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Journal of Experimental Child Psychology

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Brief Report

Parenting by lying in childhood is associated with negative developmental outcomes in adulthood



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ARTICLE INFO

Article history:

Received 26 September 2018

Revised 1 August 2019

Available online 26 September 2019

Keywords:

Lying

Parenting

Dishonesty

Externalizing problems

Internalizing problems

Psychopathy

ABSTRACT

Parenting by lying refers to the parenting practice of deception to try to control children's behavioral and affective states. Although the practice is widely observed across cultures, few studies have examined its associations with psychological outcomes in adulthood. The current research fills this gap by sampling 379 young Singaporean adults who reported on their childhood exposure to parenting by lying, their current deceptive behaviors toward parents, and their psychosocial adjustment. Results revealed that the adults who remembered being exposed to higher levels of parenting by lying in childhood showed higher levels of deception toward their parents and higher levels of psychosocial maladjustment. Our findings suggest that parenting by lying may have negative implications for children's psychosocial functioning later in life.

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Introduction

Honesty is a moral imperative in human societies. Parental attitudes and behaviors, however, are at odds with one another. Parents often emphasize the importance of honesty when socializing their children (Heyman, Luu, & Lee, 2009), yet parents worldwide lie to their children to elicit compliance

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(Heyman, Hsu, Fu, & Lee, 2013). Parental lying behavior that aims to elicit children's compliance has been frequently referred to as parenting by lying (Heyman et al., 2013).

The role that parenting by lying plays in children's sociomoral development is not entirely clear. Namely, what are the links among parenting by lying, children's lying behavior, and children's subsequent psychosocial outcomes? To date, only one study has investigated such associations (Santos, Zanette, Kwok, Heyman, & Lee, 2017). The current research extends Santos et al.'s (2017) work by examining parenting by lying in a sample of Singaporean young adults who reported their childhood exposure to parenting by lying and their current lying behaviors and psychosocial functioning.

In early childhood, children frequently observe their parents' behaviors and are likely to use these observations to infer which behaviors are normative (Bandura, 1969). From a parental socialization framework, parenting by lying may promote lying behavior in children because parents model lying behaviors that their children might imitate. Prior research has shown that when non-kin adults model dishonesty to children, adults' dishonesty can affect children's moral behavior (Hays & Carver, 2014; Scheiderer & O'Connor, 1973). For example, 5- to 7-year-old children were more likely to lie about their cheating behavior in a game if an experimenter lied to them prior to the game (Hays & Carver, 2014).

Children's own lying behavior can be indicative of maladaptive outcomes, including the development of externalizing behavior difficulties such as disruptiveness (Gervais, Tremblay, Desmarais-Gervais, & Vitaro, 2000) and conduct problems (Stouthamer-Loeber, 1986; Warr, 2007). Although less research has examined the relationship between lying and internalizing problems, there is evidence to suggest that children's lying behavior is also associated with internalizing problems such as anxiety and social isolation through the experience of guilt and shame after lying (Baumeister, Stillwell, & Heatherton, 1994; Keltner & Buswell, 1996). Furthermore, there is evidence to suggest that frequent engagement in deceptive behavior is a marker of psychopathy, which is characterized by callous unemotional traits and a disregard for the rights of others (Levenson, Kiehl, & Fitzpatrick, 1995).

Beyond their own dishonesty, children's maladjustment problems may also be associated with parenting by lying. Specifically, it is possible that repeated exposure to parental lying erodes trust within interpersonal relationships (Michaelson & Munakata, 2016; Yi et al., 2014). If children learn that their parents are untrustworthy, children may be less trusting in relationships (Yi et al., 2014). As a result, children might experience difficulties in forming and maintaining close relationships, which in turn may lead to the development of internalizing problems such as social withdrawal and depression (Bernath & Feshbach, 1995). In addition, children who observe parenting by lying may be inadvertently learning ineffective ways of handling difficult situations and dealing with interpersonal conflicts. Specifically, through observing parents' practice of lying, children can become aware of its effectiveness in inducing behavioral compliance from others (Heyman et al., 2013). Eventually, children may imitate their parents and turn to pathological lying to elicit behavioral compliance, which is an example of externalizing behavior (Hays & Carver, 2014; Stouthamer-Loeber, 1986). Engaging in pathological lying is an early risk factor of psychopathy (Levenson et al., 1995). Thus, it is important to investigate the associations between parenting by lying and internalizing problems, externalizing problems, and the expression of psychopathic traits in order to better understand associations between parenting by lying and psychosocial functioning across development.

