adolescent relationship (i.e., telling the truth, absence of lies; Hypothesis 1(H1)) while controlling parenting should be negatively linked to this variable (H2). We also predict that these relations will be mediated by adolescent-level variables: identification with the honesty value and perceived costs/benefits of

³ Benefits of lying were not included because they mostly concerned avoiding costs of telling the truth (e.g., avoiding a punishment).

honesty. Specifically, it is expected that AS predicts more identification with the honesty value (H3) as well as more benefits and less costs of being honest (H4) while controlling parenting should negatively predict identification with the honesty value (H5) as well as less benefits and more costs of being honest (H6). In turn, identification with the honesty value (H7) and low costs/high benefits of honesty (H8) should predict more adolescent's honesty. Parental valuation of honesty should also predict more identification with the honesty value in adolescents (H9). This model is tested with early adolescents because it is at this age that the process of gradually differentiating oneself from one's parents begins to take place, leading to perturbations in parent-adolescent communication (e.g., less adolescent disclosure; Masche, 2010). This particular period was also chosen because, as adolescents spend more time away from the parents' supervision, new occasions for lying appear.

Method

Participants

Participants were 174 French-speaking adolescent/parent dyads from the province of Quebec (53 male/mother dyads, 23 male/father dyads, 82 female/mother dyads, and 16 female/father dyads). The mean age of the adolescents was 13.05 years ($SD = .74$ years), and the mean age of the parents was 44.27 years ($SD = 5.28$ years). Few families (4.3%) earned less than 25,000\$CAN or more than 200,000\$CAN (2.5%) per year while most families earned up to 50,000\$CAN (13.6%), 100,000\$CAN (43.8%), and 200,000\$CAN (35.8%). These percentages are skewed toward families with better SES when compared to the Montreal population, where only 15–20% of families have access to an income of more than 100,000\$CAN, and where nearly 40% of families earn less than 40,000\$CAN (Ville de Montréal, 2013). Most parents in the present sample (79%) had a college or university degree.

Procedure

Ethic approval to conduct this study was obtained at the home university and from participating school boards prior to collecting data. Parents were then asked to provide consent for their own participation as well as their child's. Adolescents who obtained their parent's consent were met and invited to participate in the study. They first provided informed consent for their own participation and then completed a questionnaire in their respective high school. Parents completed their questionnaire at home and returned them in a prepaid envelop. The adolescent questionnaire contained specific scales about their relationship with their parent (viz., scales measuring autonomy support and controlling parenting, costs/benefits of honesty, telling the truth and lying to parent). Adolescents were asked to respond to these scales while thinking about the parent that they saw most often. This procedure was chosen because the parent they saw the most should be the one they have the most chance to communicate with.

Measures

Details regarding each measure (constructs, sample items, response scales, and alphas) are presented in Table 1. Adolescents' questionnaire was composed of scales measuring the following constructs:

Autonomy support and controlling parenting

Autonomy support and controlling parenting were assessed using the Perceived Parental Autonomy Support Scale (P-PASS; Mageau et al., 2014). The dimensions of autonomy support are providing a rationale, providing choice, and

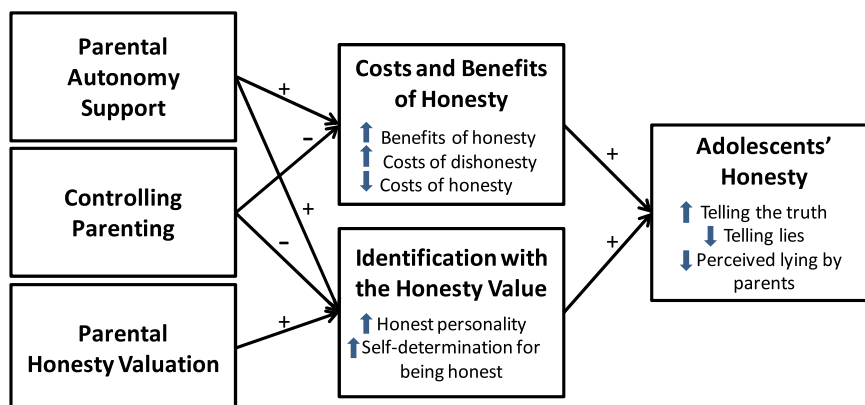


Fig. 1. Hypothesized model.

