



# Strategies and Reasons for Nondisclosure in Close Relationships During Adolescence

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## Abstract

Adolescents keep secrets from parents to assert independence or avoid punishment; however, there is little research on nondisclosure in other close relationships during adolescence. This article examines strategies and reasons for nondisclosure between adolescents ( $N = 244$ , 47.5% female,  $M_{\text{age}} = 12.71$ ,  $SD_{\text{age}} = 1.66$ ) and multiple close relationships (parents, siblings, and best friends). The results show that adolescents tended to use nondisclosure strategies more for personal information (e.g., thoughts/feelings). Adolescents had more reasons to keep information from family as they got older, and girls reported keeping information from mothers more than boys because they would feel bad, embarrassed, or ashamed. These findings provide a greater understanding of patterns of nondisclosure during adolescence, which may in turn have implications for adolescent adjustment and relationship quality.

**Keywords** Adolescence · Nondisclosure · Secrecy · Close relationships

## Introduction

Adolescents can choose to disclose to, or keep information from, multiple close others. Typically, nondisclosure during adolescence is examined in the context of the parent-child relationship. Research shows that keeping secrets from parents becomes more common as adolescents get older (Keijsers et al., 2010), and adolescents may employ several strategies to do so (Cumsille et al., 2010). However, patterns of nondisclosure across relationships are unclear, and little research has focused on why adolescents do not disclose certain topics, though research with parents suggests that reasons can include avoiding punishment or maintaining privacy (Smetana et al., 2009). Furthermore, while the benefits of disclosure are well-documented, nondisclosure seems to be negatively associated with individual adjustment (e.g., higher levels of depression and lower self-esteem; Engels et al., 2006). Thus, not only is it important to

further understanding of patterns of nondisclosure during adolescence, but research should also examine these patterns across multiple relationships to better understand adolescents' broader social systems. The present study examines patterns in strategies and reasons for nondisclosure in the context of multiple close relationships (parents, siblings, and best friends) during adolescence, while also considering other factors, such as gender and type of information, that affect nondisclosure.

## Definition and Theories

Just as disclosure is revealing information about the self to others, nondisclosure is defined here as keeping information from others. Researchers often examine different forms of nondisclosure separately and use different terms for similar concepts, such as concealment, secrecy, lying, or topic avoidance, etc. These terms may not be equivalent to each other; for example, lying requires a deliberate action and is more active than avoidance (Smetana, 2010). Additionally, previous work sometimes investigates disclosure and nondisclosure simultaneously by using four categories of information management: full disclosure, partial disclosure (leaving out details), topic avoidance (avoiding discussion or waiting until asked), and deception (lying; Bakken & Brown, 2010; Cumsille et al., 2010). As this study does not focus on full disclosure, the

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term nondisclosure will be used instead of the broader term of information management.

Another way of categorization is by organizing topics of disclosure or nondisclosure into different domains using social domain theory. Originally developed to describe children's moral development, social domain theory posits that children make sense of their social interactions within three main domains or systems of knowledge (Smetana, 2006; Turiel, 2002). The *moral domain* concerns justice, welfare, and rights (e.g., aggression towards others). The *conventional domain* pertains to authority and social norms (e.g., children calling adults by Mr. or Ms. instead of first names). The *psychological domain* includes understanding the self and others as psychological systems. This domain can be further broken down into the *prudential domain*, which includes risky or harmful behaviors (e.g., smoking or drug use), and the *personal domain*, which includes private aspects of life (e.g., body autonomy). Additionally, issues that fall under more than one domain are sometimes said to be *multifaceted*. During adolescence, a multifaceted issue is most frequently considered to be in the personal domain by the adolescent and another domain by a parent as a sign of developing autonomy (e.g., getting tattoos and piercings would be a personal issue for the adolescent but a prudential issue for the parent).

In adolescence specifically, the personal domain develops as children gain increasing autonomy and control over themselves, leading to possible conflict with their parents over privacy boundaries (Petronio, 2010; Smetana, 2010). This can also be associated with increased nondisclosure, as adolescents begin to consider some topics to be more private than others, and they try to keep such information to themselves. For example, adolescents would likely feel differently about disclosing their alcohol consumption compared to having a new romantic partner (Smetana & Metzger, 2008). Age-related changes in relationship dynamics, such as sibling and parent relationships becoming more voluntary with age (Laursen & Collins, 2009) or friendships becoming more salient in older adolescence (Furman & Buhrmester, 1992), may also play a role. Underage adolescents may never want to disclose about their alcohol consumption to parents but may feel more comfortable telling their friends as they get older. Romantic partners or interests, which are considered personal domain information by adolescents, could be a topic increasingly kept from parents to reflect adolescents' corresponding increases in independence.

This would apply to other relationships and domains as well; adolescents could choose to keep certain personal habits from new friends yet disclose that information to their siblings. Overlapping relationships, however, can cause privacy turbulence according to communication privacy management (CPM) theory (Petronio, 2010), and concern that information disclosed to one person is at risk of being transmitted to

another person (e.g., siblings "tattling" to parents). Furthermore, relationships can be conceptualized in terms of permanency, power/hierarchy, and gender composition (Laursen & Bukowski, 1997), so information can be kept secret from parents who are in a position of power but disclosed within egalitarian relationships with siblings and friends. These considerations might explain adolescents' use of different strategies or reasoning to keep information hidden from one or more relationship partners.

### Strategies for Nondisclosure

As mentioned above, nondisclosure primarily takes the forms of lying, avoidance strategies, or partial disclosure, though some studies may combine one or more of these strategies under the umbrella terms of secrecy or concealment. Lying refers to actively telling a falsehood, while avoidance strategies can include avoiding bring up a topic, changing the subject, or only disclosing when a relationship partner specifically requests information. Partial disclosure is considered between nondisclosure and disclosure, though like other nondisclosure strategies, it involves hiding information by leaving out details or only telling part of the story.

### Strategy differences between relationship types

Overall, research on strategies for nondisclosure falls nearly exclusively in the parenting literature. Full disclosure and avoidance tend to be more frequently used with parents than partial disclosure or lying (Smetana et al., 2009), though adolescents also frequently use multiple strategies, such as both partial disclosure and avoidance (Cumsille et al., 2010). With mothers especially, adolescents tend to fully disclose more than withholding information or lying, but strategy use is more mixed with fathers (Rote & Smetana, 2018). Although adolescents judge lying to be the least acceptable strategy for parents, those who do think that lying or avoiding the topic was more acceptable also engaged in these behaviors more (Rote & Smetana, 2015).

Adolescents may use different methods to keep information from siblings or friends, as they spend more or less time with them and in different contexts (e.g., seeing friends mostly at school or over the internet versus seeing family members mostly at home). Furthermore, differences in strategies used for nondisclosure can differ based on the issue at hand (e.g., issues in different social domains; Guerrero & Afifi, 1995). Therefore, the literature does not yet show clear patterns in the strategies that adolescents use with different relationships.

### Social domain differences in strategies

Adolescents may keep certain types of information from parents in different ways. Older adolescents have reported

lying to parents about a variety of topics in the personal and prudential domains, including friends, alcohol or drugs, money, and dating (Jensen et al., 2004). Other studies found that high school students were more secretive about peer or personal issues than schoolwork (Smetana et al., 2006, 2010), though adolescents are still more likely to conceal or lie, rather than disclose, about academics (Smetana et al., 2019). In general, it seems that adolescents keep secrets about personal issues the most (Villalobos Solís et al., 2015), and most adolescents believe lying or using various information management strategies was acceptable for personal issues (Perkins & Turiel, 2007; Rote & Smetana, 2015).

For siblings, older adolescents tended to report less avoidance compared to parents on personal domain topics (e.g., dating; Guerrero & Afifi, 1995), but little is known about social domain differences in nondisclosure with friends or any differences between specific strategies used for different domains. Furthermore, no study has directly studied how multiple strategies are used for different domains, especially outside of parent-child relationships.

### Gender differences in strategies

Several studies have found that boys lie more according to both self-reports and parent reports (Engels et al., 2006; Jensen et al., 2004; Tasopoulos-Chan et al., 2009), but some found that girls used lying more frequently than avoidance or partial disclosure and kept more secrets than boys (Frijns & Finkenauer, 2009; Metzger et al., 2013). Others have found no gender differences in how much adolescents conceal information (e.g., Frijns et al., 2005; Leavitt et al., 2013) nor the strategies they use (Laird & Marrero, 2010).

Within families, nondisclosure is lowest in female-female pairs in the family (e.g., mother and daughter or sister and sister) compared to all other gender compositions (Guerrero & Afifi, 1995; Tasopoulos-Chan et al., 2009). In friendships, one study found no gender differences in avoiding disclosure in older adolescents (Afifi & Guerrero, 1998), but other studies with younger and middle adolescents have found that boys kept more secrets than girls (Corsano et al., 2017; Laird Bridges et al., 2013). Taken together, past research suggests that adolescent boys tend to have higher levels of nondisclosure than girls in all close relationships.

### Reasons for Nondisclosure

A hallmark of adolescence is increasing independence, and adolescents begin to consider more information about themselves not necessary for parents or others to know (Frijns et al., 2020). Adolescents may increasingly rationalize their decisions to hide information as they get older,

citing reasons such as personal choice (Perkins & Turiel, 2007). More mature adolescents may also do more to manage a relationship by hiding information to avoid negative outcomes, such as misunderstandings (Rosenfeld, 1979) or negative reactions and consequences (Smetana et al., 2009).

### Reason differences between relationship types

Similar to other aspects of nondisclosure, most of the research on reasons for nondisclosure focuses on parents. Adolescents keep information from parents primarily out of a desire for autonomy (e.g., making their own decisions) or to avoid punishment (Bakken & Brown, 2010). Other reasons found in previous research include not wanting to burden the target of disclosure and building or maintaining trust (Bakken & Brown, 2010; Jensen et al., 2004).

