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Acceptability of Information Management Strategies: Adolescents' and Parents' Judgments and Links With Adjustment and Relationships

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Parents' and adolescents' ($M_{age} = 15.7$) acceptability ratings of four information management strategies and associations between these ratings and adjustment, relationship quality, and strategy use were examined in 174 middle-class families over 1 year. Acceptance of information management was greater for adolescents than for parents and for personal than for prudential issues; acceptance decreased across telling only if asked, avoidance, omitting details, and lying. Strategy acceptance and use were associated for lying and avoiding the topic. Controlling for strategy use, teens' acceptance of lying, omitting details, and avoidance was associated with poorer parent–adolescent relationships and more problem behavior 1 year later; acceptance of lying was associated with increases in depressed mood. Associations in the opposite direction were rare.

There has been much interest in adolescents' disclosure and secrecy about their activities from parents (see Smetana, 2011 for a review). More adolescent disclosure and less secrecy have been linked with lower levels of problem behavior (Frijns, Keijsers, Branje, & Meeus, 2010; Kerr, Stattin, & Burk, 2010; Marshall, Tilton-Weaver, & Bosdet, 2005), less depression (Frijns et al., 2010; Laird & Marrero, 2010), and better parent-adolescent relationships (Keijsers, Branje, Frijns, Finkenauer, & Meeus, 2010; Smetana, Metzger, Gettman, & Campione-Barr, 2006). However, adolescents often use different strategies to manage information, such as telling parents only if they ask, leaving out important details, avoiding the issue, and lying (Bakken & Brown, 2010; Darling, Cumsille, Caldwell, & Dowdy, 2006; Marshall et al., 2005). These strategies contain elements of both secrecy and disclosure and are of particular interest to researchers because they may act as a route to autonomy, allowing adolescents to assert privacy and control while avoiding conflict with parents (e.g., Bakken & Brown, 2010).

Some researchers have grouped information management behaviors into disclosing versus concealing strategies (Laird & Marrero, 2010); however, there is also reason to consider them separately. They differ in the frequency, situations, and justifications for their use and in their links with parenting and adolescent adjustment (Bakken & Brown, 2010; Darling et al., 2006; Smetana, Villalobos, Tasopoulos-Chan, Gettman, & Campione-Barr, 2009; Tasopoulos-Chan, Smetana, & Yau, 2009). Little is known, however, about how adolescents and their parents conceptualize the acceptability of different strategies and how these evaluations are associated with adolescents' strategy use, adjustment, and relationships.

Mean Level Differences in Strategy Acceptability

Past research suggests that the way information is concealed, the type of information, and the identity of the family member (e.g., parents vs. teens, gender) may influence judgments of the acceptability of information management. Most adolescents and adults view lying to be unacceptable in general (Jensen, Arnett, Feldman, & Cauffman, 2004; Perkins & Turiel, 2007), but they evaluate other forms of information management less negatively. Buller and Burgoon (1994) distinguished between fabrications, such as lying, which actively provide false information to others, and acts of omission, such as avoidance or omitting information, which merely refrain from providing information. Fabrications are harder to deny and more likely to violate expectations of honesty and trust within close relationships, whereas acts of omission can be more easily explained and are considered less morally

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problematic (Buller & Burgoon, 1994). Indeed, in two separate studies, adolescents spontaneously distinguished during interviews between lying and other forms of nondisclosure, noting that acts of omission are less wrong than lies (Marshall et al., 2005; Perkins & Turiel, 2007). Likewise, adolescents disapprove more of hypothetical scenarios involving overt lies than acts of omission (Keltikangas-Jarvinen & Lindeman, 1997), and undergraduates rate behaviors that deceive others through implication or concealment as less wrong than explicit statements intended to deceive (Hopper & Bell, 1984).