Table 1
Details of measures for adolescents' and parents' questionnaires.

Construct	Number of items	Sample item	Response scale minimum	Response scale maximum	α
<i>Adolescents' questionnaire</i>					
1. Perceived parental autonomy support		"For the few past months"			
Providing a rationale	4	"When my parent asked me to do something, he/she explained why he/she wanted me to do it"	Does not agree at all (1)	Very strongly agree (7)	.79
Providing choice	4	"My parent gave me many opportunities to make my own decisions about what I do"	Does not agree at all (1)	Very strongly agree (7)	.72
Acknowledging feelings	4	"My parent was open to my thoughts and feelings even when they were different from his/hers"	Does not agree at all (1)	Very strongly agree (7)	.79
2. Perceived controlling parenting		"For the few past months"			
Inducing guilt	4	"My parent made me feel guilty for anything and everything"	Does not agree at all (1)	Very strongly agree (7)	.78
Cultivating performance goals	4	"My parent refused that I could want simply to have fun without trying to be the best"	Does not agree at all (1)	Very strongly agree (7)	.79
Threatening	4	"When I refused to do something, my parent threatened to take away certain privileges in order to make me do it"	Does not agree at all (1)	Very strongly agree (7)	.83
3. Costs and benefits of honesty					
Feeling disrespectful toward parent	5	"If I lied to my parent, I would feel that I acted disrespectfully"	Unlikely (1)	Extremely likely (7)	.90
Feeling good toward parent	5	"If I told the truth to my parent, I would feel trustworthy"	Unlikely (1)	Extremely likely (7)	.92
Maintaining a good relationship with parent	5	"If I told the truth to my parent, my parent and I would keep a trusting relationship"	Unlikely (1)	Extremely likely (7)	.85
Being punished by parent	5	"If I told the truth to my parent, I would be punished"	Unlikely (1)	Extremely likely (7)	.94
Lose parent's affection	5	"If I told the truth to my parent, I would feel that my parent loves me less"	Unlikely (1)	Extremely likely (7)	.88
4. Self-Determination toward honesty		"Why are you honest in general?"			
Identified regulation	4	"Because I choose to do it for my own good"	Does not agree at all (1)	Very strongly agree (7)	.76
Introjected regulation	4	"Because I will feel bad about myself if I don't"	Does not agree at all (1)	Very strongly agree (7)	.65
External regulation	4	"So others won't be angry with me"	Does not agree at all (1)	Very strongly agree (7)	.80
6. Honest personality trait					
Fairness	8	"I wouldn't feel bad about deceiving people who allow themselves to be deceived"	Does not agree at all (1)	Very strongly agree (7)	.56
Sincerity	8	"I wouldn't pretend to like someone just to get that person to do favors for me"	Does not agree at all (1)	Very strongly agree (7)	.66
7. Telling the truth vs. lying	38	"How I spend time when parents are away"	–	–	–
<i>Parents' questionnaire</i>					
1. Honesty valuation	4	"I would be willing to do great sacrifices for my child to be honest"	Does not agree at all (1)	Very strongly agree (7)	.80
2. Observation of adolescents' lying behavior	12	"How often do you get the impression that your child lies about what he/she does with his/her friends?"	Almost never (1)	Almost always (7)	.84

acknowledging feelings. The dimensions of controlling parenting are inducing guilt, cultivating performance goals, and threatening. Previous studies using the P-PASS have supported its psychometric properties (Fournier et al., 2010; Mageau et al., 2014). Specifically, confirmatory factor analyses support its two second-order factor structure and show that AS and controlling parenting factors are strongly and negatively related ($r = -.72$). Cronbach's alphas support its internal consistency, i.e., $.76 < \alpha < .88$, while correlation patterns among the P-PASS subscales and the Psychological Control Scale (PCS-YSR; Barber, 1996) support their convergent validity (autonomy support subscales, $-.68 < r < -.55$; controlling behavior subscales, $.53 < r < .66$). The P-PASS also predicts young adults' adjustment when parental acceptance and monitoring are controlled for, supporting its usefulness as a measure of parental autonomy support and controlling parenting.

