

Domain-general or specific: How is children's understanding of deception socialized?

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Abstract

The current study investigated parenting influences on children's understanding of lie-telling in eight different social situations. These social situations clustered into two broad categories that have been assumed in the literature: first, self-oriented lies that were generally told to benefit the self (e.g., to avoid punishment or gain status); and second, socio-culturally-oriented lies that were told for more social reasons (e.g., to create positive affect, maintain modesty or politeness). Two types of parenting variables were also measured. The first concerned more general parenting practices and have been studied in the literature; while the second was about more specific parental *deceptive* behaviors like lying to your child for their compliance. Participants included 141 Turkish parent-child dyads aged 7, 9, and 11. All children judged the self-oriented and the socio-cultural lies as inappropriate but more so for the self-oriented ones; further, the socio-cultural lies were judged less negatively with age. While general parenting practices did not predict children's judgments, for parental deceptive practices, there were strong negative relationships between parents' use of threatening lies (e.g., "come with me or I'll leave you here") and children's judgments for both self- and socio-cultural lie types. The two main conclusions are that specific parental deceptive practices are more relevant than general parenting for understanding children's judgments about lie-telling situations. Second, the assumed categorization of lies

into “self-” and “social-” seems generally valid when using a plurality of situations. Finally, some issues related to the morality of lie-telling are discussed.

KEYWORDS

domain-specific socialization, parenting by lying, parenting styles, self-oriented lies, socio-culturally-oriented lies

1 | INTRODUCTION

As young children develop their ability to use language to communicate, they also learn about the possibility of communicating false information. Children as young as 3 years of age learn to communicate false information for self-benefiting purposes, such as winning a prize or avoiding potential punishment for their misbehavior (Talwar & Crossman, 2011). Lie-telling behavior at this age is considered a hallmark of typical development because being able to lie requires a certain level of cognitive and social-cognitive ability (Talwar & Lee, 2008). For more sophisticated lie-telling, children may intentionally create a false belief in another person's mind and think through some of the implications of that false-belief (Talwar, Gordon et al., 2007; Talwar & Lee, 2008). For example, if I didn't eat the cookies, then I shouldn't have chocolate on my face.

Once children have developed the cognitive capability to tell lies, they need to learn the socially appropriate and inappropriate forms of such deception. In general, children are explicitly socialized to tell the truth (Heyman, Luu et al., 2009; Lavoie et al., 2016) and studies show that, children as young as 4 years of age, understand that telling a lie is bad such that they are not supposed to do it (Bussey, 1999; Talwar & Lee, 2008). However, as children get older, they come to appreciate that different types of lies are considered less bad or even good when used for interpersonal purposes (social-benefiting lies). For a generic example, children learn that they are supposed to say that they liked a meal at the neighbors' house even if it is not true. Indeed, research has shown that children avoid telling the truth if that would hurt another person's feelings (Heyman, Sweet et al., 2009; Talwar, Murphy et al., 2007; Xu et al., 2010). These social-benefitting lies generally serve interpersonal functions important for navigating social life. Accordingly, for older children to become competent participants within the culture, they will need to learn about the nuances of different types of lies and parents will be an important factor in such learning (Talwar et al., 2022; Talwar & Crossman, 2011; 2022). In the current study we sought to investigate whether general parenting practices and/or parental uses of deception would influence children's understanding of the (in)appropriateness of self-/social-lies across different types of situations using direct measures from parent-child dyads.

1.1 | (Socio) cultural socialization: Social situations as the relevant unit of analysis

From a socio-cultural perspective, culture is an essential aspect for all development and children are indirectly socialized through participation in social situations (Rogoff, 2003; Smetana, 2017). Prior deception studies involving culture have tended to first characterize cultures in terms of those that are more collectivistic versus more individualistic and found contrasting patterns of data across the two. For example, 7- to 11-year-olds from Canada and China faced a dilemma about lying to either help a friend but hurt the group or help the group but hurt a friend (Fu et al., 2007). Results showed that Chinese children consistently prioritized the group while Canadian children showed the opposite pattern (i.e., favoring the individual). Similarly, while children from Taiwan and Mainland China judged lying to be modest as more positive than truthfully taking credit for a good deed, Canadian children showed the opposite pattern

(Lee et al., 2001). The results of these studies were interpreted as a reflection of the influence of individualistic and collectivistic values in that modesty is believed to be important for maintaining group harmony and therefore changes the valence/meaning of the lie-telling accordingly.

However, it has been noted by others that characterizing cultures along the dimension of individualism and collectivism is somewhat broad and might miss something about the specific impact of the social situation. Thus, it could be useful for studying socialization to integrate a *cultural values* approach with a *social situation* approach. For example, values like “group-interest” may not always be the most important and most salient factor in collectivistic cultures when deciding how to evaluate lies (Sweet et al., 2010). Instead, other aspects of the social situation may, at times, be more relevant. Two studies were conducted that showed how the complexity of the social situation may be integrated with the cultural value system (Ma et al., 2011). In the first, Chinese children aged 7 to 11 favored white lie-telling (vs. blunt truth) in a public (vs. private) setting. This was interpreted to suggest that children might expect the protagonist to experience more negative feelings (e.g., shame) when telling the blunt-truth. In their second study, Ma and colleagues (2011) found that 11-year-old Chinese children evaluated telling the blunt-truth more positively and telling a white-lie more negatively when the long-term consequences may lead the lie-recipient to lose face (honor) in the future. Thus, the cultural values related to honor and the experience of shame within the situation seemed to affect lie-telling evaluations. Further, as issues of shame and honor differ across cultures, so to may any influence on lie-telling socialization.

The methodological focus on social situations as a relevant unit of analysis is also motivated by socio-cultural approaches to development in general (Alessandrini & Rodríguez, 2017; Allen & Bickhard, 2017). The current study is situated within a socio-cultural tradition along the lines of Vygotsky and assumes that social interaction (and reaction) constitutes the proper locus for social understanding (Carpendale & Lewis, 2006). Culture is then the context of meaning in which social interaction takes place and so there is no real separation of “the social” and “the cultural” (i.e., socio-cultural). They are not the same, but each only exists in relation to the other. Accordingly, since lie-telling occurs within social interactions (Talwar & Lee, 2008; Hsu & Cheung, 2013), it should be influenced by social and cultural factors. Assuming that cultural values tend to be implicit in the practices of individuals within a society (Christopher & Bickhard, 2007), children’s judgments about the (in)appropriateness of lie-telling in different types of social situations should reflect aspects of the culture’s value system. This provides an alternative framework for integrating cultural values through social situations. A social situation approach to understanding cultural influences could be considered bottom-up in that there is more of a focus on the plurality of situations involved in social life. Finally, parenting is itself culturally situated/constituted in terms of practices but also in terms of effects (Smetana, 2017). Accordingly, children’s understanding of deception is considered to be socialized within the *culturally constituted social situations* involving family (parenting in the current study) and school life.