Adolescents may also discriminate among acts of omission. Buller and Burgoon (1994) theorized that avoidance is less wrong than omitting details because avoidance creates no impression of knowledge in the mind of the deceived, whereas equivocations or half-truths, like omitting important details, create a false perception of knowledge and honesty. In turn, Laird and Marrero (2010) found that telling parents only if asked functioned more like disclosure than like omission or lying. These studies imply that information management strategies may be ordered in terms of deceptiveness, with telling parents only if asked being least deceptive, followed by avoidance, then omitting important details, and finally lying. As deception is generally considered unacceptable (Buller & Burgoon, 1994), adolescents' and parents' evaluations of the acceptability of these strategies may mirror this progression.

The acceptability of using information management strategies also appears to depend on the type of activity concealed. Research guided by social domain theory (Smetana, 2011; Turiel, 1983) shows that parents and adolescents view prudential issues (acts that threaten the actor's health or safety) as more legitimately subject to parental authority and obligatory to disclose than personal issues (acts that are not right or wrong and mainly affect oneself; Smetana & Asquith, 1994; Smetana et al., 2006). Likewise, lying is deemed more acceptable when it is committed to maintain autonomy than when it is done to avoid punishment (Jensen et al., 2004; Lee & Ross, 1997)-primary reasons for adolescents' concealment of personal and prudential issues, respectively (Smetana et al., 2009). Indeed, Perkins and Turiel (2007) found that teens were more accepting of lying about personal issues than prudential ones. However, domain-related differences have not been examined in parents' judgments or in judgments of the acceptability of strategies other than lying.

Finally, generation, maturation, and gender may influence acceptance of information management. Compared to adolescents, parents typically believe that they have more legitimate authority over adolescents' behavior and that adolescents are more obligated to disclose to them (Smetana & Asquith, 1994; Smetana et al., 2006). As information management and judgments of its acceptability appear to be related to these perceptions (Darling et al., 2006; Perkins & Turiel, 2007; Smetana et al., 2006), adolescents may judge all forms of nondisclosure as more acceptable than do parents. Adolescents also increasingly focus on the personal aspects of behaviors and expect more control over their activities with age (Smetana, 2011). Indeed, Perkins and Turiel (2007) found that older adolescents were more likely to positively evaluate lies about personal and prudential behaviors than were younger adolescents. Parents likewise relinquish control over personal and prudential decisions to adolescents over time, although to a lesser extent than teens would prefer (Smetana, 2011). Thus, both parents' and adolescents' acceptance of information management strategies may increase with adolescent age.

Gender socialization theories suggest that boys are encouraged to be more dominant and independent, whereas girls are rewarded for exhibiting greater sensitivity and cooperation (Galambos, Berenbaum, & McHale, 2009). Consistent with this, late adolescent males appear more accepting of various interpersonal transgressions, such as betrayal of a friend's trust or sexual cheating (Feldman, Cauffman, Jensen, & Arnett, 2000), and of lying and omitting information (Jensen et al., 2004; Keltikangas-Jarvinen & Lindeman, 1997; but see Perkins & Turiel, 2007), than are females. Boys also expect personal control over prudential issues at earlier ages than do girls (Flanagan, Stout, & Gallay, 2008), and parents, especially mothers with more traditional gender roles, provide more autonomy to boys than girls during adolescence (Bumpus, Crouter, & McHale, 2001). Boys may therefore be more accepting of information management particularly when strategies are more deceptive or concern prudential behaviors. Furthermore, mothers tend to have closer and more knowledgeable relationships with their adolescent children than do fathers (Collins & Russell, 1991; Fuligni, 1998) and therefore may expect greater openness and be more critical of adolescents' withholding information. However, mothers and fathers do not differ in their beliefs about related constructs (e.g., autonomy expectations, legitimate parental authority; Feldman

& Quatman, 1988; Smetana & Asquith, 1994); therefore, an absence of parental gender differences in strategy acceptance would also be consistent with prior research.

Associations with Strategy Acceptability

Mean-level differences in strategy acceptability ratings provide insight into normative patterns of beliefs about information management. However, a primary goal of research on information management is to understand the import of strategy use for adolescent adjustment and parent–adolescent relationships (Kerr et al., 2010). Therefore, it is equally important to explore how individual differences in these beliefs are associated with adolescents' actual strategy use, relationship quality, and measures of adjustment.