Costs and benefits of honesty

A scale was created for the purpose of this study to investigate the perceived costs and benefits of either telling the truth or lying to one's parent following a misdeed. Adolescents were asked to picture a hypothetical situation where they engaged in misbehavior. Adolescents were then asked how likely it was that they would experience costs or benefits if they told the truth or lied, such as feeling disrespectful with parent (when lying), feeling good toward parent (when telling the truth),

maintaining a good relationship with parents (when telling the truth), being punished (for telling the truth), or losing parent's affection (for telling the truth). A five-factor CFA examined the adequacy of the measure and yielded good fit indices (χ^2 ($df = 265, N = 172$) = 405.78, $p < .001$, $\chi^2/df = 1.53$, CFI = .96, NNFI = .95, RMSEA = .06 [.05 – .07]). This analysis shows that each cost and benefit is well represented by its respective items. Correlations between costs and benefits of honesty subscales (see Table 2) show that costs and benefits do not necessarily occur together. Given their high correlations, the two benefits of telling the truth were grouped and so were the two costs of telling the truth. Benefits of telling the truth, costs of telling the truth, and a cost of lying were then examined separately.

Identification with the honesty value

Identification with the honesty value was assessed using the two following scales.

Honest personality trait

The honest personality trait was measured using the Honesty subscale of the French version of the Honesty–Humility dimension of the 200-item HEXACO personality inventory (HEXACO-PI-R; Lee & Ashton, 2004). The Honesty trait is composed of two subscales: the fairness subscale and the sincerity subscale. High scores on these subscales characterize people who avoid lying to others or manipulating them for personal gain. The predictive validity of the Honesty–Humility dimension has been supported in various studies (Ashton & Lee, 2005, 2008; Lee, Ashton, Morrison, Cordery, & Dunlop, 2008). The French version has also been tested in previous studies and its psychometric properties were satisfactory (Boies, Yoo, Ebacher, Lee, & Ashton, 2004; Saroglou, Pichon, Trompette, Verschuere, & Dernelle, 2005). For the analyses, the mean of the two subscales were averaged to create an indicator of the honest personality trait of the adolescent.

Self-determination toward honesty

Adolescents' self-determination regarding honesty was measured with the identified regulation subscale from the situational motivation scale (SIMS; Guay, Vallerand, & Blanchard, 2000) and the introjected regulation and external regulation subscales from the Self-Regulation Questionnaire (SRQ; Ryan & Connell, 1989), adapted to the specific context of honesty. Together, these subscales assess the extent to which participants are honest for self-determined reasons. For the analyses, a relative autonomy index was computed using the following formula: $(\text{Identified} - (\text{Introjected} + \text{External})/2)$. Higher scores on this index represent higher levels of self-determination. Relative autonomy indices have been widely used in past studies and were shown to be a reliable way of assessing participants' level of self-determination (Bureau, Mageau, Vallerand, Rousseau, & Otis, 2012; Grolnick & Ryan, 1987; Guay, Mageau, & Vallerand, 2003).

Telling the truth vs. lying

Adolescents' truth-telling vs. lying behaviors were assessed using a measure inspired by the Strategic Disclosure Card Sort (Darling et al., 2006). As in the original measure, participants had to indicate which of four possible strategies they tend to use the most to communicate or refrain from communicating information to their parents on various topics. The possible strategies included to hide details, to avoid the subject and to lie about various topics. The fourth possibility, the “full disclosure” category, was replaced with “telling the whole truth” to specifically assess truth-telling as the opposite of lying. In addition, although the response categories that reflect partial disclosure (i.e., hiding details and avoiding subject) were offered to permit more nuanced possibilities in addition to the dichotomic choices of telling the truth or lying, these categories were not included in the analyses because lying and honesty was the object of this study. Our measure also departed from the original measure in three additional ways. First, our measure was completed using a paper-and-pencil questionnaire. Second, we allowed participants to identify topics that they felt were not applicable to their own lives (e.g., “Riding in cars with teenage drivers” if they knew none) by checking the “Not Applicable” (N/A) box of this particular topic. Third, we did not assess whether topics were a source of disagreement but rather asked participants to answer the scale for every topic (when applicable). Participants were presented with 38 specific topics (e.g., who are their friends, how do they spend their time when their parents are away). For the analyses, the percentage of answers per category (i. e., number of times a particular communication behavior was chosen divided by the total number of applicable topics) was computed and percentages of telling the truth and lying were retained for the analyses. Table 3 presents the topics about which adolescents were most (and less) likely to lie or tell the truth.