To date, only four studies have investigated the phenomenon of parenting by lying. These studies have used three different ways to measure parenting by lying: observing parents and children (Brown, 2002), asking adults about the lies their parents told them in childhood (Heyman et al., 2009; Santos et al., 2017), and asking parents about the lies they told to their children (Heyman et al., 2009, 2013). Findings from these studies demonstrate that parenting by lying, in which parents lie to influence their children's behavioral or emotional states, is a common parenting practice everywhere it has been studied, including the United States (Heyman et al., 2009, 2013), Canada (Santos et al., 2017), China (Heyman et al., 2013), and Mexico (Brown, 2002).

There has been only one study addressing the associations between parenting by lying and psychosocial maladjustment (Santos et al., 2017). In this cross-sectional study, childhood exposure to parenting by lying was positively correlated with adulthood lying to parents and psychosocial maladjustment issues, including both externalizing and internalizing problems. One major limitation of the study, however, is that the sample was entirely female and, therefore, might not be generaliz-

able to male individuals. Although adults generally show similar amounts of lying behavior regardless of gender (Chiu, Hong, & Chiu, 2016; DePaulo & Kashy, 1998), male inclusion in the parenting by lying framework is critical, especially given that adolescent boys report both a higher tolerance of lying (Keltikangas-Järvinen & Lindeman, 1997) and a greater frequency of lying to parents when compared with their female counterparts (Engels, Finkenauer, & Van Kooten, 2006). Furthermore, there are gender differences in the prevalence of externalizing and internalizing problems, where male individuals are more likely to experience externalizing problems and female individuals are more likely to experience internalizing problems (Zahn-Waxler, Shirtcliff, & Marceau, 2008). Thus, the current study included a larger, more representative sample than the study by Santos et al. (2017) through the inclusion of both male and female participants.

The current study investigated parenting by lying in Singapore, where Chinese, Malay, and Indian cultures coexist. Sampling from a multiracial culture allows us to expand our understanding of parenting by lying. In addition, the vast majority of the Singaporean population is fluent in English, allowing the study to be conducted using the same measures as the previous studies, which provides greater grounds for exploring cross-cultural similarities/differences between Singapore and other English-speaking countries such as the United States and Canada.

Three predictions were tested in the current study. First, individuals who report higher levels of exposure to parenting by lying in childhood will also report deceiving their parents more frequently in adulthood. Second, the frequency of lying to parents will be positively correlated with psychosocial maladjustment, particularly externalizing problems, internalizing problems, and psychopathic attributes. Third, exposure to parenting by lying in childhood will be associated with higher levels of psychosocial maladjustment in adulthood, and the relationship will be mediated by the frequency of lying to parents in adulthood.

Method

Participants

A total of 379 Singaporean adults participated in the current study (186 women; $M_{\text{age}} = 21.67$ - years, $SD = 1.98$). Our sample consisted of 88.7% Chinese, 4.2% Indian, 3.7% Malay, and 3.4% "other". Participants were recruited from a developmental psychology class ($n = 274$) and through on-campus advertisements ($n = 105$). Participants were compensated for their time with either course credit or 15 Singapore dollars. The study was approved by Nanyang Technological University's institutional ethics review board.

Measures

After informed consent was obtained, participants provided their demographic information and completed four online questionnaires.