Links with Strategy Use. Attitudes have been shown to predict behavior across a variety of issues (Kraus, 1995) and the same may be true of information management. For instance, when deciding how to behave in hypothetical scenarios, the more that college students believe that deception is acceptable in the situation, the more deceptive the acts they endorse (Buller & Burgoon, 1994). Reciprocally, adolescents' attitudes toward information management may be influenced by their own previous experiences with concealment. Jensen et al. (2004) found that adolescents who lied more in the past year were more accepting of lying in hypothetical scenarios, although results were cross-sectional.

Links with Adjustment and Relationship Quality. Similar to findings regarding strategy use, strategy acceptance may also show reciprocal associations with adolescent adjustment and parentadolescent relationships. However, strategy use is influenced by pragmatic aspects of situations, such as likelihood or consequences of discovery and time to plan (Buller & Burgoon, 1994; Darling et al., 2006), which may discourage deception even when adolescents might otherwise be so inclined. In contrast, strategy acceptability judgments, like abstract moral judgments, may be less influenced by pragmatic concerns (Smetana, 2011) and thus may be similarly, but potentially more strongly, tied to the relational and personal factors commonly associated with adolescent information management. Additionally, and similar to links with beliefs about parental authority (Kuhn & Laird, 2011), teens' acceptance of information management strategies may be reciprocally related to poorer adjustment and relationships with parents because it indicates an overall lack of respect for authority and close others that is present regardless of whether teens ultimately withhold information from parents.

Few studies have examined adolescents' attitudes toward information management or their associations, but there is preliminary evidence that acceptance of concealment may be uniquely linked with adjustment and family-level variables. In a cross-sectional study of high school and collegeaged adolescents, Jensen et al. (2004) found that adolescents' acceptance of lying and actual lying behavior were differentially related to family control, family cohesion, acceptance of deviance, and self-restraint. Associations between strategy acceptance and negative relationship qualities or actual adjustment (rather than personality variables related to deviance) have not been examined, however. Likewise, these links have not been assessed longitudinally or for a broader range of information management strategies. Negative associations may be strongest for acceptance of lying and weakest for telling only if asked, however: both adolescents and theorists make conceptual distinctions between acts of omission and lies, viewing the former as more appropriate (Buller & Burgoon, 1994; Marshall et al., 2005), and telling only if asked functions more like disclosure than concealment (Laird & Marrero, 2010).

Associations with strategy acceptance may also be moderated by domain and gender. Gradual acquisition of control over personal issues promotes adolescents' mental health and positive adjustment (Hasebe, Nucci, & Nucci, 2004; Smetana, Campione-Barr, & Daddis, 2004), and feeling allowed to keep personal issues private does not mean that adolescents will choose to do so (for instance, if the relationship is close). In contrast, acceptance of concealing prudential behaviors may be more problematic for adjustment; it is associated with rejection of parental authority over prudential issues, which in turn is associated with more problem behavior and drug use (Nucci, Guerra, & Lee, 1991; Smetana et al., 2004). Therefore, acceptance of concealment may have less negative associations for personal than prudential issues.

Evidence suggests that family relationship variables (but not adjustment) may be more strongly linked with boys' than girls' acceptance of lying (Jensen et al., 2004). However, research on associations with strategy use (as opposed to strategy acceptance) displays the opposite pattern-relationship quality may be more related to girls', rather than boys' secrecy (Keijsers et al., 2010)-or does not show gender differences (Keijsers, Frijns, Branje, & Meeus, 2009; Kerr et al., 2010). It is therefore important to more fully examine gender moderation of associations with strategy acceptance, especially for a wider range of information management strategies. Additionally, given gendered parenting roles (Collins & Russell, 1991), associations between relationship quality and teen strategy acceptance may depend on the parent considered. While parent differences do not appear to moderate links with strategy use (Keijsers et al., 2010), moderation has not been explored for strategy acceptance.