Table 2

Means, standard deviations, and correlations among the costs and benefits subscales ($N = 167$).

	M	SD	2	3	4	5
Personal costs of lying	5.61	.76	.15	.24**	.14	-.01
Relationship benefit of telling the truth (2)	5.19	.71		.73***	-.22**	-.14
Personal benefit of telling the truth (3)	1.43	1.35			-.14	-.02
Relationship cost of telling the truth (4)	5.52	.78				.42***
Personal cost of telling the truth (5)	79.2	19.7				

Parent measures

Parents' questionnaire was composed of scales measuring the following constructs:

Honesty valuation

Parents' valuation of their adolescent's honest behavior was assessed with the parental valuation scale. This scale has shown satisfactory reliability in a past study ($\alpha = .71$; Mageau et al., 2009).

Observation of adolescents' lying behavior

Engels et al. (2006) scale was used to assess parents' perception of their adolescent's lying behavior. This scale asks parents to rate the extent to which their child lies. Engels et al. (2006) provide evidence for the internal consistency of this scale ($\alpha = .79$). As for its predictive validity, this measure was linked to parental knowledge of adolescents' activities ($r = -.42$; Engels et al., 2006), which is a construct generally linked to adolescents' own report of lying (Darling et al., 2006).

Results

Preliminary analyses

Dyads with missing values on computed variables or indicators ($n = 2$, representing .15% of the total data) were deleted. Skewness and kurtosis indices for all variables were normal (values ranged from -1.20 to 2.05 for skewness and from $-.06$ to 3.75 for kurtosis; Kline, 2010). Furthermore, inspection of multivariate outliers showed that 5 dyads were above the critical chi-square value of 24.32 ($p < .001$). These dyads were deleted (2.91%) because multivariate outliers typically introduce instability in the findings, making them more difficult to replicate (Tabachnick & Fidell, 2007). For informative purpose, we investigated the differences between these multivariate outliers ($N = 5$) and other participants ($N = 167$). Regression analyses (Tabachnick & Fidell, 2007) showed that multivariate outliers perceived less benefits in telling the truth ($M = 4.56$ vs. $M = 5.86$), lied more ($M = 17.4\%$ vs. $M = 2.3\%$) and had parents that valued honesty to a lesser extent ($M = 4.90$ vs. $M = 6.45$) than other participants in the sample. No difference was found on other variables. It is important to note however that the obtained model was the same whether it was tested with or without these outliers.

The final sample was composed of 167 dyads. Differences between participants according to parent's gender are explored in Table 4. Differences between participants living in separated and non-separated families are explored in Table 5. No significant difference was found.

Main analyses

Means, standard deviations, and Pearson correlations for all measures are presented in Table 6. These correlations provide support for the hypothesis that parental autonomy support and controlling parenting have a differential and opposite link with adolescents' honesty (H1 & H2).

The proposed model (Fig. 1) was tested using structural equation modeling with AMOS 19.0 (Arbuckle, 2009). Latent variables were modeled only when the construct of interest represented common variance between different scales. This was the case for the constructs of adolescents' identification with the honesty value (represented by the common variance of adolescents' self-determination toward honesty and adolescents' honest personality trait) and adolescents' honesty (represented by the common variance of the percentage of topics about which adolescents told the whole truth to their parent, the percentage of topics about which they lied, and parents' observation of their adolescent's lying behavior).

The model's fit indices were generally satisfactory, χ^2 ($df = 34, N = 167$) = $62.71, p = .002, \chi^2/df = 1.85, CFI = .92, NNFI = .86, RMSEA = .07$ [.04 - .10]. However, modification indices strongly suggested that a covariance was added between

Table 3
Topics yielding honesty vs. dishonesty.