Parenting by lying questionnaire

Parenting by lying was assessed by a 16-item questionnaire developed by Heyman et al. (2013). Four categories of widely observed lies that parents tell to their children were surveyed: (a) lies that involved eating, (b) lies that involved leaving and/or staying, (c) lies related to children's misbehavior, and (d) lies that involved spending money (see online [supplementary material](#)). The questionnaire has demonstrated satisfactory internal consistency in prior work ($\alpha = .70$: Santos et al., 2017; $\alpha = .92$: Heyman et al., 2013). For each target item, participants were asked to recall whether their parents told them the target lie by indicating *yes*, *no*, or *don't remember*. The *don't remember* response option was included so we could ensure that participants choosing *yes* or *no* were recalling with certainty. The total parenting by lying score was created by summing the lies recalled with a *yes* response (Cronbach's $\alpha = .76$). Higher scores indicate a higher exposure to parenting by lying in childhood.

Lying to parents questionnaire

The lying to parents questionnaire was adapted from Engels et al. (2006). The 12-item survey assessed the current frequency of participants' lying to their parents. This questionnaire has displayed high internal consistency in previous research ($\alpha = .90$: Engels et al., 2006; $\alpha = .90$: Santos et al., 2017). It consisted of three aspects of lying to parents: (a) explicit lies about activities and actions (eight items), (b) prosocial lies (two items), and (c) exaggerations about circumstances and events (two items). Participants indicated how frequently they lied to their parents in adulthood on a 5-point Likert scale ranging from 1 = *never* to 5 = *very often* (Cronbach's $\alpha = .83$). Higher scores indicate more frequent lying to parents.

Adult self-report questionnaire

The Adult Self-Report (ASR) questionnaire included 126 items assessing adults' general adaptive functioning as well as specific psychosocial dysfunctions based on criteria in the DSM-5 (*Diagnostic and Statistical Manual of Mental Disorders*, fifth edition; Achenbach, 2003, 2013). We used age- and gender-normed scores generated by the ASR to measure two types of psychosocial maladjustment: externalizing problems (e.g., aggression, rule-breaking, and intrusive behaviors) and internalizing problems (e.g., anxious, depressed, and withdrawn behaviors). Higher scores on these scales indicate more severe maladjustment. Internal consistencies (Cronbach's α s) for externalizing problems and internalizing problems were .90 and .93, respectively.

Levenson self-report psychopathy scale

The Levenson self-report psychopathy scale consisted of 26 items that assessed psychopathic attributes among the noninstitutionalized population (Levenson et al., 1995). This instrument evaluated both primary (16 items) and secondary (10 items) psychopathic attributes. The primary psychopathy items assessed an individual's tendency to behave selfishly and manipulatively during interpersonal interactions, whereas the secondary psychopathy items assessed an individual's impulsive and impetuous behaviors. Participants indicated their endorsement for each item on a 4-point Likert scale ranging from 1 = *disagree strongly* to 4 = *agree strongly*. Six items were reverse coded. Higher scores indicated greater endorsement of psychopathic attributes. The scale showed high internal consistency (Cronbach's $\alpha = .85$).

Results

Prior to conducting the analyses, two participants with z scores beyond 3 standard deviations of the mean on the lying to parents questionnaire were identified as outliers and subsequently were removed from the analyses. The final sample consisted of 377 participants (186 women; $M_{\text{age}} = 21.66$ - years, $SD = 1.98$).

Pearson correlation coefficients among demographic factors (gender, age, and household income), recruitment type, and the five outcome measures were computed (see Table 1). Parenting by lying was positively correlated with frequency of lying to parents as well as with psychosocial maladjustment variables. In addition, frequency of lying to parents was related to psychosocial maladjustment and psychopathic attributes.

In our preliminary analysis, we explored potential gender differences among parenting by lying, lying to parents, and the three psychosocial outcomes. Gender was related to psychopathy, where men reported higher levels of psychopathic traits than women. Preliminary analyses suggested that gender did not moderate the relationships among variables of interest and was not a moderator of the direct and indirect paths in the model reported below. Given the lack of significant gender differences, gender was not explicitly explored in the subsequent path analysis; however, it was controlled for within the analysis. Household income was negatively correlated with the frequency of lying to parents as well as with all three psychosocial maladjustment variables. Hence, household income was controlled for in the analysis. Lastly, because paid participants were generally older and reported greater internalizing problems and psychopathic traits when compared with their non-paid counterparts, recruitment mode was also controlled for in the following analysis.

Table 1

Means, standard deviations, and Pearson correlation matrix of the study variables and demographic factors.