Consistent with this theoretical motivation for social situations as the relevant unit of analysis, it has been shown that school-aged children are beginning to be able to integrate more specific social-conventional norms with moral values for lie-telling judgements (Warneken & Orlins, 2015; Xu et al., 2010). Where exactly to draw the boundaries between social-conventional and moral considerations for lie-telling and how to explain the development of such boundaries is still an open question (Bickhard, in-prep). Accordingly, the culturally relevant deception literature suggests that around the ages of 7 to 11, children develop a more complex understanding of the implicit cultural conventions and values within social situations and take that knowledge into account when making evaluations about telling a lie. Therefore, in addition to the collectivism versus individualism distinction, the specifics of different types of social situations may involve relevant complexity that is important to explore for a more complete understanding of the relation between children’s lie-telling development and culture.

Finally, in considering what aspects of social life may start to become developmentally relevant for school-aged children, the current study also targets social situations such as those that involve status and bullying (Pellegrini et al., 2009). Some primary objectives for school-aged children are to develop close interpersonal relationships with their peers, to fit in with peer groups, and to become *likable* (Lease et al., 2002). Thus, social status and bullying, as two intertwined concepts (Sentse et al., 2015) are very common in children’s and preadolescents’ everyday lives (Clark et al., 2022; LaFontana & Cillessen, 2010). In a Turkish context, a previous study has reported that around 25% of

preadolescents and adolescents were involved in a cycle of cyber bullying whereas this number increases to 45% for traditional bullying (Eyuboglu et al., 2021). In another context, 65% of Japanese preadolescents engaged in bullying behaviors (Kozasa et al., 2017) and a cross-cultural study, including 51 countries, indicated that bully victimization has a negative impact on interpersonal development (Yu & Zhao, 2021).

In sum, one aim of the current study is to expand the range of social situations beyond the areas that have already been studied (i.e., punishment, politeness, positive affect) to those that are relevant to children's burgeoning social lives (i.e., status and bullying), as well as to include those situations that may be important for cultures that emphasize honor (i.e., shame, modesty, and respect). A second aim of the current study is to empirically test whether the assumed distinction between self-/social- types of lies holds when a plurality of social situations is taken into consideration.

1.2 | Parenting

In general, parenting practices are a means by which parental socialization goals influence child development (Rogoff, 2003). However, these practices can be more direct or indirect as mechanisms of socialization (Talwar & Crossman, 2022). Direct socialization of deception development can involve practices that explicitly teach children the value of honesty and is an important avenue to investigate (Talwar et al., 2022). However, indirect practices may not have the goal of honesty promotion per se and can involve variables like general parenting styles or more specific uses of deception by parents. While the few existing studies on parenting in the literature have measured parenting styles (Popliger et al., 2011; Ma et al., 2015; Talwar et al., 2017; c.f. Dykstra et al., 2020), Tong and Talwar (2021) have argued that such a broad notion is not useful for deception development and that a domain-specific approach would be more appropriate.

Broad approaches can be considered domain-general in the sense that they apply broadly (i.e., across domains). However, domains can emphasize either the knowledge domains that the child is developing (e.g., Piaget, developmental cognitive science, nativism); or the parenting domains that are more relational in the sense that they are about child development but with respect to the parenting activity (e.g., parenting styles). Similarly, domain-specific approaches can be specific to knowledge developmental (e.g., moral, social-cognitive, language domains) or more relational in terms of the activity of the parent-child dyad (e.g., control, emotional support, reciprocity). These relational approaches may then focus on increasing specificity through the dimensions of parenting (e.g., Barber et al., 2005; Barber et al., 2012) or involve a systems orientation with multiple aspects (e.g., Grusec & Davidov, 2010).

A version of the latter, domains of socialization (Grusec & Davidov, 2010), has been elaborated in deception research (Talwar et al., 2022). For example, the original domain of parental control has been further specified to focus on control related to honesty and deception. The current study follows this process of increased specificity by focusing on parent's own deception while also including the broader styles for comparison. However, the distinction between domain-general and -specific may not always be clearcut. For example, more specific deceptive practices could themselves reflect the broader styles (e.g., using threatening lies to control your child may reflect the more coercive practices of authoritarian parents). This means that relations between parenting styles and parent's deceptive practices could be expected. For the current study, the focus is on indirect socialization of deception (i.e., it is not the explicit goal of the parent) that compares domain-general (i.e., parenting styles) with domain-specific parenting (i.e., using and modeling deception).

1.3 | Domain-general parenting

Domain-general means that the focus of this type of parenting does not have a content-specific relation to the topic of development (i.e., deception). One way to characterize domain-general parenting is in terms of parenting styles as outlined by Baumrind (1991). Baumrind's typology derived a four-fold classification of parenting out of two broad dimensions (i.e., demandingness and responsiveness). Of the four categories, the current study considers

authoritarian, authoritative, and permissive. A fourth category is included that is consistent with Baumrind's typology but is more normative in collectivist cultures: over-protective parenting.

Authoritarian parents are high on demandingness but not on responsiveness which involves strict obedience from children and punitive discipline from parents. Assuming that lie-telling is functional to avoid punishment (Lewis, 1993) and given the finding that children from a more punitive school environment lied earlier and more effectively than other children (Talwar & Lee, 2011), it is expected that authoritarian parenting should be related to preschool children's self-benefiting lie-telling behavior (Talwar et al., 2017). That is, self-benefitting lie-telling would increase because it is an adaptive solution to the problem of living in a more punitive (authoritarian) environment. However, such a relation has limited empirical support. While Talwar and colleagues (2017) found that a North-American sample (who also had higher inhibition) were less likely to lie if their parents also scored high on the *authoritative* style, no direct relations were found between *authoritarian* parenting and lie-telling. In contrast, a study with a Chinese sample did find that children whose parents fit the *authoritarian* parenting characterization exhibited an increase in their lie-telling behavior (Ma et al., 2015). One potentially relevant difference between the two studies is that authoritarian parenting in eastern cultures does not seem to involve the same negative affective and *coercive methods* used to achieve obedience and control that is more common in western cultures (Sorkhabi, 2012).

The limited empirical evidence for a relationship between authoritarian parenting and deception may be a consequence of either the age group (preschoolers), the type of lie (self-benefitting) or the type of parenting style. It could be that authoritative parenting is more relevant for older children or for more socially-oriented lies. Authoritative parents adopt a balanced and optimal level of demandingness and responsiveness, which generally leads to favorable child outcomes. Accordingly, the use of inductive practices and a focus on reasons for behavior may be more relevant for older children's understanding of lies that are told for the benefit of others (social lies). That is, children who are better able to incorporate different aspects of the situation into their understanding (i.e., reasons for behavior) may be more open to some lies being good (or at least less bad). Popliger and colleagues (2011) investigated the influence of parenting styles for school-aged children for a "prosocial" lie-telling situation (i.e., telling small lies for the benefit of someone else). Results indicated that children whose parents scored high on the *authoritative* characterization were more likely to lie to protect another person's feelings, while no relations were found for children whose parents scored high on *authoritarian* or *permissive* styles.