Little research has touched on reasons for nondisclosure between siblings and friends. Adolescents avoid disclosing to siblings to protect the relationship (Guerrero & Afifi, 1995), while they mostly keep secrets from friends due to personal choice (Perkins & Turiel, 2007). Past studies have also found that adolescents give different reasons depending on the relationship. For example, adolescents report that their top justification for lying to parents was “preventing unjust restrictions to self” while their top justification for lying to friends was “personal choice or maintaining privacy” (Perkins & Turiel, 2007). However, there does not seem to be a consistent pattern due to studies using free responses from participants or different coding schemes.

### Social domain differences in reasons

Adolescents are motivated by different reasons to keep information from others depending on what the information is about (Smetana & Metzger, 2008). Personal domain topics (e.g., what they do online) are typically deemed private information and none of the parents’ business, but adolescents usually keep prudential domain topics (e.g., drinking alcohol) secret from parents out of fear of disapproval or punishment (Metzger et al., 2020; Smetana et al., 2009). For friends, a majority of older adolescents judge lying about both personal and prudential issues to be acceptable, though specific reasons are unclear (Perkins & Turiel, 2007). Extrapolating from the parental literature, nondisclosure of personal issues due to wanting to maintain privacy would be consistent with social domain theory in that the personal domain by definition consists of private aspects of the self.

### Gender differences in reasons

Past research finds that girls are more likely than boys to keep secrets from parents for reasons broadly relating to

maintaining privacy (e.g., thinking issue is none of their business; Metzger et al., 2020; Smetana et al., 2009). Girls are more likely to lie or avoid disclosing to protect or preserve relationships (Metzger et al., 2020; Rosenfeld, 1979). Although there is no empirical research on girls' and boys' nondisclosure with siblings and friends, girls also tend to value social goals and focus on intimacy and communion in peer relationships more than boys do (Rose & Rudolph, 2006). Therefore, previous theory and research would suggest that girls may endorse reasons or strategies that are protective of their relationships.

## Present Study

The literature on nondisclosure has some clear gaps, especially in nondisclosure between siblings and peers. Furthermore, patterns of how and why adolescents do not disclose to close others, even parents, are unclear, such as domain differences in using different strategies. The present study addresses these gaps by examining the variety of strategies adolescents use and reasons they give for not disclosing to their mother, father, sibling, and best friend for topics in all social domains. Specifically, the study aims to test differences in nondisclosure strategies and reasons between relationship types, social domain, and gender. It is hypothesized that adolescents will not use any strategy very frequently, but relatively frequently used strategies should differ by relationship type and thus relationship dynamic and function. Boys will likely use more strategies than girls, in general, and all genders will likely use more strategies for issues in the personal domain compared to other domains. The most frequently cited reasons should include protecting privacy, avoiding negative consequences, and maintaining the relationship, and it is hypothesized that there will be significant differences in top reasons for not disclosing to different close others. Issues in the personal domain are predicted to be not disclosed to protect their privacy, and girls are predicted to be more likely than boys to choose not to disclose for the same reason.

## Methods

### Participants

Participants were adolescents ( $N = 244$ , 47.5% female) from a Midwestern college town originally recruited as pairs of siblings (59% same gender pairs) for a larger study on communication within the family. Participants' ages ranged from 9 to 16 years ( $M = 12.71$ ,  $SD = 1.66$ ), and 67.6% identified as White and non-Hispanic (10.7% White Hispanic, 16.8% Black/African American, 4.9% American

Indian/Alaska Native, 3.7% Asian, 2.9% Hawaiian/Pacific Islander, and 6.1% another race or multi-racial). All participants had at least one sibling, with one household reporting as many as nine children. The median household income was \$70,000–\$84,999, and parents were overall highly educated (over 80% completed at least some college). Most participants reported having a best friend (91%), with 96.4% same-gender pairs and 98% same-age or with a one-year age difference (none had more than a three-year age difference).

### Procedure

This study is part of a larger study taking place over three years with three yearly waves of data collection; only data from the first wave is included in the present study. Participating families with at least one child in 8th–10th grade and a younger child no more than four years younger were recruited from local school districts and private schools in the area, university news emails, and targeted Facebook advertisements. Interested families were directed to contact the study office via phone or email. At Wave 1, participating families came to the research lab, where the adolescent sibling pairs individually completed computer surveys on their frequency of disclosure, nondisclosure, and relationship quality with close others, among other measures. Including other measures and study activities, the lab visit was approximately two hours long. Participating families received \$50 Amazon gift cards for completing the first visit.

### Measures

#### Strategies for nondisclosure

Participants reported how they kept information on various topics from their close others (mothers, fathers, siblings, and best friends) in a 27-item measure adapted from previous research (Campione-Barr et al., 2015; Smetana et al., 2006). Topics included seven items in the personal domain (e.g., "How I spend my free time"), three items in the moral domain (e.g., "If I lie or don't keep promises to others"), three items in the conventional domain (e.g., "If I curse or use swear words"), seven items in the prudential domain (e.g., "Whether I drink beer, wine, or other alcoholic drinks"), and seven items in the multifaceted domain (e.g., "Whether I have sex or am considering having sex with someone"). For each topic, strategies were given as a list of checkbox choices, and participants checked all applicable choices for each of their close others. Five strategies were given as choices: (1) Avoid discussing the issue/change the subject, (2) Make up a story or lie to them, (3) Tell him/her only when he/she asks, (4) Partial disclosure, tell them some but not all, and (5) None of the

above, I tell them everything. Strategies were coded as 1 if chosen and 0 if not chosen.

Each item appeared to the participants based on their answers to previous survey questions. The list of checkbox choices for each relationship and topic only appeared if the participants responded that the topic was relevant to them (e.g., that they had drunk alcohol before, from a checklist of all topics asking if they had done the relevant activity in the past year), there was an applicable relationship partner (e.g., they had a best friend), and that they disclosed information on that topic some of the time or less for that relationship (i.e., 3 or less on a 1-to-5 scale on a disclosure frequency measure). Participants who chose either a 4 or 5 on the disclosure frequency measure were excluded from further assessment to ensure that the assessment of nondisclosure was for circumstances where it was at least as or more likely that adolescents would hide information as opposed to disclose. There were few cases where participants who chose a 3 or less on the disclosure frequency measure would go on to choose “None of the above, I tell them everything” in the strategy checklist. Because the survey presented a finite list of options, participants who chose this option might use a strategy that is not listed.

### Reasons for nondisclosure

Participants reported why they choose to not disclose on various topics to their close others in a 27-item measure. Topics presented were the same as in the “Strategies for Nondisclosure” measure. For each topic, reasons were given as a list of checkbox choices, and participants checked all applicable choices for each of their close others. Seven reasons were given as choices: (1) He/she would not approve/I would get into trouble, (2) I would feel bad, embarrassed, or ashamed, (3) He/she might think less of me, (4) He/she would not understand/would not be interested/would not listen, (5) It is a private matter and not their business, (6) It does not harm anyone, and (7) I always tell him/her about this. Reasons were coded as 1 if chosen and 0 if not chosen. The conditions for the appearance of item choices were the same as the “Strategies for Nondisclosure” measure.

## Results

### Descriptive Analyses

All analyses were conducted with SPSS Statistics version 27 (IBM Corp., 2020). For each topic, the percentage of times each strategy or reason was chosen by participants was calculated to find the most frequently chosen strategies and reasons for each domain and each relationship type.

This percentage was calculated by taking the number of participants who chose a specific strategy or reason for each topic question divided by the number of participants who could have responded to the topic regardless of what strategies or reasons they chose. The denominator will be different for each case, because the number of participants who could have responded to the topic depends on how they answered other measures earlier in the study, as explained in the Measures section.

Overall, few percentages were above 50%, and none were above 60% (see Tables 1 and 2). Due to the low sample size for each group, percentages were not further separated by gender. The most frequently used *strategy* for nondisclosure seems to be “telling only when asked,” followed by “avoiding or changing the topic.” The least frequently used strategy is “lie or make up a story,” though adolescents tend to lie more about topics in the moral domain than other domains. The most frequently chosen *reasons* for not disclosing to close others were “it doesn’t harm anyone,” especially for the personal and multifaceted domains but not for the moral domain, and “it’s a private matter.” One of the top reasons for parents was also “they would not approve/I would get in trouble,” especially for the moral and conventional domains.

### Main Analyses

#### Analysis plan

For each participant, the proportion of the times they chose each strategy or reason was calculated across each group of topics within a social domain; a similar way of calculating proportion scores has been previously used for social domains (Smetana et al., 2009). These proportion scores were calculated separately by relationship type and social domain, so each participant has a total of 20 proportion scores for each of the four strategies and six reasons. For participants who did not have a calculatable proportion score (e.g., due to not having the relevant relationship partner or responding previously in the survey that they disclosed a great deal about the topic), a score of 0 was substituted. This imputation was determined because youth were either not given the opportunity to rate their strategies/reasons if they: (1) did not indicate having a relationship partner in their life that was relevant (e.g., if the participant did not have a relationship with a father), or (2) they rated that they disclosed about this issue regularly to that partner, which would suggest that they did not have frequent reason to conceal information about this issue from this relationship partner. In either case, a zero was appropriate to indicate that they did not utilize any of these reasons or strategies for non-disclosure rather than leave it blank and have it treated as missing data when it was not.