Variable	M	SD	1	2	3	4	5	6	7	8
1. Parenting by lying	6.11	3.35	–							
2. Lying to parents	19.00	6.09	.18**	–						
3. Externalizing	49.11	10.15	.19***	.36***	–					
4. Internalizing	53.33	11.27	.09 [†]	.29***	.67***	–				
5. Psychopathy	29.26	9.89	.12*	.25***	.36***	.30***	–			
6. Gender	–	–	.00	–.09	–.03	–.08	–.43***	–		
7. Age	21.66	1.98	.04	.02	–.01	.07	.35***	–.62***, [‡]	–	
8. Income	–	–	–.04	–.18***	–.19***	–.11*	–.13*	.08	–.10*	–
9. Recruitment mode	–	–	–.01	.00	–.06	–.12*	–.56***	.61***	–.58***	.04

[†] $p < .10$.

** $p < .05$.

*** $p < .01$.

**** $p < .001$.

[‡] Most Singaporean men are enlisted in the National Service for 2 years before they enroll in university; thus, male students are older than their female counterparts.

A path analysis was conducted to examine the mediating role of lying to parents in the relationship between parenting by lying and the three psychosocial maladjustment variables, controlling for gender, age, household income, and recruitment mode, as well as the covariances among the maladjustment variables. Following the analysis approach recommended by Zhao, Lynch, and Chen (2010), the indirect effects were tested with 5000 bootstrapped samples in Mplus Version 7.4 (Muthén & Muthén, 1998–2015). The model fit indices are $\chi^2 = 18.195$, $df = 4$, $p = .001$, root mean square error of approximation (RMSEA) = .097, 90% confidence interval (CI) [.055, .144], comparative fit index (CFI) = .974, standardized root mean square residual (SRMR) = .031. According to Mueller and Hancock (2008), the model has a good data–model fit.

Parenting by lying and lying to parents

Fig. 1 displays results from the path analysis that explored the relationship among parenting by lying, lying to parents, and psychosocial maladjustment problems.

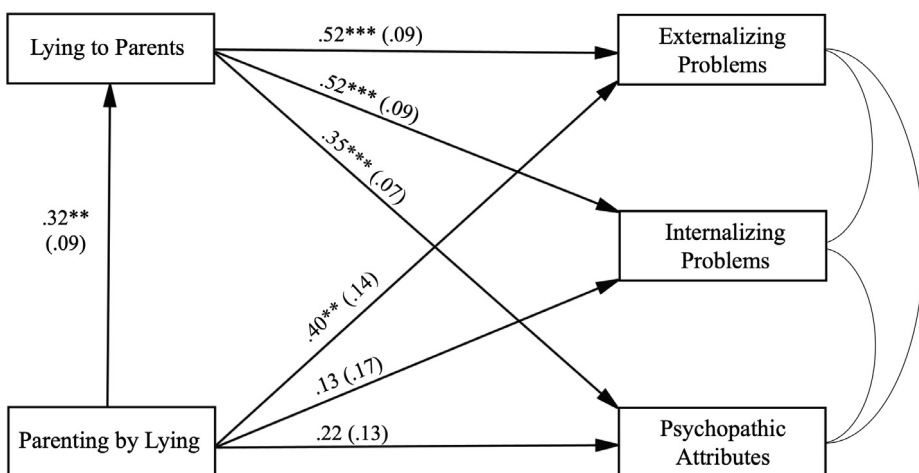


Fig. 1. Path analysis with parenting by lying as X, lying to parents as M, and the three maladjustment variables as Ys. Gender, age, household income, and recruitment mode were included as covariates but are not depicted. The coefficients are unstandardized coefficients. Standard errors are in parentheses. ** $p < .01$; *** $p < .001$.

The first prediction regarding the association of parenting by lying with lying to parents was examined. In the model, the path from parenting by lying to lying to parents was significant, $B = .32$, $SE = .09$, 95% CI [.14, .50], $p = .001$. That is, the more young adults recalled their parents lying to them as children, the more likely they were to report lying to their parents as adults.