To our knowledge, the only relevant study with a Turkish sample has focused on parenting styles and *cheating behavior* for 4- to 6-year-olds (Kotaman, 2017). The parenting styles measure that was used also included a category more dominant in certain cultures: over-protective parenting (Karabulut-Demir & Sendil, 2008). Over-protective parenting was defined by the following properties: excessive contact, infantilizing, repressing social maturity, and parental control (van Petegem et al., 2021). The over-protective parenting style is more normative among collectivistic cultures since it aligns with child socialization goals and values that prioritize interdependence (Sümer & Kağıtçıbaşı, 2010). According to the results from Kotaman (2017), parenting styles did not *predict* children's cheating behavior. However, in a follow-up analysis, there was a group difference for children who engaged in cheating behavior (or not) in that their parents scored *higher* on over-protectiveness.

Overall, existing research suggests that domain-general parenting styles and practices may play some role in children's lie-telling *behavior* for both self-benefitting and socially-oriented reasons; however, the evidence is quite limited. Further, extant studies have used diverse methodologies (i.e., different types of lie situations, age groups, mediating variables, categorizations of parenting styles) and had somewhat inconsistent findings. While these limitations in the literature make results hard to generalize, one aim of the current study is to test whether domain-general parenting practices (operationalized as parenting styles) influence children's judgements about the appropriateness of lie-telling in different types of social situations. In the current study there are two specific hypotheses (a) it is expected that authoritarian parenting positively predicts children's judgments about the acceptability of self-oriented lies; and, (b) that authoritative parenting positively predicts the acceptability of socially-oriented lies. Given the lack of empirical literature, no specific predictions were made for the other two styles (i.e., permissive and over-protective).

1.4 | Domain-specific parenting

Extant research on the influence of parenting and children's understanding of deception has been relatively limited and tended to focus on parenting styles (Dykstra et al., 2020; Talwar & Crossman, 2022; Talwar et al., 2022). Further, parents' explicit socialization goals about the acceptability of lie-telling seem to be different from their actual behaviors. For example, undergraduate students have reported retrospectively that their parents occasionally told lies to them as young children, although they also encouraged them to be honest (Heyman, Luu et al., 2009). Parents have also reported teaching their young children that lying is unacceptable but lied to them nonetheless (Lavoie et al., 2016). By experiencing others telling of lies, children might be informed about the implicit acceptability of such lies through some form of social learning. That is, despite their direct socialization about honesty, parents might be "modeling" to their young children that lie-telling is sometimes acceptable. Such modeling may involve telling lies to the child or telling lies to others in front of their child. Accordingly, domain-specific parenting refers to content-specific parenting practices (deception) related to child development (i.e., parental deception practices as related to child deception development).

Especially in the preschool years, parents use lies with their children to influence their behaviors and/or boost their positive feelings (Heyman et al., 2013). A scale to measure such lies was developed by Heyman and colleagues and was referred to as instrumental lie-telling. For a typical Turkish example related to a child's behavior: "You need to finish all your food, or it will start crying". Previous piloting with Turkish samples has suggested a threat-lie sub-scale from the Heyman et al., measure as relevant for preschooler's lie-telling. Threatening lies are those used for behavioral compliance that involve negative affect to motivate the child's behavior as in the example above (i.e., guilt is used to motivate compliance to finish the food).

Parental lies used in these sorts of situations provide children with *first-person* experience about the effects of deception when used for instrumental purposes (Bok, 1978). Initially, children are unlikely to know that they are being manipulated through lie-telling per se; however, over time the fact that the threats do not generally materialize would provide specific feedback about the statements as lies. Further, the coercive aspect of threat lies may not always require believing the threat itself. That is, the anticipation that you might be left at the mall may be frightening enough to induced compliance even if you are relatively certain that it will not happen. This could provide explicit modeling to children that lies can be an effective strategy for coercive purposes and implicitly model that such strategies are acceptable. A similar logic holds for positive affect lies in that such lies would be learned as an effective strategy for interpersonal purposes (e.g., to make someone else feel better). However, as a first-person interaction, children may not know that their parents are lying to them in these situations. Unlike threat lies, there is not the same type of potential feedback in terms of the parent not following through on the threat.

Finally, in addition to having their parents lie to them in a first-person interaction, children observe their parents telling lies to other people as a part of everyday life. Telling a lie that there was a traffic jam as an excuse for being late to an appointment or telling a friend that she lost weight (although it is clear that she did not) are examples of everyday lies that may happen in the presence of children. These situations would provide children with *third-person* experience of parents lying in everyday life. This modeling would explicitly suggest that lies can be used for a variety of purposes in everyday life when interacting with others and it would implicitly suggest that such behavior is acceptable. Accordingly, a new scale was developed by the current researchers to measure parent's everyday lie-telling.

In sum, another goal of the current study is to test whether parents' domains-specific deceptive practices, such as instrumental and everyday lie-telling, have an influence on children's evaluations of lies. Accordingly, (a) it is expected that parents' use of *threatening lies* will positively predict children's judgments about the acceptability of *self-oriented* lies; (b) that parental use of lies to increase their children's *positive affect* will positively predict children's judgments about the acceptability of *socially-oriented* lies; and, (c) for *everyday lie-telling* we expected a positive predictive relation to children's judgments for both self- and socially-oriented lies.

1.5 | General aims of the study

Our primary aim was to extend research on children's judgments about the (in)appropriateness of lie-telling in two ways: (1) Investigate school-aged children's understanding of the (in)appropriateness of lie-telling for self-oriented and socially-oriented reasons through a plurality of social situations; (2) Investigate the relationship between children's understanding of deception with two types of parenting variables: (a) a more general parenting styles variable; and, (b) parents' more specific deceptive behaviors.

2 | METHODS

2.1 | Participants

Participants were 141 parent-child dyads. The child part of the sample consisted of forty-six 7-year-olds (mean age = 7;5 [years; months], $SD = 3.8$ months, 23 boys), forty-seven 9-year-olds (mean age = 9;4, $SD = 4.3$ months, 22 boys) and forty-eight 11-year-olds (mean age = 11;3, $SD = 3.2$ months, 24 boys). Participants were native Turkish speakers recruited from public and private elementary schools in the same general neighborhood of Ankara. Ankara is a metropolitan city of approximately five and a half million people. Most participants were from middle-class and upper-middle-class socioeconomic backgrounds. Parent measures were completed by 117 parents (114 mothers, 3 single-parent fathers). A G*power analysis (Faul et al., 2007) indicated that at least 108 participants were needed for the most complex hierarchical regression analysis with a medium effect size ($f^2 = .15$), given an alpha of .05 and a power of .90.

2.2 | Procedure

Permission to approach schools about the study was obtained from the Turkish Ministry of Education along with ethics approval from the University. Parents who gave their written informed consent were then asked to fill out a demographics form and three online parent measures in the following order: Parent's Attitude Scale, Instrumental Lie-telling; and Everyday Lie-telling. Children were tested in a quiet room in their school. The experimenter obtained verbal assent before administering the Lie-telling Evaluation Task (LET) which took approximately 15–20 min.¹ Each experimenter was accompanied by a coder who also recorded all the answers of the participant.