**Table 1** Average percentages of times each strategy was chosen by relationship type and social domain

Domain	Relationship			
	Mother	Father	Sibling	Best Friend
Avoid topic or change the subject				
Personal	28.60	29.16	24.33	21.23
Prudential	27.54	27.16	25.88	18.35
Moral	45.90	46.22	41.67	42.22
Conventional	42.86	47.18	37.72	34.41
Multifaceted	23.94	26.67	20.90	12.98
Lie or make up a story				
Personal	9.46	9.12	8.56	4.35
Prudential	17.39	14.81	5.88	6.42
Moral	19.67	20.17	15.97	12.22
Conventional	12.34	13.38	10.78	4.30
Multifaceted	8.88	10.33	7.46	1.92
Tell only when asked				
Personal	47.10	48.66	48.40	46.55
Prudential	42.03	38.27	41.76	44.95
Moral	41.80	42.86	40.97	36.67
Conventional	39.61	38.73	36.53	35.48
Multifaceted	52.90	53.67	54.98	50.00
Partial disclosure				
Personal	26.45	24.33	20.72	26.85
Prudential	17.39	14.81	26.47	27.52
Moral	25.41	22.69	19.44	18.89
Conventional	20.78	21.83	21.56	13.98
Multifaceted	26.64	23.00	25.62	23.56
Average N's				
Personal	66	80	107	56
Prudential	10	12	24	16
Moral	41	40	48	30
Conventional	51	47	56	31
Multifaceted	37	43	57	30

For examining the first research question about strategies for nondisclosure, a 4 (relationship type) X 5 (social domain) X 2 (gender) X 2 (birth order) multivariate analysis of variance (MANOVA) was conducted with proportion scores for all *strategies* except “none of the above, I tell them everything” as the dependent variables, with domain and relationship type as within-subject predictors, and gender and birth order as between-subject predictors. For examining the second research question about *reasons* for nondisclosure, a second MANOVA model was run with the same predictors but instead included all reasons except “I always tell him/her about this” as dependent variables. Birth order was included in the models to account for the fact that participants were recruited as sibling pairs (Campione-Barr et al., 2021b), but sibling ordinal status is not a central

**Table 2** Average percentages of times each reason was chosen by relationship type and social domain

Domain	Relationship			
	Mother	Father	Sibling	Best Friend
They would not approve/I would get into trouble				
Personal	10.75	11.09	2.67	0.51
Prudential	30.43	24.69	7.06	6.42
Moral	40.16	36.97	10.42	6.67
Conventional	52.60	48.59	11.98	5.38
Multifaceted	20.08	19.00	4.98	0.96
I would feel bad, embarrassed, or ashamed				
Personal	15.91	14.85	8.96	8.18
Prudential	23.19	18.52	13.53	14.68
Moral	38.52	36.13	22.92	36.67
Conventional	36.36	37.32	20.36	24.73
Multifaceted	10.04	8.33	6.72	4.33
They might think less of me				
Personal	6.88	7.33	7.22	7.93
Prudential	21.74	18.52	11.76	6.42
Moral	36.07	34.45	31.25	32.22
Conventional	24.68	24.65	18.56	16.13
Multifaceted	9.65	9.00	7.21	4.33
They would not understand/would not be interested/would not listen				
Personal	20.86	27.01	30.61	13.81
Prudential	14.49	13.58	26.47	18.35
Moral	12.30	17.65	22.22	11.11
Conventional	14.29	14.79	22.75	11.83
Multifaceted	22.78	30.67	31.34	17.79
It is a private matter and not their business				
Personal	33.12	31.48	36.10	28.90
Prudential	15.94	14.81	31.18	30.28
Moral	27.87	28.57	43.06	21.11
Conventional	12.99	11.27	29.94	24.73
Multifaceted	22.78	21.67	34.08	23.08
It does not harm anyone				
Personal	44.73	40.79	37.17	39.13
Prudential	20.29	23.46	30.00	28.44
Moral	4.92	5.88	8.33	7.78
Conventional	14.29	17.61	22.16	23.66
Multifaceted	51.74	47.00	44.78	48.56

variable in this study due to the focus on multiple relationships. Models were also run with age as a covariate; age often accounts for much of what makes birth order influential due to older siblings being physically and cognitively stronger and more mature compared to their younger siblings (Campione-Barr, 2017). If birth order effects were no longer significant with the addition of age, birth order was dropped as a predictor. This was the case for the reasons MANOVA model, but not for strategies.

Correlations between proportion scores were small to moderate, with significant correlations ranging from  $r = 0.1$  to  $0.4$ . Some correlations were as high as  $r = 0.7$ , such as between proportion scores for lying about personal information to mothers and lying about personal information to fathers. There were also some significant correlations between strategies and reasons, such as lying about personal information to mothers and endorsing the reason of “it’s private” for not disclosing personal information to mothers.

### Strategies for nondisclosure

A main effect of Domain ( $F(16, 3824) = 1.69, p = 0.04, \eta^2 = 0.007$ ) was qualified by two significant three-way interactions of Domain X Gender X Birth order ( $F(16, 3824) = 2.51, p = 0.001, \eta^2 = 0.01$ ), which was only significant for the strategy of lying ( $F(3.71) = 6.19, p < 0.001, \eta^2 = 0.025$ ), and Domain X Relationship X Birth order ( $F(48, 11,472) = 1.52, p = 0.01, \eta^2 = 0.006$ ), which was only significant for the strategies of lying ( $F(8.54) = 2.25, p = 0.02, \eta^2 = 0.009$ ) and only telling when asked ( $F(10.21) = 1.85, p = 0.05, \eta^2 = 0.008$ ). There was also a significant three-way interaction of Relationship X Gender X Birth order ( $F(12, 2148) = 2.30, p = 0.007, \eta^2 = 0.013$ ), which was only significant for the strategy of partial disclosure ( $F(2.59) = 4.22, p = 0.009, \eta^2 = 0.017$ ). Note that because participants used each strategy with differing frequency, the scales of the y-axes on the figures in this section are not the same (see Figs. 1a–4b). Alpha levels for post-hoc tests were set with a Bonferroni-like correction at  $p < 0.005$  to both account for low power and ensure that significant effects are still detected.

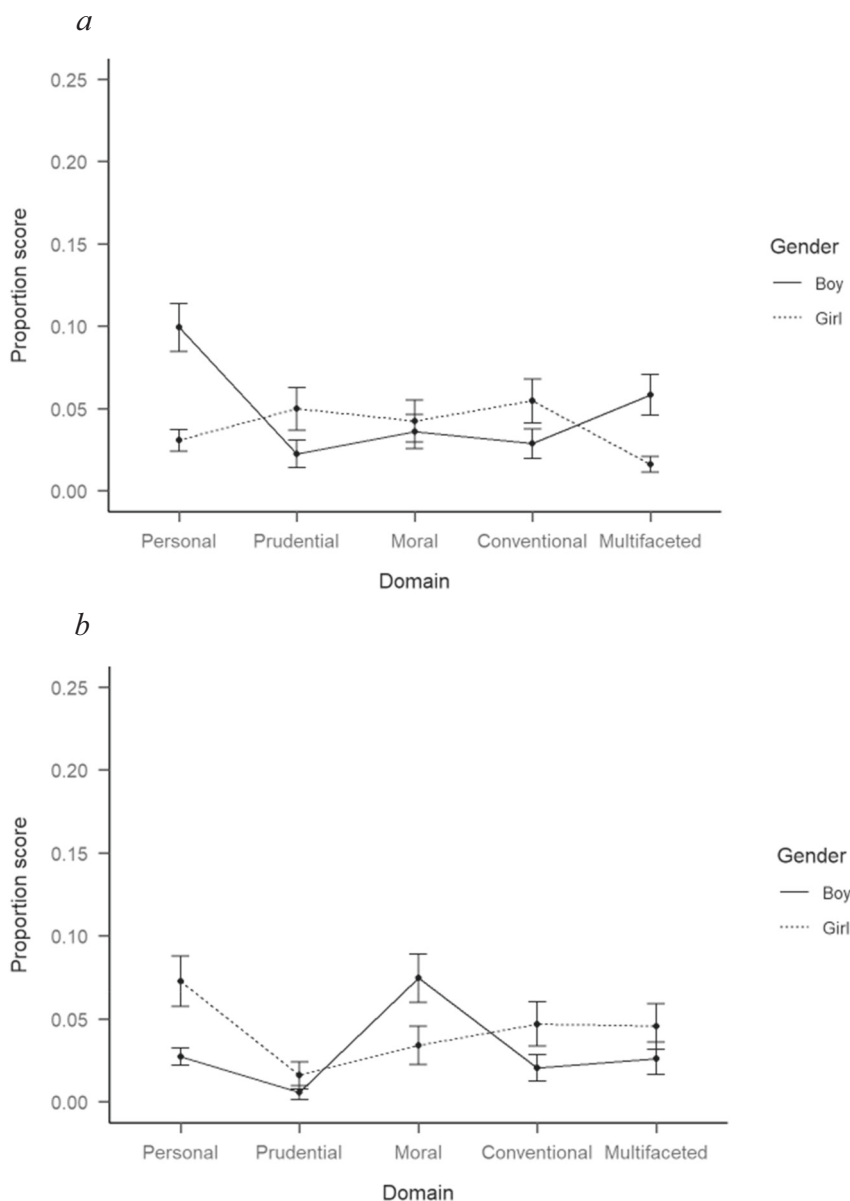
**Lying** For the strategy of lying, there were two three-way interactions: Domain X Gender X Birth order (see Fig. 1a, b) and Domain X Relationship X Birth order (see Fig. 2a, b). For the Domain X Gender X Birth order interaction, post-hoc t-tests found that only male older siblings and female younger siblings lied more about information in the personal domain compared to information in the prudential domain (older boys:  $t(60) = 3.04, p = 0.004$ ; younger girls:  $t(54) = 3.49, p < 0.001$ ). Female younger siblings also lied more about personal domain information than moral domain ( $t(54) = 3.24, p = 0.002$ ). For the Domain X Relationship X Birth order interaction, post-hoc t-tests found no significant differences for older siblings. However, younger siblings tend to lie about information in the personal and moral domain compared to information in the prudential domain, but only to family members (mothers:  $t_{PE-PR}(121) = 3.08, p = 0.003, t_{MO-PR}(121) = 3.10, p = 0.002$ ; fathers:  $t_{PE-PR}(121) = 3.52, p = 0.001, t_{MO-PR}(121) = 2.95, p = 0.004$ ; siblings:  $t_{PE-PR}(121) = 3.88, p < 0.001, t_{MO-PR}(121) = 3.22, p = 0.002$ ). Younger siblings also lie about

information in the personal domain more than information in the multifaceted domain, but only to their siblings ( $t_{PE-MU}(121) = 3.08, p = 0.003$ ).