Lying to parents and psychosocial maladjustment problems

We also found support for our second prediction. Specifically, we found that lying to parents was positively associated with each of the psychosocial maladjustment variables, including externalizing problems, $B = .52$, $SE = .09$, 95% CI [.34, .69], $p < .001$, internalizing problems, $B = .52$, $SE = .09$, 95% CI [.34, .70], $p < .001$, and psychopathic attributes, $B = .35$, $SE = .07$, 95% CI [.21, .48], $p < .001$. These results can be interpreted to mean that frequent lying to parents in adulthood predicted maladjustment problems.

Parenting by lying and externalizing problems

The model revealed a significant positive indirect effect between parenting by lying and externalizing problems through the influence of lying to parents, $B = .17$, $SE = .06$, 95% CI [.07, .30], $p = .005$. In addition, we discovered a significant positive direct effect of parenting by lying on externalizing problems, $B = .40$, $SE = .14$, 95% CI [.13, .67], $p = .005$, even after controlling for the effect of lying to parents. According to Zhao et al. (2010) classification approach, there was a complementary mediation between childhood parenting by lying and adulthood externalizing problems given that both the direct and indirect pathways were significant. Specifically, the indirect pathway indicates that parenting by lying was related to externalizing problems via the effect of lying to parents, and the direct pathway reveals an unmediated association between parenting by lying and the severity of externalizing problems.

Parenting by lying and internalizing problems

For the relationship between parenting by lying and internalizing problems, the path analysis revealed an indirect-only mediation (see Zhao et al., 2010). Specifically, there was a significant positive indirect effect, $B = .17$, $SE = .06$, 95% CI [.07, .31], $p = .005$, but no significant direct effect of parenting by lying on internalizing problems, $B = .13$, $SE = .17$, 95% CI [-.20, .46], $p = .450$, after controlling for lying to parents. Lying to parents fully explained the relationship between childhood parenting by lying and adulthood internalizing problems. These results suggest that childhood exposure to parenting by lying was positively related to the frequency of adulthood lying to parents, which in turn was related to the severity of internalizing problems in adulthood.

Parenting by lying and psychopathic attributes

Lastly, the model revealed only a significant indirect effect between parenting by lying and psychopathic attributes, $B = .11$, $SE = .04$, 95% CI [.05, .21], $p = .008$. The association between parenting by lying and psychopathic attributes was no longer significant after controlling for lying to parents, $B = .22$, $SE = .13$, 95% CI [-0.02, 0.48], $p = .080$. Parenting by lying predicted psychopathic attributes only through the effect of lying to parents. Thus, an indirect-only mediation existed between childhood parenting by lying and psychopathic attributes, with lying to parents acting as the mediator.

Discussion

The current study aimed to investigate the associations between exposure to parenting by lying in childhood and psychosocial outcomes later in life. Specifically, we examined the association between self-recalled childhood exposure to parenting by lying and current lying behavior toward parents as well as current psychosocial maladjustment among young Singaporean adults. There were four major

findings. First, greater recall of exposure to parenting by lying in childhood was associated with more frequent lying toward parents in adulthood. Second, reports of higher levels of lying to parents were linked to reports of higher levels of psychosocial maladjustment among young adults, including externalizing problems, internalizing problems, and psychopathic attributes. Third, greater recall of childhood parenting by lying in young adults was related to the severity of externalizing problems above and beyond the influence of lying to parents. Lastly, lying to parents mediated the relationship between childhood experience of parenting by lying and current psychosocial maladjustment.

As predicted, extensive exposure to parenting by lying in childhood was associated with greater use of deception toward parents in adulthood. By lying in the presence of their children, parents may be implicitly teaching their children that dishonesty is permissible and is an acceptable means to an end. Reciprocity is another potential mechanism of behavioral transmission. That is, after realizing that a parent is dishonest, children might lie to their parents in return. Dishonesty erodes trust, and children might not feel obliged to tell their parents the truth after learning that their parents are untrustworthy (Jones, Cohn, & Miller, 1991).