2.3 | Measures²

2.3.1 | Child measures

Lie-telling Evaluation Task (LET). The LET task was developed by the current researchers to assess children's understanding of self-oriented and socially-oriented lie-telling using a variety of social situations. The task involved eight short scenarios in which the protagonist tells either a self-oriented or a socially-oriented lie. Scenarios involving self-oriented lies were told to: avoid punishment, avoid shame, attain status, and avoid being bullied. The scenarios involving socially-oriented lies were told for the purposes of: being modest, being polite, showing respect, creating positive affect. A sample story can be seen in Appendix A.

The task was originally piloted with a small sample of 11-year-olds ($n = 15$) before being piloted with a larger sample of 108 parent-child dyads. To reduce memory demands, each scenario was restricted to two characters: the lie-teller

and the lie-recipient. Further, only the lie-teller was given a name and the lie-recipient was referred to in relation to the lie-teller (e.g., Ali's friend, parent, teacher, etc.). Children were also given a picture of the scenario along with the story narrative. The gender of the protagonist was matched with that of the participant. Half of the scenarios in each category (self- and social-) involved telling a lie to a peer and the other half of them to an adult (e.g., teacher, neighbor, aunt). The order of the eight scenarios and the answer options were counterbalanced, resulting in a total of 16 versions of the LET task.

After each story, children were asked two comprehension control questions to assess their understanding of the overall story and of the deceitful statement from the protagonist. If a child gave an incorrect answer to a comprehension question, the story was read to the child once again. If the child gave an incorrect answer again, then no additional questions were asked. Next, children were asked to correctly categorize the lie by the protagonist as a lie. Lastly, the evaluation of the appropriateness of the protagonist's lie was asked using a 7-point scale ranging from 0 (very inappropriate) to 6 (very appropriate). The scale was presented with a visual aid that showed seven faces along with thumbs up or thumbs down and transitioned from green to yellow to red (Cheung et al., 2015; Ma et al., 2011; Xu et al., 2010). This was the main dependent measure and is referred to as children's *Judgments of Appropriateness* (JoA).

2.3.2 | Parent measures

Parenting Attitudes Scale (PAS). The PAS was developed by Karabulut-Demir and Şendil (2008) to measure parenting styles and is based on Baumrind (1991) typology. It has 46 items that are rated on a 5-point Likert scale ranging from 0 (never) to 4 (always). There are four sub-scales: authoritative (17 items, $\alpha = .83$, e.g., "I ask my child's opinion when I buy something for her/him."), authoritarian (11 items, $\alpha = .76$, e.g., "I yell at my child when she/he behaves inappropriately."), over-protective (9 items, $\alpha = .82$, e.g., "I protect my child from things that would be discouraging for her/him."), and permissive (9 items, $\alpha = .70$, e.g., "I let my child sleep whenever she/he wants."). The original study reported moderate to high internal reliability values (.74–.83) and has been widely used with Turkish samples. Four control questions were added (participants were asked to choose a particular response option) to detect random responses. Participants who missed more than one control question were excluded from analyses involving PAS ($n = 2$).

Instrumental Lie-telling Scale. A modified version of the instrumental lie-telling questionnaire was used to measure the prevalence of parents' telling lies to their children as means to influence their behavior or emotions. This measure was retrospective in that parents were asked to think back to when their children were preschoolers. Developed by Heyman and colleagues (2013), the original questionnaire consisted of six types of everyday situations in which parents commonly make untrue statements (4 items per situation for a total of 24 items). For the current study, the questionnaire has been adapted and piloted using three prior samples ($n = 48$, $n = 56$, $n = 82$, respectively). Lies related to fantasy characters were excluded because the characters (e.g., the tooth fairy, Santa Claus, etc.) do not exist in Turkish culture. Also, some statements that are frequently used in Turkish culture were added (e.g., "Eat your food or it will start crying") and ones with little variance were removed. Overall, the final version of the questionnaire consists of 25 items and three control questions to detect random responses. Finally, response options were changed from binary to a 5-point Likert scale ranging from 0 (never) to 4 (always). An additional response option "I prefer not to answer" was also added to discourage skipping questions. Participants who missed the control questions were excluded from analyses involving this scale ($n = 3$).

In the current study, exploratory factor analyses were conducted. Based on the previous piloting, a threat lie subcategory (and the original positive affect subcategory) were anticipated on conceptual grounds. Threat lies were those in which the parental lie involved negative affect related to a direct threat or consequence for the child. Indeed, the factor analyses resulted in a three-factor structure (see [supplementary materials](#) for the details) that

included threat (.74) and positive affect lies (.71). A coherent third factor emerged for lies about resources/money (.82).

Everyday Lie-telling Scale. Two versions of this scale were developed by the researchers. However, the child version represented a low Cronbach alpha value (.50), hence, it was not included in further analyses. Only the parent version was used. The parent version assesses the frequency of parents' own lie-telling behaviors to others in everyday social situations that roughly matched the social situations in the child LET scenarios. For instance, an item to avoid punishment is "When knowing that I violate traffic rules and am stopped by a policeman, I say 'Sorry, I did not know'". Parents evaluate the frequency of such behaviors on a 5-point Likert scale ranging from 0 (never) to 4 (always). The response options "I prefer not to answer" and "I have never been in such a situation" were added to the questionnaires to avoid questions being left blank. Three control questions were added to detect random responses.

A precursor to this scale was piloted on a sample of 78 parent-child dyads ($n = 56$ parents). An earlier version of this scale was then piloted on a sample of 108 parent-child dyads ($n = 78$ parents). After factor analyses (see [supplementary materials](#)), the final questionnaire consisted of 9 items with a high Cronbach alpha (.73). Participants who missed the control questions were excluded from analyses ($n = 3$).

3 | RESULTS

3.1 | Data analysis approach

The overall purpose of the current study was to examine children's judgements of (in)appropriateness of lie-telling in a variety of social situations and how those judgements are related to domain-general and domain-specific parenting. Since the measure for children's evaluations of the (in)appropriateness of lie-telling behaviors was developed in the current study, we first conducted exploratory factor analysis to determine its factor structure before addressing the major aims. Regarding the first aim, we analyzed how the judgements of (in)appropriateness changed across 7-, 9-, and 11-year-olds between two lie-types. We conducted a mixed ANOVA for this purpose. In line with the second aim of the study, we first checked the bivariate relationships among main study variables. Then, two separate sets of multiple regression analyses were conducted to test the effect of domain-general and domain-specific parenting behaviors on judgements of (in)appropriateness. All relevant statistical values can be seen in Figure 1 and Tables 1–3. All analyses were performed with SPSS 26 (IBM Corp., 2019).