**Only telling when asked** For the strategy of only telling when asked, there was one three-way interaction of Domain X Relationship X Birth order (see Fig. 3a, b). Post-hoc t-tests showed similar patterns for older and younger siblings. Older siblings only disclosed when asked more for information in the personal and multifaceted domains than the prudential, conventional, and moral domains for family members (mothers:  $t_{PE-PR}(121) = 9.00, p < 0.001, t_{PE-CO}(121) = 5.33, p < 0.001, t_{PE-MO}(121) = 5.18, p < 0.001, t_{MU-PR}(121) = 6.71, p < 0.001, t_{MU-CO}(121) = 3.82, p < 0.001, t_{MU-MO}(121) = 3.60, p < 0.001$ ; fathers:  $t_{PE-PR}(121) = 8.76, p < 0.001, t_{PE-CO}(121) = 6.63, p < 0.001, t_{PE-MO}(121) = 6.01, p < 0.001, t_{MU-PR}(121) = 7.21, p < 0.001, t_{MU-CO}(121) = 5.15, p < 0.001, t_{MU-MO}(121) = 4.69, p < 0.001$ ; siblings:  $t_{PE-PR}(121) = 2.97, p = 0.004, t_{PE-CO}(121) = 6.83, p < 0.001, t_{PE-MO}(121) = 5.29, p < 0.001, t_{MU-PR}(121) = 3.78, p < 0.001, t_{MU-CO}(121) = 6.42, p < 0.001, t_{MU-MO}(121) = 5.36, p < 0.001$ ). They also only disclosed when asked more for information in the personal and multifaceted domains than the conventional and moral domains for best friends ( $t_{PE-CO}(121) = 4.70, p < 0.001, t_{PE-MO}(121) = 3.48, p = 0.001, t_{MU-CO}(121) = 4.03, p < 0.001, t_{MU-MO}(121) = 3.19, p = 0.002$ ). Younger siblings also only disclosed when asked more for information in the personal and multifaceted domains than the prudential, conventional, and moral domains for family members (mothers:  $t_{PE-PR}(121) = 4.40, p < 0.001, t_{PE-CO}(121) = 3.61, p < 0.001, t_{PE-MO}(121) = 5.22, p < 0.001, t_{MU-PR}(121) = 3.91, p < 0.001, t_{MU-CO}(121) = 2.96, p = 0.004, t_{MU-MO}(121) = 4.16, p < 0.001$ ; fathers:  $t_{PE-PR}(121) = 4.26, p < 0.001, t_{PE-CO}(121) = 3.94, p < 0.001, t_{PE-MO}(121) = 5.10, p < 0.001, t_{MU-PR}(121) = 3.89, p < 0.001, t_{MU-CO}(121) = 2.14, p = 0.002, t_{MU-MO}(121) = 4.66, p < 0.001$ ; siblings:  $t_{PE-PR}(121) = 5.02, p = 0.004, t_{PE-CO}(121) = 6.85, p < 0.001, t_{PE-MO}(121) = 8.41, p < 0.001, t_{MU-PR}(121) = 2.89, p = 0.005, t_{MU-CO}(121) = 4.11, p < 0.001, t_{MU-MO}(121) = 5.49, p < 0.001$ ). Furthermore, similar to their older siblings, they only disclosed when asked more for information in the personal and multifaceted domain than the conventional and moral domains for best friends ( $t_{PE-CO}(121) = 4.99, p < 0.001, t_{PE-MO}(121) = 6.73, p < 0.001, t_{MU-CO}(121) = 3.33, p = 0.001, t_{MU-MO}(121) = 3.45, p = 0.001$ ), but they also only disclosed when asked more for prudential information than moral ( $t(121) = 3.33, p = 0.001$ ).

**Partial disclosure** For the strategy of partial disclosure, there was one three-way interaction of Relationship X Gender X Birth order (see Fig. 4a, b). Post-hoc t-tests found that female older siblings partially disclose more to mothers

**Fig. 1 a** Domain X Gender X Birth order interaction for older siblings' use of lying. **b** Domain X Gender X Birth order interaction for younger siblings' use of lying. The y-axis scale is 0–0.25 due to the low frequency of use for this strategy



than fathers ( $t(60) = 3.90$ ,  $p < 0.001$ ) or best friends ( $t(60) = 3.96$ ,  $p < 0.001$ ), and they also partially disclose more to siblings than best friends ( $t(60) = 4.71$ ,  $p < 0.001$ ). Male younger siblings partially disclose more to siblings than mothers ( $t(66) = 2.85$ ,  $p = 0.006$ ) or fathers ( $t(66) = 3.24$ ,  $p = 0.002$ ).

**Summary** There were significant differences found in how adolescents hide information based on relationship type, social domain, and gender. Older sisters tend to use partial disclosure most to mothers and siblings, but younger brothers partially disclose more to their siblings than their parents. Younger siblings in general tend to lie more to their family members about information in the personal and

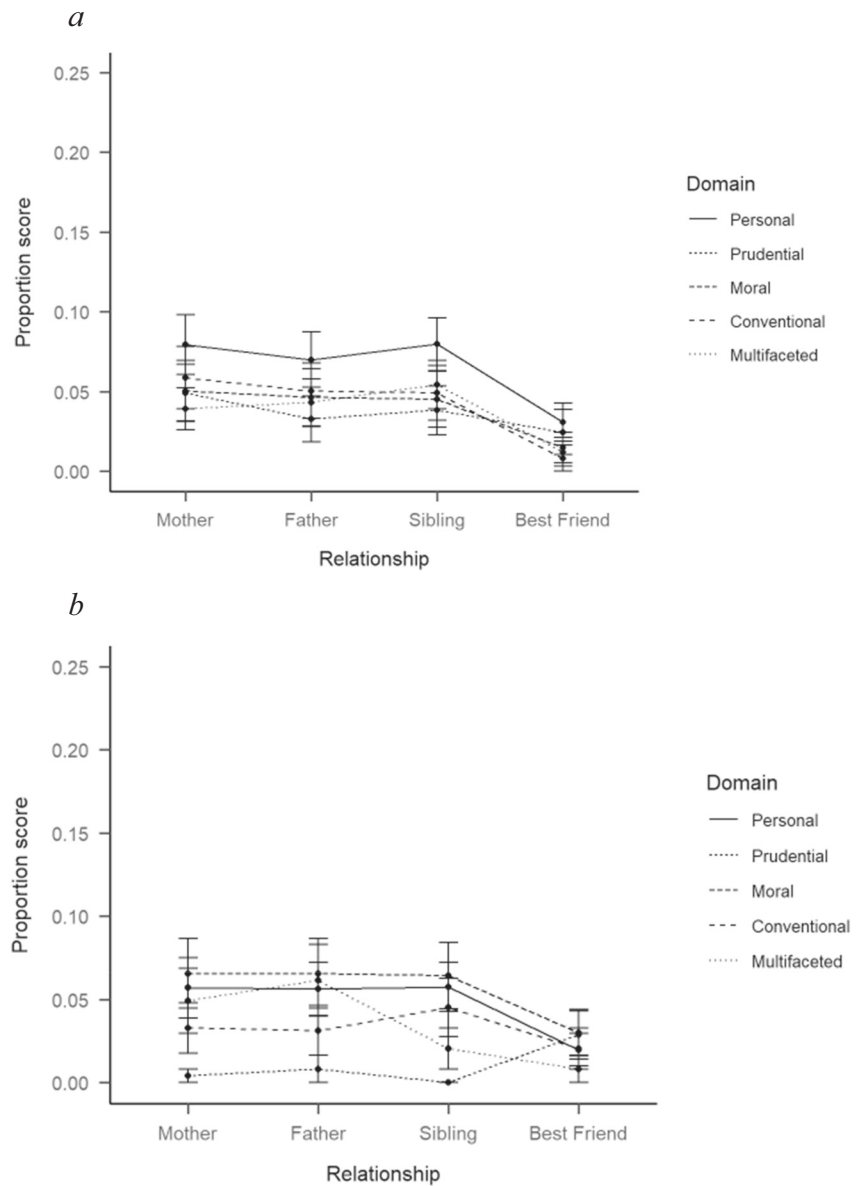
moral domains compared to the prudential and multifaceted domains. Regardless of gender, both older and younger siblings tend to use the strategy of only disclosing when asked in the personal and multifaceted domains compared to other domains. Older brothers and younger sisters lie more about information in the personal domain compared to the prudential and moral domains.