Topics about which adolescents...	#1	#2	#3	#4	#5
Lied most	(13.9%) Riding in cars with teenage drivers	(13.2%) Drinking alcohol	(12.5%) Using Drugs	(10.5%) Going to parties where there aren't any adults present	(9.9%) Seeing a friend whom parents do not like
Told the truth less	(46.1%) When you can start dating	(48.7%) Going to parties where there aren't any adults present	(55.0%) Where you can go with your boyfriend/girlfriend	(55.2%) Going to a movie alone with a boyfriend or girlfriend	(55.3%) Drinking alcohol
Told the truth most	(97.9%) Joining a club or activity	(94.7%) What time you come home	(92.5%) The type of movies you can go to	(90.6%) How much time you spend with your friends	(90.1%) How much time you spend on the telephone
Lied less ^a	(0%) Joining a club or activity	(0%) Who your friends are	(0%) What you do on weekends	(0%) The type of TV shows or videos you watch	(0%) Talking on the phone with your boyfriend/girlfriend

^a "The type of movies you can go to", and "The kind of clothes you wear when you go out".

^a Three other topics yielded no lying as the principal strategy for information management, namely "Where you go with your friends".

Table 4

Mean differences on adolescent reports between adolescents who responded toward their mother or father.

	Mean (SD) for reports toward mother (N = 129)	Mean (SD) for reports toward father (N = 38)	t	p
Parental autonomy support	5.70 (.87)	5.67 (.79)	.15	.88
Controlling parenting behavior	2.48 (.91)	2.49 (1.13)	-.06	.96
Costs of telling the truth	3.92 (1.19)	3.82 (1.30)	.44	.66
Benefits of telling the truth	5.86 (.99)	5.95 (.78)	-.50	.62
Cost of lying	5.64 (1.18)	5.51 (1.29)	.59	.56
Self-determination for being honest	1.36 (1.33)	1.67 (1.38)	-1.24	.22
Honest personality	5.46 (.80)	5.31 (.71)	1.02	.31
% of truth across topics	79.1 (20.3)	79.7 (17.5)	-.16	.87
% of lies across topics	2.10 (4.03)	2.66 (5.17)	-.71	.48

Table 5

Mean differences on adolescent reports between separated or non-separated families.

	Mean (SD) for separated families (N = 120)	Mean (SD) for non-separated families (N = 47)	t	p
Parental autonomy support	5.73 (.84)	5.60 (.89)	.87	.39
Controlling parenting behavior	2.46 (.88)	2.53 (1.14)	-.46	.65
Costs of telling the truth	3.80 (1.16)	4.15 (1.32)	-1.67	.10
Benefits of telling the truth	5.91 (.99)	5.82 (.84)	.54	.59
Cost of lying	5.58 (1.25)	5.68 (1.09)	-.46	.65
Self-determination for being honest	1.37 (1.38)	1.59 (1.29)	-.92	.36
Honest personality	5.47 (.78)	5.30 (.78)	1.27	.21
% of truth across topics	79.3 (20.1)	79.0 (18.9)	.10	.92
% of lies across topics	2.06 (4.16)	2.64 (4.67)	-.78	.44

Table 6

Means, standard deviations, and correlations involving all variables (N = 167).

	M	SD	2	3	4	5	6	7	8	9	10	11
Parental autonomy support	5.69	.85	-.42***	-.27**	.43***	.31***	.22**	.29***	.40***	-.26**	.04	-.16*
Controlling parenting behavior (2)	2.48	.96		.47***	-.25**	-.11	-.27**	-.39***	-.34***	-.28***	.03	.15 [†]
Costs of telling the truth (3)	3.90	1.22			-.16*	.07	-.25**	-.23**	-.27**	.27***	.06	.15 [†]
Benefits of telling the truth (4)	5.88	.95				.21**	.13 [†]	.27***	.36***	-.11	-.01	-.03
Cost of lying (5)	5.61	1.20					.02	.35***	.33***	-.20**	.14 [†]	-.08
Self-determination for being honest (6)	1.43	1.35						.25**	.22**	-.20*	.13 [†]	-.20*
Honest personality (7)	5.52	.78							.49***	-.33***	.24**	-.17*
% of truth across topics (8)	79.2	19.7								-.50***	.03	-.19*
% of lies across topics (9)	2.23	4.31									-.10	.16*
Parental honesty valuation (10)	6.45	.64										-.21**
Parent report of adolescent lying (11)	2.28	.68										