3.2 | Exploratory factor analyses for the LET

This task was developed to measure children's evaluations of the (in)appropriateness of lie-telling behaviors. There were eight items categorized into two subscales (self and social). To test whether the self/social lie-telling distinction holds when a diversity of social situations is considered, an exploratory factor analysis using PAF with Direct oblimin rotation was performed. Bartlett's test of sphericity ($\chi^2(28) = 204.09, p < .01$) and KMO of sampling adequacy (.75) values satisfied the criteria to proceed with the analysis. Results revealed two factors (four items for each). The first factor consisted of punishment, bullying, status, and respect scenarios; and explained 29% of total variance. The second factor consisted of politeness, positive affect, modesty, and shame scenarios; and explained 8% of the total variance. This means that three of the scenarios for each factor were consistent with the a priori conceptual structure, while one of the scenarios for each factor had opposite loadings (i.e., respect and shame scenarios). That is, these two scenarios switched places with the a priori self- versus social- structure. Considering this new pattern, the first factor continued to be labeled as *self-oriented lies* ($\alpha = .62$) and the

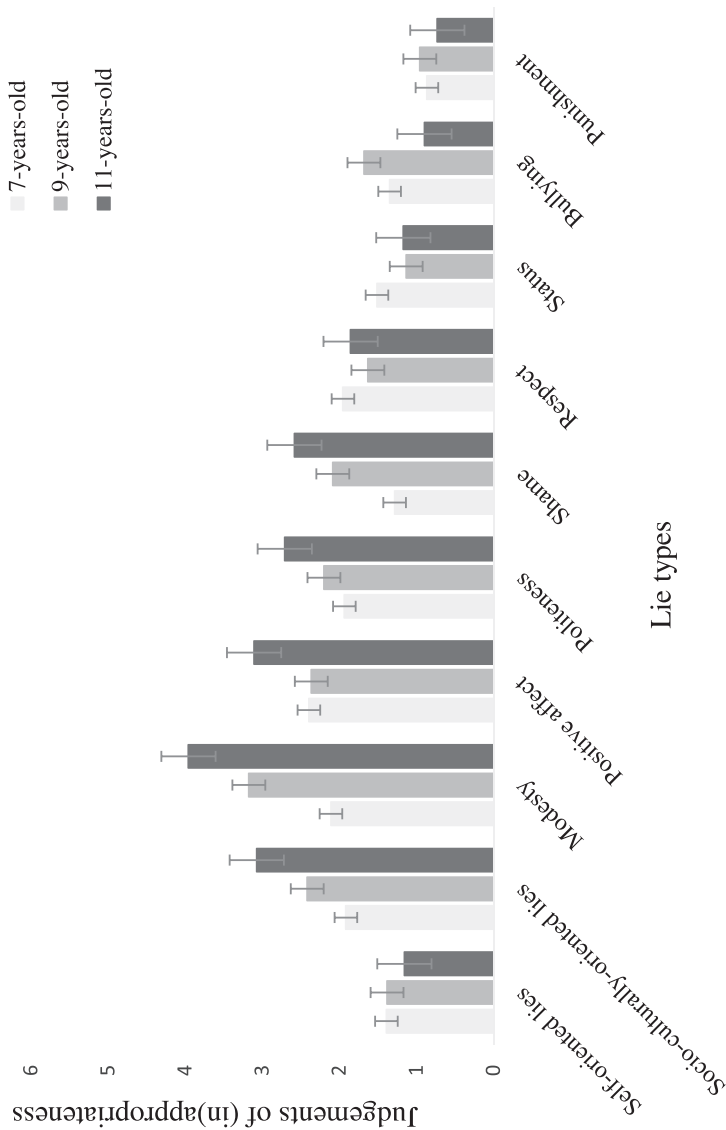


FIGURE 1 Mean scores of lie-telling scenarios across age groups (error bars show standard errors).

TABLE 1 Correlations between age, lie-telling, and parenting variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Age	1	-.11	.36***	-.04	.04	.15	.08	-.01	-.05	.09	.04
2. Self-oriented lies		1	.31***	-.05	.07	-.10	.17*	-.03	-.19**	.02	-.07
3. Socio-culturally oriented lies			1	-.01	-.01	.05	.13	.16*	-.19**	.06	.02
4. Authoritative parenting				1	-.49***	-.07	.03	-.14	-.20**	.09	-.09
5. Authoritarian parenting					1	.20**	.21**	.23**	.25***	-.03	-.04
6. Over-protective parenting						1	.06	.18**	.25***	.30***	.21**
7. Permissive parenting							1	-.06	-.19**	-.02	-.09
8. Lies about resources								1	.42***	.40***	.54***
9. Threat lies									1	.37***	.31***
10. Positive affect lies										1	.33***
11. Everyday lie-telling											1

* $p < .10$, ** $p < .05$, *** $p < .01$.

second factor was labeled as *socio-culturally-oriented lies* ($\alpha = .73$). Cronbach alpha value of the total scale was also moderate (.75).

3.3 | The development of children's understanding of lie-telling

Figure 1 shows the mean values for children's evaluations of the appropriateness of telling lies in the different types of social situations. In general, children rated lie-telling as inappropriate (i.e., scores below 3); however, self-oriented lies were rated more negatively than socio-culturally-oriented lies; and lie-telling for modesty reasons was rated as somewhat appropriate by the 9- and 11-year-olds (i.e., scores above 3).

A mixed ANOVA was conducted with Age (7-, 9-, 11-year-olds) as the between-subjects variable and Lie-type (Factor 1: self-oriented vs. Factor 2: socio-culturally-oriented) as the within-subjects variable. Results indicated a main effect of Lie-type, $F(1, 138) = 113.51$, $p < .01$, $\eta_p^2 = .45$, a marginal main effect of Age, $F(2, 138) = 2.77$, $p = .066$, $\eta_p^2 = .04$; and an interaction between Age and Lie-type, $F(2, 138) = 13.98$, $p < .01$, $\eta_p^2 = .17$, such that older children rated socio-culturally-oriented lies less negatively than younger children but were not different for self-oriented lies. Finally, self-oriented and socio-culturally-oriented lies were positively correlated ($r(141) = .31$, $p < .01$).

3.4 | The relations among parenting styles and parental deception

Bivariate analyses were performed to test the relationships among parenting variables (Table 1). Authoritarian parenting was negatively correlated with authoritative parenting ($r(117) = -.49$, $p < .01$) and positively with over-protective ($r(117) = .20$, $p < .05$) and permissive ($r(117) = .21$, $p < .05$) parenting styles (see Table 1). The three types of instrumental lie-telling were all correlated with each other. Lies about resources was positively correlated with threat lies ($r(116) = .42$, $p < .01$) and lying for positive affect ($r(116) = .40$, $p < .01$). Threat lies was positively correlated with lying for positive affect ($r(116) = .21$, $p < .01$). In addition, threat lies were positively related to authoritarian ($r(116) = .25$, $p < .01$) and over-protective ($r(116) = .25$, $p < .01$) parenting but negatively related to authoritative ($r(116) = -.20$, $p < .05$) and permissive ($r(116) = -.19$, $p < .05$) parenting. Parents' everyday lie-telling in everyday situations was

positively correlated with lies about resources ($r(116) = .54, p < .01$), threat lies ($r(116) = .31, p < .01$), and lying for positive affect ($r(116) = .33, p < .01$).