The Present Study

The present study examines teens' and parents' acceptance of information management strategies over 1 year, as well as longitudinal correlates of such acceptance. Given the paucity of information regarding beliefs about the acceptability of information management, the first aim of this study was to compare parents' and adolescents' evaluations of the acceptability of four information management strategies across a variety of situations, as categorized by social-cognitive domain. We examined strategy acceptability in middle to late adolescence because, during this time, adolescents are increasingly away from home and engaging in risky behaviors (Collins & Steinberg, 2006), concealment becomes more common (Keijsers et al., 2010), and parents decrease in their knowledge of children's activities (Masche, 2010).

We expected that domain, strategy, and family member would all influence strategy acceptability ratings. Specifically, we hypothesized that participants would judge telling only if asked as most acceptable, followed by avoidance, then omitting details, and finally lying. We further hypothesized that participants would judge information management as more acceptable for personal than prudential issues, that adolescents would rate all forms of information management as more acceptable than would parents, and that participants would be more accepting of information management at Wave 2 than Wave 1. We also considered possible interactions of these factors, hypothesizing that strategy differences in acceptability ratings might be more pronounced for parents than for teens. Finally, we examined potential adolescent and parent gender differences in evaluations of the acceptability of information management strategies. We expected mothers to be less accepting of strategy use than fathers and boys to be more accepting and increase more in their acceptance of information management than girls, particularly for prudential issues.

The second aim of the study was to examine links between adolescents' judgments of strategy acceptability and actual strategy use. We expected reciprocal associations, such that over 1 year, greater acceptance of information management strategies would be associated with more use of those strategies and more use of information management strategies would be associated with greater strategy acceptance.

The final aim of this study was to examine bidirectional associations between adolescents' acceptance of information management strategies and their adjustment and relationships with parents. To ensure that links between strategy acceptability judgments and adolescent adjustment or parent– adolescent relationships were not merely due to the influence of strategy use on both factors, we controlled for adolescents' actual strategy use when examining all associations with adolescent strategy acceptance. We also examined associations with strategy use, controlling for strategy acceptability, to provide a baseline against which to compare the effects of strategy acceptance.

Given differences between concealment and disclosure strategies, and prior relations between adjustment, family variables, and perceptions of concealment, we expected that greater acceptance of all strategies except telling only if asked would be associated with more problem behavior and depressed mood, more negative family interactions, and less parental support. However, we theorized that the links with relationship quality and adjustment would be less robust for omitting information and avoiding the subject than for lying, based on distinctions between omission and fabrication. Furthermore, we expected that negative associations among strategy acceptance, relationship quality, and adjustment would be stronger for prudential than personal issues. Finally, we examined parent and teen gender moderation of these associations. Consistent with Jensen et al. (2004), we expected that links between relationship quality and strategy acceptance would be stronger for males than females, at least for judgments of lying. Although adolescents' relationships with mothers and fathers differ, factors affecting relationship quality may not;

thus, we made no specific predictions about moderation by parent gender.

METHOD

Sample

Participants were 174 families with 10th- and 11thgrade adolescents ($M_{age} = 15.7$ years, SD = 0.63; 83 males, 91 females) from two suburban high schools in a northeastern city. Families were studied three times over 1 year, but in this study we focused on the first and last assessments. For convenience, the first and the last wave will be referred to here as Wave 1 and Wave 2. Participants were drawn from a larger sample that also included 40 families with 12th graders; these participants were excluded from current analyses because the majority (76%) of 12th graders moved out of their parents' home by the third wave and therefore had very different communication and relationship patterns with parents at that point. At Wave 1, 174 adolescents, 167 mothers $(M_{age} = 46.4 \text{ years}, SD = 5.8)$, and 111 fathers $(M_{\text{age}} = 49.0 \text{ years}, SD = 5.0)$ took part in the study. Although fewer fathers than mothers participated, most adolescents (86%) reported on both of their parents. Adolescents self-identified as Caucasian (74%), biracial (10%), Asian (8%), African American (6%), Hispanic (2%), and Native American (1%).