[†]p < .10, *p < .05, **p < .01, ***p < .001

the error terms of the honest personality and cost of lying (expected $\Delta\chi^2(1) = 15.67$). This second model yielded good fit indices, $\chi^2(df = 33, N = 167) = 44.96, p = .08, \chi^2/df = 1.36, CFI = .96, NNFI = .94, RMSEA = .05 [.00 - .08]$, and was thus retained. Adolescents with more autonomy-supportive parents reported higher identification with the honesty value ($\beta = .24, p = .02$; H3). In addition, the more parents were autonomy supportive, the more adolescents perceived benefits of telling the truth ($\beta = .39, p < .001$; H4) and the more adolescents perceived costs of lying ($\beta = .33, p < .001$; H4). In contrast, the more parents were controlling, the less the adolescents identified with the honesty value ($\beta = -.46, p < .001$; H5), and the more adolescents perceived costs of telling the truth whereas controlling parenting was found to be unrelated to benefits of telling the truth and costs of lying. In turn, costs of lying and costs of telling the truth both predicted adolescents' honesty ($\beta = .30, p < .001$ and $\beta = -.16, p = .04$; H8), whereas benefits of telling the truth was positively associated with adolescents' honesty but this relation was marginal ($\beta = .14, p = .07$; H8). These results were obtained while controlling for the effect of adolescents' identification with the honesty value on adolescent's honesty ($\beta = .54, p < .001$; H7). Finally, parents' honesty valuation predicted adolescents' identification with the honesty value ($\beta = .24, p = .01$; H9). These results appear in Fig. 2.

Significance of the indirect effects was assessed using the bootstrap method with 500 resamples.⁴ The present results showed that both indirect effects from AS and controlling parenting to adolescents' honesty, via the mediators, were

⁴ In this method, hundreds of data sets are generated by randomly drawing participants from the original sample, each generated data set containing the same number of participants than in the original data set (each participant can be drawn multiple times in each generated data set). This technique creates a distribution of various estimates (e.g., indirect effects), which in turn is used to calculate a two-tailed significance test for each estimate.

significant ($\beta = .30, p = .002$ and $\beta = -.32, p = .006$, respectively). The indirect effect from parents' honesty valuation to adolescents' honesty, via adolescents' identification with the honesty value, was also significant ($\beta = .13, p = .002$).

The effect of adolescents' gender on the present model was tested using multi-group analyses. In these analyses, a constrained model, where all paths between variables are constrained to be equal between groups, is compared to an unconstrained model, where paths are allowed to vary freely between groups. Results showed that there was no significant difference between the constrained and unconstrained models ($\chi^2(13) = 10.40, p = .66$), suggesting that the proposed model is the same for both adolescent boys and girls. It should nevertheless be noted that there might have been insufficient power to adequately test these differences given the size of the present sample.

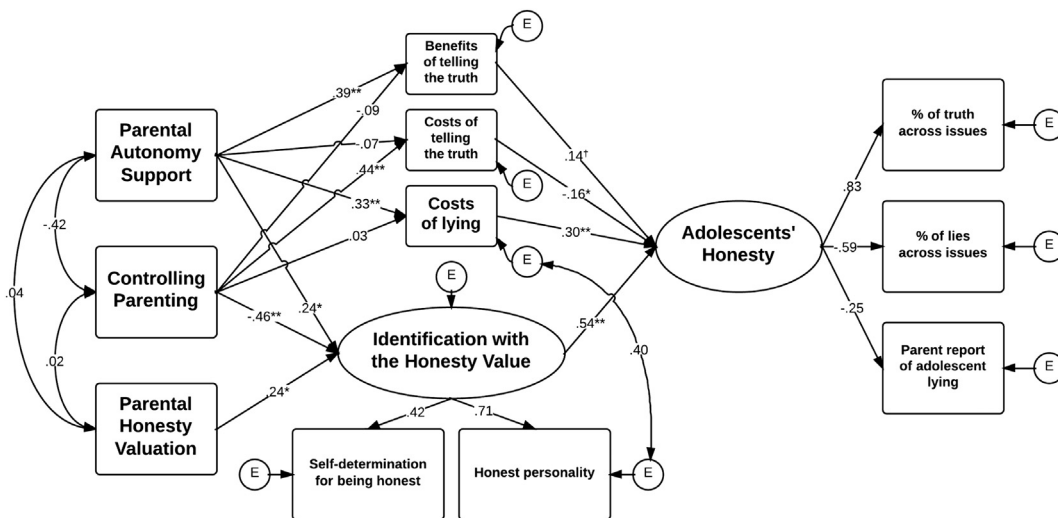
We also tested the effect of adolescents' age on the dependent variables by examining Pearson correlations. These correlations indicated that older adolescents behaved less honestly than younger ones ($\beta = -.14, p = .05$), which is in line with past literature (Jensen et al., 2004). We then included age as a covariate in the main model and added links to all other variables. Results showed that the link between age and honesty was explained by the fact that older adolescents seemed to identify less with the value of honesty ($\beta = -.23, p = .01$). Indeed, the direct effect of age on honesty was no longer significant but the indirect effect between age and honesty through identification with the honesty value was significant ($\beta_{\text{indirect}} = -.14, p = .002$). Age was not related to other variables. Importantly, adding age in the main model did not alter the present findings.