3.5 | The relations among parenting styles and parental deception, and children's understanding of lie-telling

two sets of multiple regression analyses were performed to investigate the relations between the parent variables and children's lie evaluations.³ The first two regressions concerned *domain-general parenting styles* and children's evaluations of the appropriateness of lie-telling (self-oriented and socio-culturally-oriented as the DVs). For both regressions, SES, gender, and age were entered in step 1, and *parenting styles* were entered in step 2 (see Table 2). For self-oriented lies as the DV, none of the models were significant. For socio-culturally-oriented lies as the DV, the full model was significant; however, this was due to age entered in step one. That is, none of the parenting style variables significantly predicted socio-culturally-oriented lies.

Two more regression analyses were performed with *domain-specific parenting behaviors involving deception* and children's evaluations as the DVs. For both regressions, SES, gender, and age were entered in step 1, and parental lie-telling behaviors were entered in step 2 (see Table 3). For self-oriented lies as the DV, the final model was not significant ($p = .11$). Threat lies significantly and negatively predicted self-oriented lies $\beta = -.31, p < .01$. For socio-culturally-oriented lies as the DV, the full model was significant and parental lies about resources $\beta = .39, p < .01$ and threat lies $\beta = -.40, p < .01$ significantly predicted children's socio-culturally-oriented lies. Age also significantly predicted socio-culturally-oriented lies in both steps, $\beta = .43, p < .01$.

4 | DISCUSSION

Similar to previous research, the current findings suggest that children generally evaluate all types of lies as not being appropriate (Fu et al., 2007; Lee et al., 2001). However, as children got older their evaluations of the socio-culturally-oriented lies became less negative. The average appropriateness evaluations for socio-culturally-oriented lies were 1.9 for 7-year-olds but increased to 2.4 and 3.1 for 9- and 11-year-olds respectively (a score of 3 was neutral). While the current study used a within-subjects approach to the different types of lies, the findings are generally consistent with past research in which lying for interpersonal reasons seems to be evaluated more positively compared to lies told that benefit the self (Cheung et al., 2015; Heyman, Sweet et al., 2009; Ma et al., 2011; Xu et al., 2010). However, past research suggests that the evaluations of prosocial lies in particular involve a shift from negative/(inappropriate) to positive/(appropriate) at around 9-years of age (Cameron et al., 2012; Cheung et al., 2015; Ma et al., 2011).

While such a shift was not the case for 9-year-olds in the current study, the 11-year-old children did show such a shift from negative to positive for lies involving modesty (see Figure 1). Also, for the 11-year-olds, the overall average of the socio-culturally-oriented lies was right at the mid-point between positive and negative. In contrast, self-oriented lies were generally rated as very inappropriate for all ages. However, the direct comparison between self- and socio-culturally-oriented lies for the same group of children suggests that the reason for the generally negative evaluation for self-oriented lies may be different across age groups. That is, the 7-year-old's evaluation of self-oriented lies as very inappropriate would seem to be because they evaluate all lies to be inappropriate (i.e., like a broken clock being right twice a day). In contrast, the 11-year-old's evaluation of self-oriented lies as very inappropriate may be more specifically because the lie is for the benefit of the self.

The extant literature has generally tested children on a single type of social situation that assumes a binary categorization (e.g., punishment as benefitting the self, prosocial or politeness for more social reasons). The current results partially validate this assumption through testing a wider variety of social situations but also adds some new considerations. The factor analyses in the current study suggested a grouping in which situations that involved modesty,

TABLE 2 Hierarchical regression analyses to test the main effects of parenting styles on appropriateness of lie-telling.

Models	Self-oriented lies					Socio-culturally-oriented lies				
	Unstandardized B (SE)	[95% CI]	β	R ²	ΔR^2	Unstandardized B (SE)	[95% CI]	β	R ²	ΔR^2
Step 1. Control variables										
SES	.20 (.11)	[-.03-.42]	.17*	.03	.03	-.11 (.14)	[-.39-.17]	-.07	.18***	.18***
Gender	.05 (.19)	[-.33-.43]	.03			-.24 (.24)	[-.71-.24]	-.09		
Age	-.00 (.01)	[-.01-.01]	-.08			.03 (.01)	[.02-.04]	.42***		
Step 2. Main predictors										
Authoritative parenting	-.30 (.30)	[-.90-.30]	-.11	.09	.06	-.04 (.38)	[-.78-.71]	-.01	.20***	.02
Authoritarian parenting	.05 (.28)	[-.51-.61]	.02			-.25 (.35)	[-.94-.45]	-.08		
Over-protective parenting	-.19 (.16)	[-.51-.13]	-.12			-.01 (.20)	[-.40-.39]	-.00		
Permissive parenting	.40 (.21)	[-.02-.82]	.19*			.34 (.26)	[-.18-.86]	.12		

Note: All β values were taken from the last step.
* $p < .10$, ** $p < .05$, *** $p < .01$.

TABLE 3 Hierarchical regression analyses to test the main effects of parent-reported lie-telling on appropriateness of lie telling.

Models	Self-oriented lies					Socio-culturally-oriented lies				
	Unstandardized B (SE)	[95% CI]	β	R ²	ΔR^2	Unstandardized B (SE)	[95% CI]	β	R ²	ΔR^2
Step 1. control variables										
SES	.17 (.12)	[−.06–.40]	.14	.03	.03	−.09 (.13)	[−.35–.17]	−.06	.19***	.19***
Gender	.01 (.20)	[−.37–.40]	.01			−.25 (.22)	[−.69–.19]	−.10		
Age	−.00 (.01)	[−.02–.01]	−.09			.03 (.01)	[.02–.04]	.43***		
Step 2. Main predictors										
Lies about resources	.25 (.18)	[−.11–.62]	.18	.11	.08*	.73 (.21)	[.32–1.15]	.38***	.35***	.16***
Threat lies	−.56 (.20)	[−.96–(−.16)]	−.31***			−.96 (.23)	[−1.42–(−.51)]	−.40***		
Positive affect lies	.21 (.15)	[−.09–.51]	.16			.12 (.17)	[−.22–.46]	.07		
Everyday lie telling	−.09 (.24)	[−.56–.39]	−.04			−.18 (.27)	[−.71–.36]	−.07		

Note: All β values were taken from the last step.

* $p < .10$, ** $p < .05$, *** $p < .01$.

positive affect, politeness, and avoiding shame went together. While the first three are lies that are more clearly socially-oriented, avoiding shame would seem to be about avoiding punishment (i.e., self-oriented). However, shame is a significant aspect of Turkish culture. In Turkish culture, defending one's honor is of central importance and actions towards protecting one's honor and avoiding shame can be considered acceptable given the stakes. For example, research has shown that actions towards "saving face" (i.e., avoiding shame) are more common in Turkish culture compared to Japanese honor culture (Boiger et al., 2014). Accordingly, it is plausible that children evaluate lying to avoid shame as being "culturally" appropriate even if it benefits the self.

The other grouping from the factor analyses included situations in which the protagonist was avoiding punishment, avoiding bullying, increasing one's status, and showing respect. While the first three are lies that are clearly directed towards oneself and told for one's own benefit, showing respect was assumed to be an action oriented towards others. However, the purpose of showing respect to others is not to diminish one's own status (i.e., it may be to benefit the self) and in cultures where respect is important, such displays are part of being accepted as a proper member of society (Glover & Hannum, 2008). Whether the "self-benefitting" aspect of respect is consistent across cultures is an open question worth exploring.