#### Reasons for nondisclosure

A main effect of Relationship ( $F(18, 2160) = 23.40$ ,  $p < 0.001$ ,  $\eta^2 = 0.028$ ) was qualified by two two-way interactions of Relationship X Gender ( $F(18, 2160) = 1.80$ ,  $p = 0.02$ ,  $\eta^2 = 0.015$ ), which was only significant for the reason



**Fig. 2 a** Domain X Relationship X Birth order interaction for older siblings’ use of lying.  
**b** Domain X Relationship X Birth order interaction for younger siblings’ use of lying.  
 The y-axis scale is 0–0.25 due to the low frequency of use for this strategy



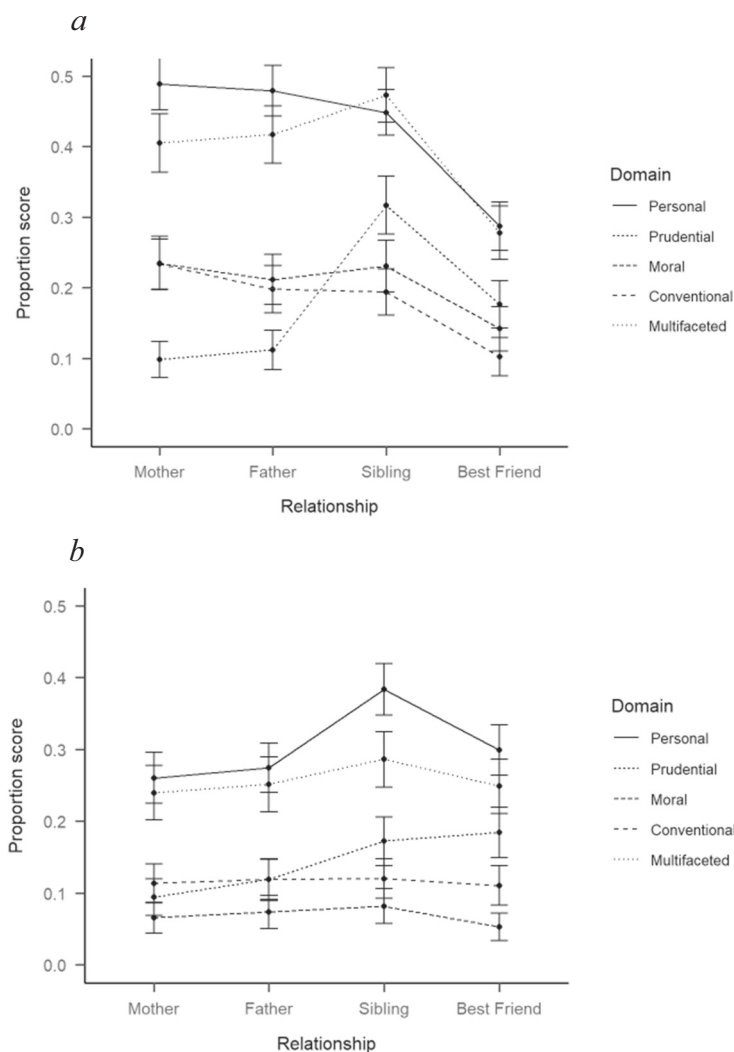
of “I would feel bad, embarrassed, or ashamed” ( $F(2.59) = 5.71, p = 0.001, \eta^2 = 0.023$ ), and Relationship X Age ( $F(18, 2160) = 4.70, p < 0.001, \eta^2 = 0.038$ ), which was significant for the reasons of “They would not approve/I would get in trouble” ( $F(2) = 9.71, p < 0.001, \eta^2 = 0.039$ ), “I would feel bad, embarrassed, or ashamed” ( $F(2.59) = 7.09, p < 0.001, \eta^2 = 0.029$ ), “It’s private” ( $F(2.26) = 8.75, p < 0.001, \eta^2 = 0.035$ ), and “It doesn’t harm anyone” ( $F(2.51) = 6.44, p = 0.001, \eta^2 = 0.026$ ). There was also a significant two-way interaction of Domain X Age ( $F(24, 3848) = 2.10, p = 0.001, \eta^2 = 0.013$ ), which was only significant for the reason of “It doesn’t harm anyone” ( $F(3.28) = 4.52, p = 0.003, \eta^2 = 0.018$ ). Note that because participants endorsed each reason at different levels, the scales of the y-axes on the figures in this section are not the same (see

Figs. 5–10). Alpha levels for post-hoc tests were set with a Bonferroni-like correction at  $p < 0.005$  to both account for low power and ensure that significant effects are still detected.

**They would not approve/I would get in trouble** For the reason of “they wouldn’t approve,” there was one two-way interaction of Relationship X Age (see Fig. 5). Post-hoc regressions found that age positively predicted keeping information from mothers because they would not approve ( $\beta = 0.221, p = 0.001$ ), but not for any other relationships.

**I would feel bad, embarrassed, or ashamed** For the reason of “I would feel bad,” there were two two-way interactions: Relationship X Age (see Fig. 6) and Relationship X Gender

**Fig. 3** **a** Domain X Relationship X Birth order interaction for older siblings' use of only telling when asked. **b** Domain X Relationship X Birth order interaction for younger siblings' use of only telling when asked. The y-axis scale is 0–0.5 due to the relatively higher frequency of use for this strategy



(see Fig. 7). For the Relationship X Age interaction, post-hoc regressions found that age positively predicted keeping information from mothers because the adolescent would feel bad or embarrassed ( $\beta = 0.215$ ,  $p = 0.001$ ), but not for any other relationships. For the Relationship X Gender interaction, post-hoc t-tests found that girls chose this reason more than boys, but only for keeping information from mothers ( $t(242) = 3.546$ ,  $p < 0.001$ ).

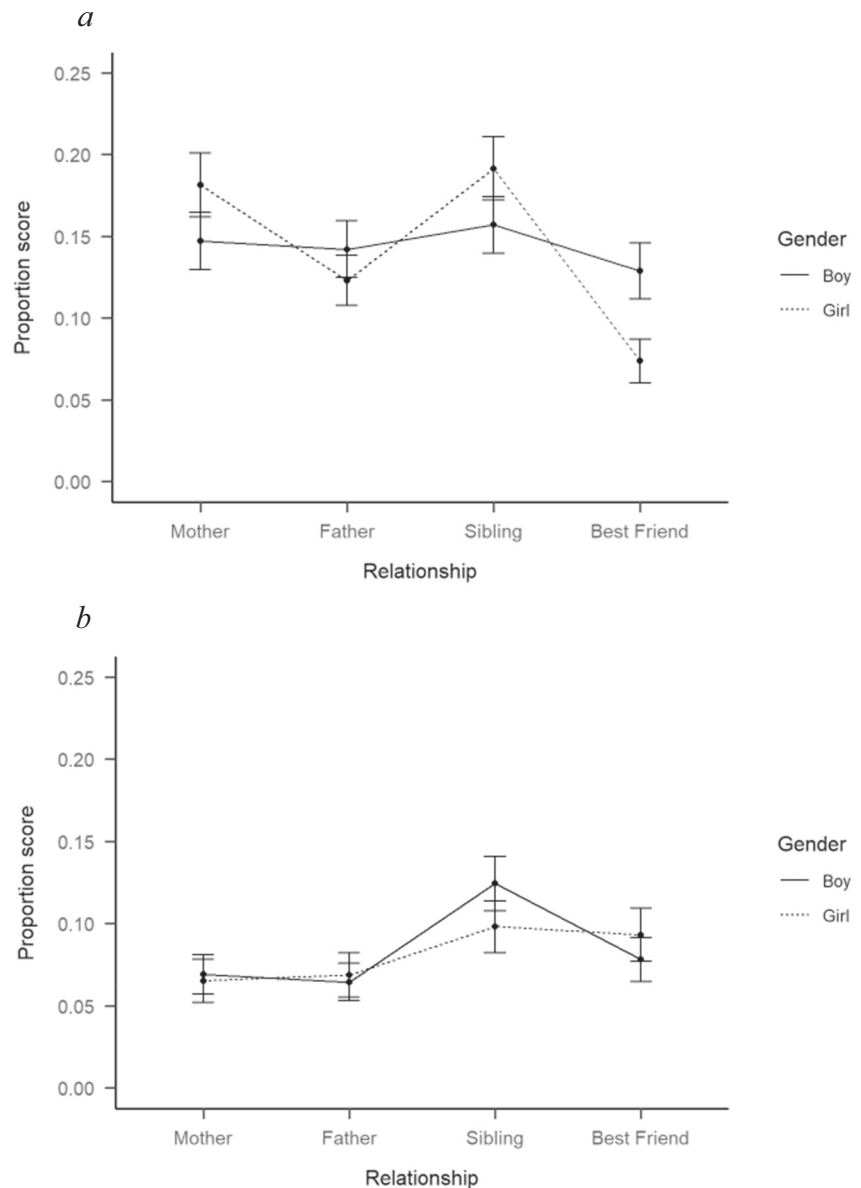
**It's private** For the reason of “it's private,” there was one two-way interaction of Relationship X Age (see Fig. 8). Post-hoc regressions found that age positive predicted keeping information from family members because it is a private matter (mothers:  $\beta = 0.226$ ,  $p < 0.001$ ; fathers:  $\beta = 0.215$ ,  $p = 0.001$ ; siblings:  $\beta = 0.231$ ,  $p < 0.001$ ), but not for best friends.

**It doesn't harm anyone** For the reason of “it doesn't do any harm,” there were two two-way interactions:

Relationship X Age (see Fig. 9) and Domain X Age (see Fig. 10). For the Relationship X Age interaction, post-hoc regressions found that age positively predicted keeping information from family members because it does not do any harm (mothers:  $\beta = 0.274$ ,  $p < 0.001$ ; fathers:  $\beta = 0.185$ ,  $p = 0.004$ ; siblings:  $\beta = 0.206$ ,  $p = 0.001$ ), but not for best friends. For the Domain X Age interaction, post-hoc regressions found that age positively predicted keeping information in the multifaceted ( $\beta = 0.209$ ,  $p = 0.001$ ) and conventional ( $\beta = 0.178$ ,  $p = 0.005$ ) domains because it does not do any harm, but not for other domains.