The majority (74%) of families were married (67% with both birth parents, 7% with a stepparent); the rest were single-parent, primarily divorced families. Parents typically had at least some college education; 15% of mothers and 19% of fathers had only a high school education or less. Families were primarily middle class; income ranged from less than \$30,000 to greater than \$130,000 a year, with median income between \$70,000 and \$86,000 a year. Most fathers (87%) and approximately half of the mothers (58%) worked full time. Nearly all (96%) adolescents lived with their birth mothers all or part of the time. Most adolescents (75%) lived with their birth fathers all or part of the time.

Attrition over the year was 2% for teens and mothers and 8% for fathers, resulting in a Wave 2 sample of 170 teens, 164 mothers, and 102 fathers. Compared to those retained, nonretained teens were less likely to live with their mothers and more likely to be older, Asian, to have married fathers, and to rate avoiding and omitting information about prudential issues as acceptable. There were no significant differences between retained and nonretained parents.

Procedures

Families were recruited by letters sent home to parents of 10th-12th graders, presentations made during morning announcements, and an information table in the cafeteria. Interested parents and teens filled out an interest form on a secure online website or contacted the project office by phone. Permission, consent, and assent forms were mailed to interested families, who were enrolled in the study once completed forms were returned. At least one parent had to participate along with their teen, although participation of both parents was strongly encouraged; only one child per family was allowed to participate. Due to financial constraints (i.e., funds available for honoraria), we capped study participation at the first 215 families to return completed forms. This led to a participation rate of approximately 15% of all eligible families in the two districts. Of the families who indicated interest (approximately 400; 28% of eligible families) and were mailed consent forms, 58% participated in the study. The demographic background of participating adolescents matched the profiles of the two high schools, although mean GPA was somewhat higher than average. Families received a \$35 honorarium for completing the first wave of surveys and \$60 for completing the final study wave.

Participants completed the surveys online using SurveyMonkey. Although not all families had access to the Internet at home, nearly all participants had some access to the Internet and e-mail (e.g., at school, work, or the library). Participants also could complete paper versions by mail, but only 3% of families did so. Family members were sent individual e-mails with links to the survey and were asked to complete the survey in private. Basic demographic information collected at each wave helped ensure that the survey was completed by the intended participant. Families were emailed or called with weekly reminders until the surveys were completed or participants indicated that they wished to discontinue participation in the study.

Measures

Strategy use. At both waves, adolescents indicated the *primary* information management strategy they used with mothers and fathers (separately) for five *personal* issues (how free time is spent, having a crush, how allowance money or earnings are spent, what they talk about on the phone with friends, who their friends are) and four *prudential*

issues (driving recklessly, drinking alcohol, smoking marijuana or using illegal drugs, going to parties where teens are drinking). Issues were categorized based on social domain theory and previous studies of secrecy and disclosure (Smetana et al., 2006, 2009). For each issue, adolescents could choose from five different strategies (tell all, tell only if asked, avoid the topic, omit important details, or lie) or could indicate that they never engage in the behavior. Strategies were coded as a "1" if chosen and a "0" if not chosen; behaviors that teens did not engage in were left blank. The proportion of responses affirming strategy use in each category was calculated.

As adolescents varied in the behaviors they endorsed (and thus the items on which strategy use was indicated), alphas could not be calculated. Instead domain categorization of the items was verified using confirmatory factor analysis (CFA) in MPlus 6.0 (Muthén & Muthén, 1998–2012) with a weighted least squares with mean and variance (WLSMV) adjustment estimator, given the dichotomous data. Separate models were fit for each of the four information management strategies. Nonsignificant chi-square values or chi-square divided by df values less than 3.0, comparative fit indexes (CFIs) greater than .90, root mean square errors of approximation (RMSEAs) less than .08 indicate acceptable fit (Kline, 2005). With few exceptions, a two-factor model with personal and prudential items assigned to separate factors fit the data acceptably and better than a single-factor solution; almost all factors loadings were significant at the p < .05 level. Based on chi-square difference tests, the vast majority of factor loadings and thresholds were found to be invariant across time and teen

gender for all forms of strategy use and with both mothers and fathers (ps > .05).