Increased lying behavior toward parents was related to greater psychosocial maladjustment among young adults, including externalizing problems, internalizing problems, and psychopathic attributes. These results are consistent with previous research indicating that frequent lying in children and adolescents may be associated with disruptiveness, conduct problems, and a lack of self-regulation (Engels et al., 2006; Gervais et al., 2000; Stouthamer-Loeber, 1986).

We also found support for the third prediction, which suggests that lying to parents mediated the relationships between childhood exposure to parenting by lying and the three psychosocial maladjustment variables. In fact, parenting by lying contributed to internalizing problems and psychopathic attributes only through lying to parents (indirect pathway). This is consistent with prior evidence suggesting that frequent lying behavior is one of the most prominent features of child and adolescent psychopathy (Levenson et al., 1995). The relationship between parenting by lying and externalizing problems, however, had significant direct and indirect paths, indicating that parenting by lying and externalizing problems have a direct association even after controlling for lying to parents. In a similar vein, Hays and Carver (2014) found that children were more likely to act impulsively and break the rules of a game after being lied to by an adult. Hence, parental lying may have implications for children's behaviors that go beyond modeling dishonesty. Specifically, parenting by lying could place children at a higher risk for developing externalizing problems.

There are a number of limitations to address in future studies. One major limitation is that, due to the nature of this study's correlational design, we are unable to draw causal inferences. An alternative explanation for the current findings is that individuals who lie to their parents may have a bias toward recalling more frequent instances of parenting by lying. It is also possible that psychosocial maladjustment leads to more lying because children need to lie more to avoid punishment. It is also unclear how parenting by lying may relate to other parental variables that can have important implications for socialization such as parents' sensitivity/responsiveness and discipline (Stouthamer-Loeber, 1986). Therefore, although we interpret our results through a parental socialization framework, there are other possible explanations that have yet to be explored. To address these remaining questions, it is necessary for future research to adopt experimental or longitudinal methods.

Another major limitation in our study relates to data collection using retrospective reporting. By asking participants to recall their early childhood experiences from 10 to 15 years earlier, participants may have over- or under-reported in the parenting by lying questionnaire. Furthermore, it is possible that certain life events (e.g., death in the family, estranged relationship from parents) may have influenced participants' recollection of their childhood. Moreover, it is important to recognize that our single-informant design may have inflated the magnitude of the hypothesized relationships by creating shared variances among the study variables. Future research should aim to address these concerns by using multiple informants (e.g., parents) to report on the same variable.

Lastly, the effects of parenting by lying may be influenced by the nature of the lies or the goals of the parent (see Grusec, 2008). For instance, lies that are assertions of parents' power (e.g., "If you don't behave, we will throw you into the ocean to feed the fish") might be more closely tied to children's psychosocial maladjustment as compared with lies that simply target children's compliance (e.g., "There's no more candy in the house").

To conclude, the current study investigated associations among childhood exposure to parenting by lying, lying to parents, and adulthood psychosocial adjustments among young Singaporean adults. Our findings suggest that parental lies that are intended to influence children's behavioral and emotional states may have negative long-term implications for children's psychosocial functioning.

Acknowledgments

This research was supported by a Nanyang Technological University Start Up Grant, Singapore (M4081490) and a Singapore Ministry of Education Social Science Research Thematic Grant (MOE2016-SSRTG-017) to Peipei Setoh.

Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jecp.2019.104680>.