**Summary** There were significant differences found in why adolescents hide information based on age, relationship type, social domain, gender. Overall, adolescents keep information from family members, especially mothers, for more reasons as they get older, including for reasons of avoiding disapproval, feeling bad or embarrassed, maintaining privacy, and thinking that their actions do not do any

**Fig. 4 a** Relationship X Gender X Birth order interaction for older siblings' use of partial disclosure. **b** Relationship X Gender X Birth order interaction for younger siblings' use of partial disclosure. The y-axis scale is 0–0.25 due to the low frequency of use for this strategy



harm. Adolescents also increasingly chose the reason of “it doesn’t harm anyone” as they got older for keeping information in the multifaceted and conventional domains secret. Lastly, girls tended to keep information from mothers because they would feel bad, more so than boys.

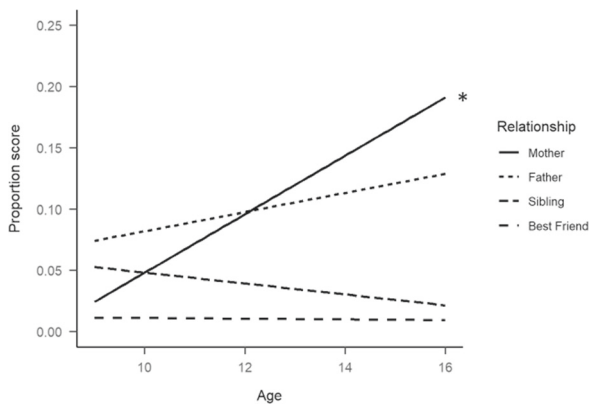
## Discussion

Patterns in adolescent nondisclosure and information management are poorly understood, especially across multiple relationships. The present study focuses on examining the strategies that adolescents use to keep information from their parents, siblings, and best friends and the reasons they have for doing so. Broadly, adolescents disclose to siblings

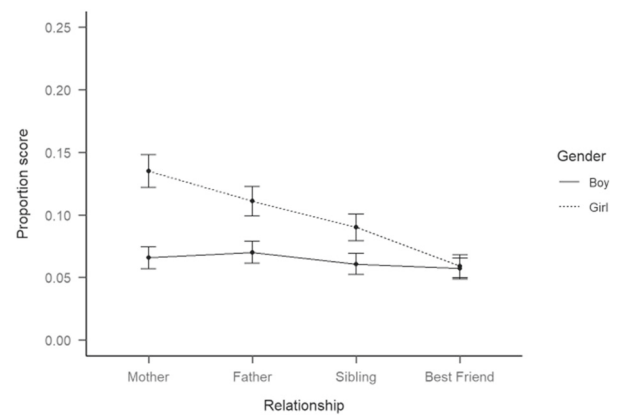
the least and mothers and friends the most (Campione-Barr et al., 2021a), suggesting that siblings are the relationship partner adolescents keep information from most frequently. The current findings show greater complexity in how and why adolescents manage information with different relationship partners and how it also depends on type of information (social domain) and gender.

## Strategies for Nondisclosure

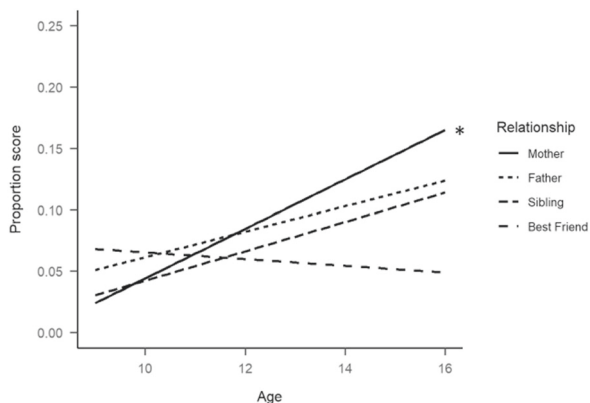
In general, adolescents did not use any one strategy very frequently based on the descriptive analyses. The percentages of strategy use were, with few exceptions, below 50%, and the majority were below 30%. Participants included in these analyses had previously reported



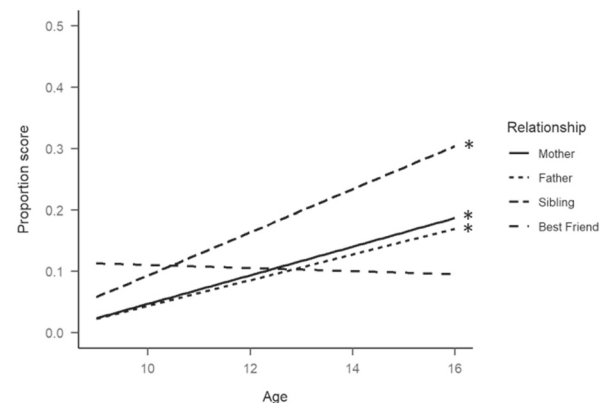
**Fig. 5** Relationship X Age interaction for reason “They would not approve”. The y-axis scale is 0–0.25 due to the low frequency of adolescents endorsing this reason. The asterisk (\*) denotes a significant slope ( $p < 0.005$ )



**Fig. 7** Relationship X Gender interaction for reason “I would feel bad”. The y-axis scale is 0–0.25 due to the low frequency of adolescents endorsing this reason



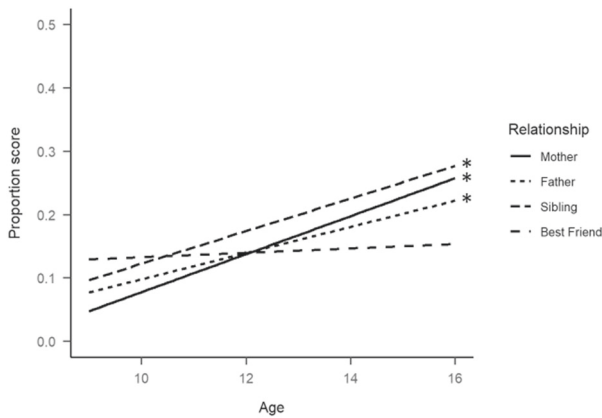
**Fig. 6** Relationship X Age interaction for reason “I would feel bad”. The y-axis scale is 0–0.25 due to the low frequency of adolescents endorsing this reason. The asterisk (\*) denotes a significant slope ( $p < 0.005$ )



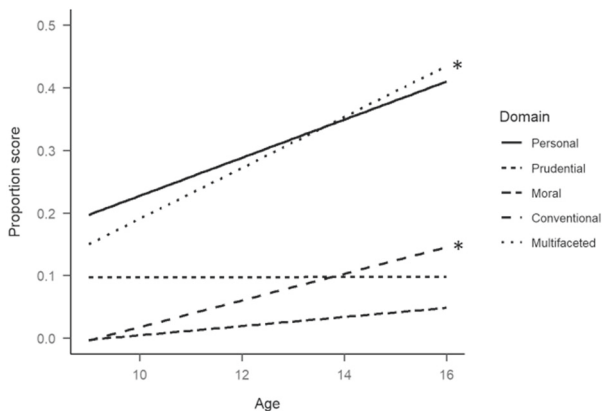
**Fig. 8** Relationship X Age interaction for reason “It’s private”. The y-axis scale is 0–0.5 due to the relatively higher frequency of adolescents endorsing this reason. The asterisk (\*) denotes a significant slope ( $p < 0.005$ )

that they did not disclose these pieces of information frequently, implying that it is common for them to use more than one strategy or different strategies depending on what information they were hiding and from whom. The most frequently used strategy was not partial disclosure as expected, but “telling only when asked,” followed by “avoiding the topic or changing the subject.” Consistent with previous research (Jensen et al., 2004; Smetana et al., 2009, 2010), adolescents did choose lying as a strategy at times, but the frequency was noticeably lower than other strategies, especially for personal or multifaceted domain topics. These patterns suggest that adolescents are more often lying by omission, or simply keeping quiet about information that they would rather not share. Because all strategies were listed together in the survey, it is likely that adolescents differentiated “lying by omission” strategies such as avoiding the topic from “lying” because lies of omission do not involve telling a falsehood.

As suggested by descriptive results, several notable patterns for strategy use emerged from the main analyses, where adolescents’ use of nondisclosure strategies depended on the relationship partner and the social domain of the information, in combination with gender and birth order. In support of hypotheses, at least for the strategies of lying and only telling when asked, the personal domain was always the domain with the most frequent strategy use when it significantly differed from other domains. This is interesting when placed within the broader disclosure literature, because other research has shown that disclosure is also higher for issues in the personal domain compared to moral and conventional issues (Campion-Barr et al., 2021a). However, theoretically, personal issues are outside social regulation or authority, so adolescents may particularly differ in terms of with whom they are willing to share that information. It may be that the specific strategies of lying and only telling when asked, along with the specific context such as relationship, gender, and birth order, are more



**Fig. 9** Relationship X Age interaction for the reason “It doesn’t harm anyone”. The y-axis scale is 0–0.5 due to the relatively higher frequency of adolescents endorsing this reason. The asterisk (\*) denotes a significant slope ( $p < 0.005$ )



**Fig. 10** Domain X Age interaction for the reason “It doesn’t harm anyone”. The y-axis scale is 0–0.5 due to the relatively higher frequency of adolescents endorsing this reason. The asterisk (\*) denotes a significant slope ( $p < 0.005$ )

favored among adolescents for personal information. For example, with parents, younger siblings might choose to lie over other strategies for personal information because it is the easiest to use. If parents are consistently asking for information over the dinner table, choosing a strategy like avoiding the topic may spark arguments about keeping secrets, and adolescents lie to maintain the peace. Indeed, for other strategies, domain differences seem to vary by strategy; for the strategy of avoiding the topic, moral and conventional domain topics have the highest strategy use. This is consistent with both previous research (Campione-Barr et al., 2021a) and social domain theory (Smetana, 2006; Turiel, 2002), as these domains have social and personal repercussions.