Strategy acceptability. At both waves, adolescents and parents rated the acceptability of teens' use of four information management strategies for three personal and three prudential issues highly similar to the topics rated for strategy use. The personal items were as follows: How free time is spent, how allowance money or earnings are spent, and having a crush. The *prudential* items were drinking alcohol, smoking marijuana or using illegal drugs, and texting while driving. Specifically, adolescents were asked "how acceptable do you think it would be to [lie to your parents, avoid talking to your parents, leave out important details when talking with your parents, tell your parents only if they ask] about ?" Parents were asked the same questions, reworded to reflect parents' perspectives. Participants rated strategy acceptability on a 5-point scale ranging from 1 (definitely wrong) to 5 (definitely OK). Across both waves, reliabilities ranged from .74 to .92 for teens, .78 to .93 for mothers, and .66 to .95 for fathers (see Table 1).

Domain categorization of the strategy acceptability items also was verified with a CFA using full information maximum likelihood (FIML) estimation with robust standard errors (MLR). A two-factor model with personal and prudential items loading on separate factors fit the data well. For all family members and strategies, the models showed nonsignificant chi-square values, RMSEAs < .08, CFIs > .98. Based on chi-square difference tests, and for all family members, factor loadings and intercepts were invariant across time, teen gender, and waves (ps > .05), with three partial invariance

 TABLE 1

 Means, Standard Deviations, and Reliability of Strategy Acceptability Ratings

	Teen W1			Teen W2			Mother W1			Mother W2			Father W1			Father W2		
	М	SD	α	М	SD	α	М	SD	α	М	SD	α	М	SD	α	М	SD	α
Personal																		
Lie	3.09	0.96	.74	2.99	1.00	.78	2.26	0.90	.78	2.11	0.92	.81	2.17	0.77	.64	2.03	0.83	.76
Omit	3.56	0.99	.79	3.38	1.00	.79	2.80	0.99	.80	2.69	0.97	.82	2.66	0.91	.72	2.66	1.02	.84
Avoid	3.67	0.91	.74	3.54	0.99	.80	3.08	0.92	.80	3.04	0.90	.80	2.80	0.90	.77	2.82	0.90	.79
Tell if asked	3.87	0.97	.77	3.83	0.96	.77	3.53	0.99	.85	3.55	0.96	.82	3.31	1.00	.85	3.45	1.03	.90
Prudential																		
Lie	1.96	1.13	.85	2.06	1.15	.90	1.14	0.42	.83	1.19	0.58	.90	1.16	0.37	.80	1.13	0.37	.82
Omit	2.27	1.31	.89	2.46	1.35	.94	1.22	0.48	.80	1.29	0.63	.88	1.24	0.51	.89	1.24	0.50	.77
Avoid	2.47	1.34	.88	2.59	1.36	.92	1.32	0.62	.89	1.43	0.78	.89	1.35	0.67	.87	1.28	0.58	.81
Tell if asked	2.94	1.45	.91	3.05	1.39	.92	1.76	1.09	.93	1.78	1.11	.93	1.84	1.13	.94	1.75	1.05	.93

Note. Acceptability was rated on a 5-point scale with 5 = *most acceptable.*

exceptions. Factor loadings were invariant across family members for all strategies at Wave 2 and for telling only if asked at Wave 1; acceptance of lying, avoiding, and omitting details about having a crush at Wave 1 loaded more highly on the personal factor for mothers than for teens or fathers. Detailed fit and noninvariance information about the strategy use and acceptability CFAs can be found on the publisher's website as Supporting Information.

Relationship quality. At both waves, adolescents reported on their relationships with mothers and fathers using four subscales, two assessing positive support (companionship and affection) and two assessing negative interactions (conflict and antagonism) from the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985). Each subscale consisted of three items; adolescents indicated the frequency of the 12 relationship behaviors on a 5-point scale ranging from 1 (little or none) to 5 (extremely much). At Waves 1 and 2, Cronbach's alphas for positive support were .82 and .83 for ratings of mothers and .83 and .85 for ratings of fathers; for negative interactions, they were .93 and .94 for ratings of mothers and .95 and .96 for ratings of fathers. These two constructs, although sometimes combined (e.g., Stattin & Kerr, 2000) or studied in isolation (e.g., Keijsers et al., 2010), are not equivalent (De Goede, Branje, & Meeus, 2009) and were only moderately (negatively) correlated in this study (see Table 2). Therefore, parental support and negative interactions were examined separately in these analyses.