Overall, the current results indicated that children through the school years develop more nuanced evaluations of lies in relation to the social situations in which they take place. Such findings are generally consistent with previous studies conducted in other cultures. Although a given type of social situation has many relevant aspects, the basic differentiation between self- and socially-oriented situations seems reasonable. That said, which lies are deemed more "self-oriented" or "socially-oriented" will likely depend on the specific culture—hence the term "socio-culturally-oriented" lies. It is also likely that the same type of situation could be construed as either self-oriented or socially-oriented even within a culture. What implications such variability might have for moral development is an interesting question.

The deception literature is largely uniform in assuming a moral framing for all lie-telling situations. An often-cited source that argues for such a framing is the work by Bok (1978). That work argues that while there may be a few situations in which lie-telling is not bad, it is a slippery-slope, and so better to avoid the possibility that any lies are morally appropriate. However, there are a few reasons to consider whether a moral framing is a necessary starting point for developmental research on children's understanding of lie-telling. The first is developmental: while young children are able to differentiate moral transgressions from social conventions (from personal issues) the domain of reasoning that is used for a given situation changes with age (Smetana & Yoo, 2022). As discussed in Smetana (2017), part of how parents seem to indirectly socialize such differentiation is through their response to different types of transgressions. For example, more intense and angry responses have been shown to follow moral transgressions while more fearful responses follow for prudential violations (i.e., safety, harm to self) and more comforting and playful responses follow for prudential and pragmatic mistakes (Dahl et al., 2014). To the extent that these parenting responses differ across cultures so too would the domain of reasoning being socialized for the "same" situation.

Issues of moral development are further complicated by deeper theoretical considerations that apply to developmental research in general. Developmental research makes theoretical assumptions about the nature of knowing, learning, and development that permeate explanations and methodologies (Allen & Bickhard, 2022). For the most part, these assumptions and their connection to methods are not explicit (i.e., they are presupposed). However, some of these assumptions have been explicitly discussed for moral development in the context of an action-based approach to knowing and a process-relational approach to learning and development (Carpendale et al., 2013; Carpendale et al., 2021). The central point of that analysis is that the development of morality is emergent within interpersonal relations. In turn, this puts the proximal locus of relevance on social interaction and the situations within which those interactions are (culturally) meaningful. Accordingly, an action and process framing imply a perspective on the development of morality that is consistent with the socio-cultural approach being advocated in the current study.

Thus, the second reason to consider whether a moral framing for all lie-telling is appropriate is cultural. If children's judgements about lie-situations reflect the values of their culture, then differences in children's judgments across cultures would seem to suggest the morality of one culture and the (relative) immorality of the other. For example,

the stark cross-cultural differences present for Chinese and Canadian samples for modesty and group- versus individual-benefitting lies (Fu et al., 2007; Lee et al., 2001). The current point is not to suggest that no lie-telling situation is immoral (perhaps even universally immoral), but rather, that some situations might differ across cultures and that others may not be considered a moral transgression in the first place (e.g., the 3-year-old in the introduction who failed to wipe the chocolate from his face).

This agnosticism is consistent with an effort to avoid a sort of ethnocentrism about lie-telling situations without subscribing to a moral relativism. That is, when lies are judged bad in one culture and good (or less bad) in another, it need not follow that one of them is morally correct (at least not without strong considerations to the contrary). It also need not be problematic for the literature at large, instead, researchers can remain empirically open about where exactly the boundaries are for “moral” versus “social-interactional” lie-telling (such boundaries may themselves be blurry). It may turn out that the self-situations generally involve moral considerations while the socio-cultural situations are more variable across situations and cultures. However, any definitive conclusions may need to wait for more empirical studies across a wider variety of situations and cultures in conjunction with theoretical work concerning development more broadly.

4.1 | Convergent validity: the relations among parenting styles and parental deception

Parent's *authoritarian* and *over-protective* practices were significantly correlated with their use of threat lies, and *authoritative* and *permissive parenting* were negatively correlated with the use of those lies. This means that parents who are higher in their levels of control also resorted more to the use of threats to get their children to comply. In contrast, parents who showed more appropriate (or low) amounts of control used such threats less frequently. These findings make sense given that the use of threatening lies may be an easy solution to control children's behavior. On the other hand, an appropriate amount of control can be achieved more easily with open and direct communication and may not require the use of lies that involve threats. Further, parents who have realistic expectations (or in the case of permissive parenting, few expectations) for their children may find it unnecessary to use threatening lies as a parenting practice in general (Robinson et al., 1995).

In addition to threat lies, lies about family resources were also positively correlated with both over-protective and authoritarian parenting. Over-protective parenting is normative in collectivistic cultures (Sümer & Kağıtçıbaşı, 2010) and involves putting excess importance on rules, rewards, punishment, academic success, and most importantly, their children's comfort and safety (Domènech-Rodriguez et al., 2009). For parents who emphasize their children's safety and comfort and apply psychological control through overprotection, telling lies about the presence/absence of existing resources, may function to prepare children for “the worst-case scenario”. Further, over-protective parenting was the only style that was correlated (positively) with parents' use of lies to increase children's positive affect. This is also consistent with a characterization of the over-protective style that emphasizes safety and comfort and suggests a type of control different in quality from the coercive version found with authoritarian practices. This characterization would mean that these parents are more likely to ensure that their children generally avoid distressing emotions through whatever means are available, including telling lies across situations.

4.2 | The influence of domain-general parenting styles and domain-specific parental deception on children's understanding of lie-telling

Parenting styles did not predict children's evaluations for either self- or socio-culturally-oriented lie situations. Authoritarian parenting reflects a number of coercive and punitive practices which have been argued to encourage the use of self-benefitting lies (Lewis, 1993; Talwar & Lee, 2011); however, findings are mixed for the preschool age (Ma et al., 2015; Talwar et al., 2017). In the current study, authoritarian parenting was not predictive of any of

children's evaluations. Instead, parents' instrumental use of threat lies *negatively* predicted children's evaluations for both self- and socio-culturally-oriented situations. However, the direction of the predictive effect was contrary to our expectations. That is, children who were often subjected to threatening lies as preschoolers evaluated all lie situations more harshly when they got older. If parent's use of threat lies modeled an effective strategy for coercive purposes, then children were expected to learn that functionality for themselves and judge self-lies more positively (i.e., a positive relationship). However, the lack of differentiation between types of lies and the lack of a positive relationship suggests that children are not modeling their parents' deceptive practices at any level of generalization. Instead, from the child's perspective (Bok, 1978), the deceptive experience with threat lies may be sufficiently unpleasant so as to "teach" children that lying is generally unpleasant and should be evaluated negatively.