Discussion

The present research shows that parental autonomy support leads to more adolescents' honesty while controlling parenting predicts less adolescents' honesty. Results also show that this effect is mediated by adolescents' identification with the honesty value and by perceived high benefits and low costs of honesty. More precisely, results showed that the more parents are perceived as autonomy supportive the more adolescents report high benefits of telling the truth and high costs of lying to them. In contrast, the more parents adopt controlling behaviors the more adolescents report high costs of telling the truth. AS did not predict perceived costs of telling the truth, whereas controlling parenting did not predict benefits of telling the truth or costs of lying. In turn, the costs of telling the truth (negative link), the benefits of telling the truth (positive, marginally significant link), and the cost of lying (positive link) all predicted adolescents' honesty. The effects of parenting on adolescents' honesty were obtained while controlling for parental valuation of honesty. Results also revealed that age was significantly related to less adolescents' honesty. Mediation analyses further showed that this link was explained by a weaker identification with the honesty value for older adolescents. Finally, multi-group analyses showed that this model applies for both adolescent boys and girls. However, given the limited sample size, multi-group analyses should be interpreted with caution.

Implications for the literature on adolescents' honesty

The present findings are in line with past research showing that autonomy-supportive parenting is linked to more adolescent disclosure to parents (Roth, Ron, & Benita, 2009). By focusing on adolescents' honesty (i.e., telling the truth and not lying) instead of disclosure (i.e., adolescents' willingness to provide details about themselves and their activities), this study supports the importance of parental autonomy support, and the absence of controlling behaviors, in fostering an open and



† $p = .07$, * $p < .05$, ** $p < .001$

Fig. 2. Obtained model, $N = 167$. † $p = .07$, * $p < .05$, ** $p < .001$.

honest communication from adolescents. These findings provide support to the proposition that parental autonomy support is a fundamental component of optimal parenting (Joussemet et al., 2008).

In addition, previous researchers (Darling et al., 2006) have found that the decision to lie was influenced by certain costs such as fear of behavioral consequences (e.g., being punished) and fear of emotional consequences (e.g., losing the parent's affection). This research extends these findings by including benefits of being honest (i.e., feeling truthful with parents, maintaining parent's confidence) and a cost of being dishonest (i.e., feeling deceitful with parents) using a multidimensional measure of costs and benefits. Importantly, this research shows that the association between perceived costs and benefits of honesty and adolescents' honesty holds when controlling for adolescents' identification with the value of honesty. This suggests that even when adolescents identify with the value of honesty, they can still choose to lie if a particular context makes honesty threatening.

By demonstrating the specificity of the links between parenting behaviors and certain costs and benefits of telling the truth or lying, the present results also suggest that the costs and benefits that are perceived in a relationship depend on the type of interpersonal interactions that take place within this relationship. It seems that by being autonomy supportive, parents foster a context where there are benefits to being honest and where lying would imply losing these benefits. These perceptions in turn are linked to more honesty. In contrast, controlling parenting seems to make adolescents particularly aware of how costly sharing truthful information with their parent could be. This in turn translates into less honesty.

Finally, the present results underline the importance of being autonomy supportive, and not controlling, for the promotion of adolescents' identification with the honesty value. It is important to note that identification with the honesty value varies with age. It might be that, as they grow up, early adolescents challenge their previous conceptions about morality, which leads to lower identification and less subsequent honesty. Future studies testing adolescents' identification with the honesty value using a longitudinal design are needed to further investigate this issue. Nevertheless, the present findings show that the relation between age and adolescents' honesty may be explained by differences in value identification.