References

- Achenbach, T. M. (2003). *Manual for the ASEBA Adult Forms & Profiles*. Burlington: University of Vermont.
- Achenbach, T. M. (2013). *DSM-oriented guide for the Achenbach System of Empirically Based Assessment (ASEBA)*. Burlington: University of Vermont, Research Center for Children, Youth, and Families.
- Bandura, A. (1969). Social-learning theory of identificatory processes. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 213–262). Chicago: Rand McNally.
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, *115*, 243–267.
- Bernath, M. S., & Feshbach, N. D. (1995). Children's trust: Theory, assessment, development, and research directions. *Applied and Preventive Psychology*, *4*, 1–19.
- Brown, P. (2002). Everyone has to lie in Tzeltal. In S. Blum-Kulka & C. E. Snow (Eds.), *Talking to adults: The contribution of multiparty discourse to language acquisition* (pp. 241–275). Mahwah, NJ: Lawrence Erlbaum.
- Chiu, S. L., Hong, F. Y., & Chiu, S. I. (2016). Undergraduates' day-to-day lying behaviors: Implications, targets, and psychological characteristics. *Social Behavior and Personality*, *44*, 1329–1338.
- DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and casual relationships. *Journal of Personality and Social Psychology*, *74*, 63–79.
- Engels, R. C. M. E., Finkenauer, C., & Van Kooten, D. C. (2006). Lying behavior, family functioning and adjustment in early adolescence. *Journal of Youth & Adolescence*, *35*, 949–958.
- Gervais, J., Tremblay, R. E., Desmarais-Gervais, L., & Vitaro, F. (2000). Children's persistent lying, gender differences, and disruptive behaviors: A longitudinal perspective. *International Journal of Behavioral Development*, *24*, 213–221.
- Grusec, J. E. (2008). What is the nature of effective parenting? It depends. In M. Kerr, H. Stattin, & R. Engels (Eds.), *What can parents do? New insights into the role of parents in adolescent problem behavior* (pp. 239–257). West Sussex, UK: Wiley.
- Hays, C., & Carver, L. J. (2014). Follow the liar: The effects of adult lies on children's honesty. *Developmental Science*, *6*, 977–983.
- Heyman, G. D., Hsu, A. S., Fu, G., & Lee, K. (2013). Instrumental lying by parents in the US and China. *International Journal of Psychology*, *48*, 1176–1184.
- Heyman, G. D., Luu, D. H., & Lee, K. (2009). Parenting by lying. *Journal of Moral Education*, *38*, 353–369.
- Jones, W. H., Cohn, M. G., & Miller, C. E. (1991). Betrayal among children and adults. In K. Rotenberg (Ed.), *Children's interpersonal trust: Sensitivity to lying, deception and promise violations* (pp. 118–134). New York: Springer.
- Keltikangas-Järvinen, L., & Lindeman, M. (1997). Evaluation of theft, lying, and fighting in adolescence. *Journal of Youth & Adolescence*, *26*, 467–483.
- Keltner, D., & Buswell, N. B. (1996). Evidence for the distinctness of embarrassment, shame, and guilt: A study of recalled antecedents and facial expressions of emotion. *Cognition & Emotion*, *10*, 155–172.
- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*, 151–158.
- Michaelson, L. E., & Munakata, Y. (2016). Trust matters: Seeing how an adult treats another person influences preschoolers' willingness to delay gratification. *Developmental Science*, *19*, 1011–1019.
- Mueller, R., & Hancock, G. (2008). Best practices in structural equation modeling. In J. Osborne (Ed.), *Best practices in quantitative methods* (pp. 488–508). Thousand Oaks, CA: Sage.
- Muthén, L., & Muthén, B. (2015). *Mplus user's guide*. Los Angeles: Author.
- Santos, R. M., Zanette, S., Kwok, S. M., Heyman, G. D., & Lee, K. (2017). Exposure to parenting by lying in childhood: Associations with negative outcomes in adulthood. *Frontiers in Psychology*, *8*. <https://doi.org/10.3389/fpsyg.2017.01240>.
- Scheiderer, E. G., & O'Connor, R. D. (1973). Effects of modeling and expectancy of reward on cheating behavior. *Journal of Abnormal Child Psychology*, *1*, 257–266.
- Stouthamer-Loeber, M. (1986). Lying as a problem behavior in children: A review. *Clinical Psychology Review*, *6*, 267–289.
- Warr, M. (2007). The tangled web: Delinquency, deception, and parental attachment. *Journal of Youth & Adolescence*, *36*, 607–622.
- Yi, L., Fan, Y., Li, J., Huang, D., Wang, X., Tan, W., ... Lee, K. (2014). Distrust and retaliatory deception in children with autism spectrum disorder. *Research in Autism Spectrum Disorders*, *8*, 1741–1755.

- Zahn-Waxler, C., Shirlcliff, E. A., & Marceau, K. (2008). Disorders of childhood and adolescence: Gender and psychopathology. *Annual Review of Clinical Psychology*, 4, 275–303.
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37, 197–206.