Threat lies are potentially distinctive from other instrumental lies in that they involve negative affect directed toward the child and this may be what has a lasting impact on how children think about lie-telling in general (i.e., across both types of lie situations). While the coercive practices related to authoritarian parenting are also negative in terms of emotional affect, it seems that the more specific deception content present for telling lies is also required to influence children's lie-telling evaluations. Further, the coercive aspect of authoritarian parenting may not always be present in non-western cultures (Sorkhabi, 2012) such that we should not necessarily have expected an effect for the current sample. Regardless, the general lack of significant associations between parenting styles and deception is convergent with the study by Popliger et al. (2011) that included children of a similar age. That study found a positive relation of *authoritative* parenting on children's pro-social deception but no relation for authoritarian. Different from the current study, that study was focused on lie-telling *behavior* in a pro-social context only and the authors indicated that the effect was relatively small.

Interestingly, instrumental lies about resources showed the opposite predictive pattern from instrumental threat lies (i.e., a positive relationship in contrast to a negative relationship). That is, parents who told lies to their children about the presence/absence of resources had children who rated socio-culturally-oriented lie situations more positively. Lies about resources may be a less emotionally charged lie-telling context compared to threat lies, and, while positive affect lies are explicitly focused on emotions in terms of making children feel better, they do not concern compliance. Threatening lies rely on negative emotions in terms of using the child's fear/guilt to motivate compliance whereas lies about resources attempt to put distance between the child and their request through the creation of a new "obstacle". The request is not denied per se, instead, it is delayed in some way or other to appease the child in the moment without actually granting the request (e.g., "I didn't take any money with me today, we'll come back another day."). Accordingly, resource lies may provide a more emotionally neutral context for implicitly modeling to children that lie-telling need not be universally bad. Further, given the context, it may demonstrate explicitly that lie-telling has a social-coordinative function in ways that lead children to generally consider socio-cultural lies as somewhat appropriate.

The general rationale to test for the relevance of parental deceptive practices (both instrumental and everyday) for children's socialization of deception was some form of social-learning. This possibility was most straightforward in the case of parent's everyday lie-telling. Everyday lie-telling implied a view of the adult as an explicit model to be imitated from a third-person perspective. That is, children with parents who lied often would have had explicit modeling for similar situations in the child's life and/or implicit modeling that lies are generally acceptable. In contrast to instrumental lie-telling, the third-person perspective would also remove the potential role of emotional experience from the child's social-learning. However, parent's everyday lie-telling had no relation to children's evaluations for either self- or socio-cultural lies. Given that there were only relations for instrumental lie-telling suggests an important role for whether or not you are the lie-teller or lie-recipient. A major theme from Bok (1978) is that the recipient of lies may have a different interpretation than the producer. While this theme was in the context of whether it is okay (or not) to sometimes lie to others, it may apply here for thinking about how the effect of modeling depends on how/what the child is prepared to learn when being the recipient of a lie.

Collectively, the results from the current study suggest three things about the influence of parents on their children's socialization of deception. First, consistent with the theoretical claim by Tong and Talwar (2021), the influence

from parents seems to be more specific than general. The domain-specific influence of parental lying was robust in terms of magnitude and it applied to *both* types of lie-telling situations. Second, applying to both situations suggests that parental instrumental lying results in less overall differentiation of types of lies for their children. Third, the direction of the relationship between type of parental lying and child outcomes may depend on the affectivity of the lie-telling situation and how it is experienced by the child. That is, the use of negatively-valenced lies by parents resulted in children showing a sort of negativity bias about lies, while the opposite was true for more the more affectively neutral lies in the resource situations. This difference in the direction of the relations would seem to suggest that children do not see the adult as a model to “imitate” unless the interaction involves first-person experience and is not emotionally unpleasant. While longitudinal research would be needed to validate this implication, the current data would seem to provide initial support for the hypothesis.

4.3 | Limitations and future directions

Regarding the child LET measure, the exploratory factor analysis for the different social situations meant rethinking how to characterize self- and socially-oriented lie-telling. It is likely that the nature of some situations will change according to culture, so it would be interesting to see how the “same” social situations cluster for a different culture (e.g., perhaps the shame situation would show its self-benefiting character in a more individualistic culture). Further, there is likely to be within culture variability that would change the status of the lie across situations. In some cultures, there may be strong norms against lying to the teacher separate from norms about lying to adults. Future research could begin to dissect the various aspects of the different types of social situations to determine relevant influences on children’s judgments.

Regarding parent measures, one limitation of the current study may be the retrospective nature of the instrumental lie-telling scale; however, the robust alphas do not suggest a psychometric problem. For the everyday lie-telling scales, it may be useful for future research to control for social desirability effects. It may also be important to ask parents whether their everyday lie-telling happens in the presence of their children. That said, the correlations amongst the different parenting measures suggest robust convergent validity for all of the scales. Further, the data for children was collected independently from parents which makes any relations unlikely to be due to systematic misreporting by parents. Separate from any potential desirability effects, the child version of the everyday lie-telling scale should be developed further given the low Cronbach’s alpha (.50). Finally, the cross-sectional nature of the study means any potential causal interpretations are only hypotheses at this point. Future research will need to determine longitudinally whether parental lie-telling in preschool has a causal influence on children’s understanding of deception at later ages.

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CONFLICT OF INTEREST STATEMENT

The Authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

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

ETHICS APPROVAL STATEMENT

Ethical approval from Bilkent University and the Ministry of National Education of Turkey was obtained. This study has been conducted in accordance with guidelines on the ethics of research published by the American Psychological Association.

ENDNOTES

¹ Additional tasks/questions were assessed (~10 min) but are not part of the current study.

² An earlier version of all measures were piloted with a separate sample of 108 parent-child dyads.

³ Two more regression analyses were performed to test the most relevant domain-general (i.e., authoritative and authoritarian) and domain-specific (i.e., lies about resources and threat lies) parental practices together in the same model. Similar to previous analysis, SES, gender, and age were controlled in step 1, the main predictors were entered in step 2, and outcome variables were self-oriented and socio-culturally oriented lies. The results did not change the patterns to be reported here, and thus, were left out.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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APPENDICES

APPENDIX A

SAMPLE PUNISHMENT SCENARIO AND FOLLOW-UP QUESTIONS

Story 1. During the lunch hour, when it is forbidden to enter the school building, Mert/Aylin snuck into the school. When the hall monitor saw Mert/Aylin, he said to him/her that s/he has to inform the principal about students who entered the building without permission and asked Mert/Aylin whether s/he has permission. Because Mert/Aylin did not want to be punished, s/he told the hall monitor that his/her teacher gave him/her permission to enter the school building.

Follow-up questions:

Comprehension question 1: Did Mert/Aylin have permission to enter the school or not?

Comprehension question 2: What did Mert/Aylin say to the hall monitor when s/he asked Mert/Aylin if s/he had permission to enter the school building?

Categorization question 1: Is what Mert/Aylin said a lie or the truth?

Categorization question 2: Mert/Aylin didn't have permission to enter the school building, but when the hall monitor asked, Mert/Aylin said to him/her that s/he had permission. Why did Mert/Aylin tell that to the hall monitor?

Lying-evaluation Question: How appropriate is what Mert/Aylin said to the hall monitor?

-Is it very appropriate, appropriate, a little appropriate, neither appropriate nor inappropriate, a little inappropriate, inappropriate, or very inappropriate?