Limitations and future research

Although this study uses reports from both adolescents and parents, the present results should be interpreted while keeping in mind the following limitations. First, the present study was cross-sectional. Results are thus of a correlational nature such that no direction of causality can be inferred. In fact, previous research has shown that adolescent behavior affects parenting (Jang & Smith, 1997; Reitz, Deković, & Meijer, 2006). Future research should thus test the present sequence longitudinally to look for reciprocal or reverse effects. Second, the multivariate outliers that were deleted from the data set represented people who lied more, perceived less benefits of telling the truth, and whose parents valued honesty to a lesser extent. Although the results remained the same when outliers were included in the analyses, additional research is necessary to extend the present findings to a population of adolescents who report extreme lying. Third, the costs and benefits were measured regarding telling the truth or lying about a misdeed, while the truth telling and lying behaviors were measured regarding everyday events. Framing our measure of honesty as "honesty following a misdeed" might have yielded stronger relations. Fourth, we asked adolescents to complete the questionnaire while thinking about the parent they saw the most. This procedure may have created biases in the adolescents' responses. However, no mean difference was found on the studied variables between mothers and fathers (see Table 4). Unfortunately, there were not enough fathers to test the proposed model in multi-group analyses for mothers and fathers separately. Future research should thus ensure that the obtained model holds for both mothers and fathers. Fifth, the families surveyed in the present study had an average SES that is above the mean of the region. Additional research is necessary to generalize the present findings to lower SES population given that SES has been shown to affect autonomy-supportive parenting (Grolnick, 2013) and other parental factors (e.g., perceived legitimacy of parental authority; Nucci, Camino, & Sapiro, 1996). Furthermore, it is possible that in harsh environments, where opportunities for misbehaving are more abundant and parental resources are more limited, adolescents may be more attuned to potential costs and benefits of honesty than their high SES counterparts. This increased sensitivity would enable them to respond more efficiently to interpersonal cues and, in turn, help them retain access to parental resources despite self-regulation failures. The specific costs and benefits of honesty may also vary depending on SES. Future research in more various socio-economical contexts is needed to investigate these hypotheses.

As pointed out by Darling et al. (2006), the measure used to assess adolescent communication in the present study attributes an equal weight to communication of trivial (e.g., joining a club or activity) and critical (e.g., seeing a friend whom your parents do not like) topics. However, differences may exist between adolescents who lie about unimportant issues but tell the truth about what they consider more important and adolescents who generally tell the truth but lie when it comes to more central issues. Future research should attempt to weight the importance that adolescents attribute to the different lies they tell their parents.

Social Domain Theory (Smetana, 1997) makes distinctions between the type of domains in which adolescents can share information with their parents (e.g., the personal domain, which pertains to adolescents' personal choices, and the prudential domain, which pertains to adolescents' security and health). In the present study, topics from different domains were assessed but no distinctions were made across domains. Yet, Social Domain Theory shows that parents' expectations and reactions to children's sharing of information should differ as a function of the social domain (e.g., personal or prudential) in which the information is embedded (Smetana, 1997). It is possible that adolescents would expect less flexibility from parents

when sharing a misdeed pertaining to a prudential issue (e.g., harsher punishment, less perspective taking from parents) than when sharing a misdeed in the personal domain. If this is the case, social domains would moderate adolescents' perception of costs and benefits. Future research is needed to investigate how social domains influence the observed relations in the proposed model.

Finally, Darling, Cumsille, Peña-Alampay, and Coatsworth (2009) have shown that there can be significant cultural variability in variables affecting adolescents' lying. Exploring the cultural variations of our model would help determine to what extent it is culturally bound.

Regarding clinical implications, this study suggests that existing parenting workshops (Faber & Mazlish, 2012) that foster autonomy-supportive parenting may have the additional benefits of promoting adolescents' honesty by fostering adolescents' identification with the honesty value and by creating a climate where adolescents feel safe to tell the truth. Sharing this additional benefit with parents would further encourage them to adopt more autonomy-supportive behaviors.

In sum, the present findings suggest that the more parents are autonomy supportive the more their adolescents tell the truth. It seems that when parents support adolescents' autonomy and refrain from using controlling behaviors, they create an interpersonal context where adolescents perceive less costs and more benefits in being honest and identify with the honesty value to a greater extent, thus promoting adolescents' honesty.

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