Domain differences in the strategies of lying and only telling when asked further depends on the relationship, as expected, with differences between family members (i.e.,

mothers, fathers, and siblings) and best friends. These findings suggest how close others can play different roles in how adolescents share and hide information, and birth order also appears to be important. Younger siblings only showed a domain difference in lying to family members, to whom they lied more about personal information; they seem to lie to best friends about information in all domains equally and rarely. For younger siblings who tend to be in close contact with family members more often and have not quite gained the independence afforded to older siblings, there may be a more pressing need to try to form a bubble of privacy around themselves and greater use of nondisclosure strategies such as lying. The difference may not be as apparent with friends because adolescents generally do not try to exert independence from them, and in fact begin to spend more time with them starting in early adolescence (Lam et al., 2014). Thus, adolescents do not need to differentiate what kind of information they lie about, and all lying is at a low level regardless. Additionally, adolescents used both strategies less for prudential domain information than personal domain information, but only for family members. For parents, adolescents may use fewer strategies due to their beliefs about parental authority over prudential issues, especially for younger adolescents (Campione-Barr et al., 2021a). The difference is less apparent with siblings for “only telling when asked” (see Fig. 3a, b) and may reflect the relatively lesser authority that siblings have over each other.

Lastly, for the strategies of partial disclosure and lying, interesting patterns were found with gender, birth order, relationship, and domain. Older sisters partially disclosed most to mothers and siblings, but younger brothers partially disclosed more to siblings than parents. The specific finding that older sisters partially disclose more to mothers is in line with previous findings (Tasopoulos-Chan et al., 2009). To look at these results from another angle, it is also not surprising that the female siblings are partially disclosing more to mothers, while the male siblings are partially disclosing more to siblings. Disclosure has been found to be highest within female-female pairings within the family (e.g., mother-daughter pairs; Guerrero & Afifi, 1995; Smetana et al., 2006), and partial disclosure is still disclosing somewhat, albeit while also hiding some details about the information. On the other hand, only older brothers and younger sisters lied more about issues in the personal domain than issues in the prudential and moral domains. As previously mentioned, younger siblings may be especially motivated to lie about their personal matters to family to create more privacy for themselves, and this may be true for older brothers as well. However, there were no relationship differences for older siblings in lying, suggesting that older brothers are lying to everyone more about their personal matters. This is in line with previous findings of both higher

levels of lying with boys (Tasopoulos-Chan et al., 2009) and more secret-keeping about personal domain issues (Villalobos Solís et al., 2015).

### Reasons for Nondisclosure

In general, the most frequently cited reasons for keeping information from others included protecting personal privacy and avoiding others' disapproval or punishment, which were consistent with predictions and previous research on parents (Smetana et al., 2009). Descriptive analyses also showed patterns of differences in relationships, which are supported in later analyses; for example, for the reason of avoiding disapproval or getting in trouble, percentages are highest for parents in all domains. However, contrary to predictions, another common reason that adolescents gave for keeping information hidden was that the secret does not harm anyone, though there is a noticeable dip in percentages of adolescents choosing this reason for the moral domain, which concerns harm to others (Smetana, 2006; Turiel, 2002).

Further analyses showed that for the reason of "it doesn't harm anyone," information in the multifaceted and conventional domains were increasingly seen as not harmful as adolescents got older. For the conventional domain at least, these results are consistent with social domain theory (Smetana, 2006; Turiel, 2002); the conventional domain concerns social norms such as cursing, which older adolescents increasingly do and get into less trouble for (Jay et al., 2006). It is also more acceptable for older adolescents and emerging adults to flout some social conventions that younger adolescents abide by because older adolescents are seen as being more responsible for themselves (Smetana, 2010), which may explain why older adolescents reason that hiding information in the conventional domain does not harm anyone. Information in both the multifaceted and personal domains showed upward trajectories in being kept secret for the reason of "it doesn't harm anyone" as adolescents aged, though only the multifaceted domain had a statistically significant increase. Nevertheless, both domains are clearly above the other domains (see Fig. 10), possibly further reflecting the increased autonomy of older adolescents, especially for maintaining control over their private information (Smetana, 2010).

As expected, there were significant relationship differences in reasons for nondisclosure, and like the differences found with social domain, these relationship differences changed with age. Participants increasingly chose the reasons of avoiding disapproval and feeling bad as they got older, but only for mothers. Participants also increasingly chose the reasons of maintaining privacy and not harming anyone as they got older, but only for family members. It is clear that adolescents are endorsing more reasons as they

get older and gain more independence from their parents. This is consistent with previous findings that disclosure to family members (including siblings) also decreases with age (Campione-Barr et al., 2021a); it follows that adolescents would then have more reason to keep information secret out of a desire for greater autonomy (Smetana, 2006, 2010).

Contrary to expectations, girls were not more likely than boys to choose reasons of privacy. Instead, girls chose the reason of feeling bad, embarrassed, or ashamed more than boys, but only for keeping information from mothers. This could stem from the close relationship that daughters and mothers typically share within the family unit (Smetana et al., 2006). When adolescents feel bad or embarrassed about their actions, they might hide it out of the sense that they have let their close others down. This may be most apparent for girls because they are more likely to avoid disclosure to protect the relationship (Metzger et al., 2020; Rosenfeld, 1979), especially their close relationship with mothers.

### Limitations and Future Directions

Though this study contributes important findings on how and why adolescents keep information from their close others, it is not without limitations. First, the generalizability of the findings is limited across gender and sexual orientation. All participants identified as cisgender at the time of the study, though the study did not ask about sexual orientation. This constrained sample is relevant because minority gender or sexual orientation identities are topics that adolescents commonly keep from family members or friends (e.g., due to fear of rejection; Willoughby et al., 2008). Furthermore, the study was conducted in a college town in the Midwest US, and most of the families included were White and middle-to-high-income. As previous studies have shown, there are differences in information management within parent-child and peer relationships across culture, ethnicity, and SES (e.g., Bakken & Brown, 2010; Smetana et al., 2010). The present study could not test these differences due to the relatively small sample size of non-white or low-income participants, so future studies should include a more intentionally diverse sample to better assess patterns across multiple relationships.

A second limitation is the age range of the participants. The mean age was under 13, with a range of 9 to 16, and there were several items in the measures that did not apply to many of the participants, such as drinking alcohol or having sex, due to the young age range. Including older participants would increase the variability of the data on how and why adolescents keep information hidden about these topics.

Future research could extend this study by examining sibling disclosure and nondisclosure more closely,

specifically focusing on age difference and gender composition of sibling pairs. All siblings in the current study were within four years apart, but siblings with wider age differences may disclose less to each other. For example, a much older sibling might hide their personal feelings if they feel that their younger sibling would not understand the issue, or they might lie about their actions so that it does not adversely influence the younger sibling.

Lastly, it is important to extend these results to investigate how nondisclosure affects individual adjustment and relationship quality, particularly in the context of a network of relationships. Recent work on the process of keeping secrets redefines secrecy based on *intention* in addition to active concealment (Slepian, 2021). The cognitive effort of active concealment can be detrimental to social interactions and relationship quality. Even if there is no action, a person can still think about the secret, which may be associated with rumination or other coping behaviors that affect adjustment. Indeed, previous work has shown links between keeping secrets from parents and various negative outcomes, such as lower relationship quality, depressive symptoms, and problem behavior (Engels et al., 2006; Frijns & Finkenauer, 2009). By extension, keeping secrets from multiple people may have different implications compared to keeping secrets from just one person, and this can also depend on which person someone is keeping secrets from and what the secret is about. For example, the cognitive effort of keeping a secret from a parent, who an adolescent presumably sees every day, is likely greater than the effort of keeping a secret from an online friend. Additionally, there may be spillover effects, where the effort of keeping a secret from one or a few close others is detrimental to other social relationships.

## Conclusion

Adolescents keep information from their close others in a variety of ways, sometimes depending on the person or information at hand. The specific patterns in how and why they do so, especially with siblings and peers, have been lacking attention in current research. This study provides an important basis for examining patterns of nondisclosure across multiple close relationships and social domains. The strategies that adolescents use to hide information depends on what kind of information they are keeping secret and from whom exactly they are keeping the information. Similarly, the reasons that adolescents give for why they choose not to disclose certain information also depends on the type of information and their relationship partner, in addition to age. These differences can all have implications for adjustment and relationship quality within adolescents' close social network and future research in this area will be

able to determine under which conditions non-disclosure is beneficial to youth adjustment and relationships, and under which conditions it is detrimental.

**Authors' contributions** YG conceived the research questions, performed statistical analyses, and drafted the manuscript; SK conceptualized the study design, obtained funding, and critically revised the manuscript; NC-B conceptualized the study design, obtained funding, oversaw data collection, and helped to draft the manuscript. All authors read and approved the final manuscript.

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**Data Sharing and Declaration** This manuscript's data will not be deposited. Data are available by request to the corresponding author.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Ethical Approval** This study was approved by the University of Missouri Institutional Review Board (#2002396). This study was performed in line with the principles of the Declaration of Helsinki.

**Informed Consent** All participants over 18 years old provided informed consent. For participants under 18 years old, their parent or guardian provided informed consent and the participant provided informed assent.

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## References

- Afifi, W. A., & Guerrero, L. K. (1998). Some things are better left unsaid II: Topic avoidance in friendships. *Communication Quarterly*, 46(3), 231–249. <https://doi.org/10.1080/01463379809370099>.
- Bakken, J. P., & Brown, B. B. (2010). Adolescent secretive behavior: African American and Hmong adolescents' strategies and justifications for managing parents' knowledge about peers. *Journal of Research on Adolescence*, 20(2), 359–388. <https://doi.org/10.1111/j.1532-7795.2010.00642.x>.
- Campione-Barr, N. (2017). The changing nature of power, control, and influence in sibling relationships. *New Directions for Child and Adolescent Development*, 2017(156), 7–14. <https://doi.org/10.1002/cad.20202>.
- Campione-Barr, N., Lindell, A. K., Giron, S. E., Killoren, S. E., & Greer, K. B. (2015). Domain differentiated disclosure to mothers and siblings and associations sibling relationship quality and youth emotional adjustment. *Developmental Psychology*, 51(9), 1278. <https://doi.org/10.1037/dev0000036>.
- Campione-Barr, N., Guo, Y., Garcia, R. L., & Killoren, S. (2021a). Who do you tell? Domain-differentiated adolescent disclosure across multiple close relationships. Manuscript in preparation.
- Campione-Barr, N., Rote, W., Killoren, S. E., & Rose, A. J. (2021b). Adolescent adjustment during COVID-19: The role of close relationships and COVID-19-related stress. *Journal of Research on Adolescence*, 31(3), 608–622. <https://doi.org/10.1111/jora.12647>.
- Corsano, P., Musetti, A., Caricati, L., & Magnani, B. (2017). Keeping secrets from friends: Exploring the effects of friendship quality,

- loneliness and self-esteem on secrecy. *Journal of Adolescence*, 58, 24–32. <https://doi.org/10.1016/j.adolescence.2017.04.010>.
- Cumsille, P., Darling, N., & Martínez, M. L. (2010). Shading the truth: The patterning of adolescents' decisions to avoid issues, disclose, or lie to parents. *Journal of Adolescence*, 33(2), 285–296. <https://doi.org/10.1016/j.adolescence.2009.10.008>.
- Engels, R. C. M. E., Finkenauer, C., & van Kooten, D. C. (2006). Lying behavior, family functioning and adjustment in early adolescence. *Journal of Youth and Adolescence*, 35(6), 949–958. <https://doi.org/10.1007/s10964-006-9082-1>.
- Frijns, T., & Finkenauer, C. (2009). Longitudinal associations between keeping a secret and psychosocial adjustment in adolescence. *International Journal of Behavioral Development*, 33(2), 145–154. <https://doi.org/10.1177/0165025408098020>.
- Frijns, T., Finkenauer, C., Vermulst, A. A., & Engels, R. C. M. E. (2005). Keeping secrets from parents: Longitudinal associations of secrecy in adolescence. *Journal of Youth and Adolescence*, 34(2), 137–148. <https://doi.org/10.1007/s10964-005-3212-z>.
- Frijns, T., Keijsers, L., & Finkenauer, C. (2020). Keeping secrets from parents: on galloping horses, prancing ponies and pink unicorns. *Current Opinion in Psychology*, 31, 49–54. <https://doi.org/10.1016/j.copsyc.2019.07.041>.
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development*, 63(1), 103–115. <https://doi.org/10.1111/j.1467-8624.1992.tb03599.x>.
- Guerrero, L. K., & Afifi, W. A. (1995). Some things are better left unsaid: Topic avoidance in family relationships. *Communication Quarterly*, 43(3), 276–296. <https://doi.org/10.1080/01463379509369977>.
- IBM Corp. 2020. *IBM SPSS statistics for windows, Version 27.0*. IBM Corp.
- Jay, T., King, K., & Duncan, T. (2006). Memories of punishment for cursing. *Sex Roles*, 55(1–2), 123–133. <https://doi.org/10.1007/s11199-006-9064-5>.
- Jensen, L. A., Arnett, J. J., Feldman, S. S., & Cauffman, E. (2004). The right to do wrong: Lying to parents among adolescents and emerging adults. *Journal of Youth and Adolescence*, 33(2), 101–112. <https://doi.org/10.1023/B:JOYO.0000013422.48100.5a>.
- Keijsers, L., Branje, S. J. T., Frijns, T., Finkenauer, C., & Meeus, W. (2010). Gender differences in keeping secrets from parents in adolescence. *Developmental Psychology*, 46(1), 293–298. <https://doi.org/10.1037/a0018115>.
- Laird, R. D., Bridges, B. J., & Marsee, M. A. (2013). Secrets from friends and parents: Longitudinal links with depression and antisocial behavior. *Journal of Adolescence*, 36(4), 685–693. <https://doi.org/10.1016/j.adolescence.2013.05.001>.
- Laird, R. D., & Marrero, M. D. (2010). Information management and behavior problems: Is concealing misbehavior necessarily a sign of trouble? *Journal of Adolescence*, 33(2), 297–308. <https://doi.org/10.1016/j.adolescence.2009.05.018>.
- Lam, C. B., McHale, S. M., & Crouter, A. C. (2014). Time with peers from middle childhood to late adolescence: Developmental course and adjustment correlates. *Child Development*, 85(4), 1677–1693. <https://doi.org/10.1111/cdev.12235>.
- Laursen, B., & Bukowski, W. M. (1997). A developmental guide to the organisation of close relationships. *International Journal of Behavioral Development*, 21(4), 747–770. <https://doi.org/10.1080/016502597384659>.
- Laursen, B., & Collins, W. A. (2009). Parent-child relationships during adolescence. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development* (pp. 3–42). John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470479193.adlpsy002002>.
- Leavitt, C. E., Nelson, D. A., Coyne, S. M., & Hart, C. H. (2013). Adolescent disclosure and concealment: Longitudinal and concurrent associations with aggression. *Aggressive Behavior*, 39(5), 335–345. <https://doi.org/10.1002/ab.21488>.
- Metzger, A., Wakschlag, L. S., Anderson, R., Darfler, A., Price, J., Flores, Z., & Mermelstein, R. (2013). Information management strategies within conversations about cigarette smoking: Parenting correlates and longitudinal associations with teen smoking. *Developmental Psychology*, 49(8), 1565–1578. <https://doi.org/10.1037/a0030720>.
- Metzger, A., Romm, K., Babskie, E., & Alvis, L. (2020). “It’s none of your business”: Adolescents’ reasons for keeping secrets about their engagement in problem behaviors. *Journal of Social and Personal Relationships*, 1–21. <https://doi.org/10.1177/0265407520966391>.
- Perkins, S. A., & Turiel, E. (2007). To lie or not to lie: To whom and under what circumstances. *Child Development*, 78(2), 609–621. <https://doi.org/10.1111/j.1467-8624.2007.01017.x>.
- Petronio, S. (2010). Communication privacy management theory: What do we know about family privacy regulation? *Journal of Family Theory & Review*, 2(3), 175–196. <https://doi.org/10.1111/j.1756-2589.2010.00052.x>.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, 132(1), 98–131. <https://doi.org/10.1037/0033-2909.132.1.98>.
- Rosenfeld, L. B. (1979). Self-disclosure avoidance: Why I am afraid to tell you who I am. *Communication Monographs*, 46(1), 63–74. <https://doi.org/10.1080/03637757909375991>.
- Rote, W. M., & Smetana, J. G. (2015). Acceptability of information management strategies: Adolescents’ and parents’ judgments and links with adjustment and relationships. *Journal of Research on Adolescence*, 25(3), 490–505. <https://doi.org/10.1111/jora.12143>.
- Rote, W. M., & Smetana, J. G. (2018). Within-family dyadic patterns of parental monitoring and adolescent information management. *Developmental Psychology*, 54(12), 2302–2315. <https://doi.org/10.1037/dev0000615>.
- Slepian, M. L. (2021). A process model of having and keeping secrets. *Psychological Review*. <https://doi.org/10.1037/rev0000282>.
- Smetana, J. G. (2006). Social domain theory: Consistencies and variations in children’s moral and social judgments. In M. Killen, & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Lawrence Erlbaum Associates Publishers.
- Smetana, J. G. (2010). *Adolescents, families, and social development: How teens construct their worlds*. John Wiley & Sons.
- Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development*, 77(1), 201–217. <https://doi.org/10.1111/j.1467-8624.2006.00865.x>.
- Smetana, J. G., Villalobos, M., Rogge, R. D., & Tasopoulos-Chan, M. (2010). Keeping secrets from parents: Daily variations among poor, urban adolescents. *Journal of Adolescence*, 33(2), 321–331. <https://doi.org/10.1016/j.adolescence.2009.04.003>.
- Smetana, J. G., Villalobos, M., Tasopoulos-Chan, M., Gettman, D. C., & Campione-Barr, N. (2009). Early and middle adolescents’ disclosure to parents about activities in different domains. *Journal of Adolescence*, 32(3), 693–713. <https://doi.org/10.1016/j.adolescence.2008.06.010>.
- Smetana, J. G., & Metzger, A. (2008). Don’t ask, don’t tell (your mom and dad): Disclosure and nondisclosure in adolescent-parent relationships. In *What Can Parents Do?* Margaret Kerr, Håkan Stattin, Rutger C. M. E. Engels (eds.) John Wiley & Sons (pp. 65–87).
- Smetana, J., Robinson, J., Bourne, S. V., & Wainryb, C. (2019). “I didn’t want to, but then I told”: Adolescents’ narratives regarding disclosure, concealment, and lying. *Developmental Psychology*, 55(2), 403–414. <https://doi.org/10.1037/dev0000646>.



- Tasopoulos-Chan, M., Smetana, J. G., & Yau, J. P. (2009). How much do i tell thee? Strategies for managing information to parents among American adolescents from Chinese, Mexican, and European Backgrounds. *Journal of Family Psychology*, 23(3), 364–374. <https://doi.org/10.1037/a0015816>.
- Turiel, E. (2002). *The culture of morality: Social development, context, and conflict*. Cambridge University Press.
- Villalobos Solís, M., Smetana, J. G., & Comer, J. (2015). Associations among solicitation, relationship quality, and adolescents' disclosure and secrecy with mothers and best friends. *Journal of Adolescence*, 43, 193–205. <https://doi.org/10.1016/j.adolescence.2015.05.016>.
- Willoughby, B. L., Doty, N. D., & Malik, N. M. (2008). Parental reactions to their child's sexual orientation disclosure: A family stress perspective. *Parenting: Science and Practice*, 8(1), 70–91. <https://doi.org/10.1080/15295190701830680>.

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