Problem behavior. At both waves, adolescents reported on their problem behavior using a shortened version of the Problem Behavior Scale (PBS; Mason, Cauce, Gonzales, & Hiraga, 1996). Teens indicated how frequently they engaged in 10 acts of minor deviance (e.g., marijuana or alcohol use, minor theft, fighting, truancy) on a 5-point scale ranging from 1 (*never happens*) to 5 (*happens very often*). Cronbach's alphas were .71 and .78 for Waves 1 and 2, respectively.

Depressed mood. At both waves, adolescents reported on their depressive symptoms using the Center for Disease Control–Depression Scale (CES-D; Radloff, 1977), a 20-item measure of depressed mood. Adolescents indicated how frequently they had felt or behaved in different ways over the past week on a 4-point scale ranging from 1 (*rarely or none of the time*) to 4 (*most or all of the time*). Cronbach's alphas were .89 and .91 for Waves 1 and 2.

RESULTS

Mean-Level Differences in Strategy Acceptability

There were far fewer fathers than mothers or teens participating in the study. To avoid truncating the sample size included in the analyses, we first examined whether mothers' and fathers' ratings could be combined using a 2 (Wave) × 3 (Family Member) × 2 (Domain) × 4 (Strategy) × 2 (Teen Gender) repeated measures analysis of variance (ANOVA) on acceptability ratings. As there was only one significant difference between parents' ratings (a significant four-way interaction, *F*(1, 94) = 6.62, p < .05, $\eta^2 = .07$, showing that at Wave 1, mothers were more accepting of girls' nondisclosure about personal issues than were fathers, p < .01), mothers' and fathers' reports were combined for subsequent analyses.

Next, we compared parents' and adolescents' acceptability ratings using a 2 (Wave) \times 2 (Generation: Parent vs. Teen) \times 2 (Domain) \times 4 (Strategy) \times 2 (Teen Gender) repeated measures ANOVA. Significant main effects of generation, domain, and strategy, F(1, 168) = 233.09, F(1, 168) = 761.80, F(3, 168) = 760.80, F(3, 168)504) = 216.59, ps < .001, $\eta_p^2 = .58$, .82, .56, indicated that, as hypothesized, adolescents rated strategy use as more acceptable than did parents (Ms = 2.97, 2.09) and that managing information was seen as more acceptable for personal than prudential issues (Ms =3.15, 1.91). Telling only if asked was seen as most acceptable, followed by avoidance, omitting important details, and, least of all, lying (Ms = 3.01, 2.60, 2.43, 2.08), all ps < .001. These main effects were qualified by Generation \times Strategy \times Domain, *F*(3, 504) = 32.44, p < .001, $\eta_p^2 = .16$; Wave × Strategy × Domain, F(3, 504) = 3.54, p < .05, $\eta_p^2 = .02$; and Wave × Generation × Domain × Teen gender, F(1, 168) = 6.58, p < .05, $\eta_p^2 = .03$, interactions. Interaction effects were examined using post hoc comparisons with Bonferroni-corrected p-values. Both parents and teens significantly distinguished between the acceptability of the strategies in the order previously reported. However, for personal issues, parents distinguished more between telling only if asked and the other strategies and between avoidance and the other strategies than did teens (ps < .05), whereas for prudential issues, teens distinguished more between lying and the other strategies than did parents (ps < .05). Additionally, participants were more accepting of lying and omitting about personal issues at Wave 1 than at Wave 2 but were more accpting of avoidance and omitting about prudential issues at Wave 2 than at Wave 1. Finally,

	М		SD	1	2		3	4	5		6	7	8
1. W1 Prob Beh	1.3	86	0.37										
2. W2 Prob Beh	1.4	4	0.48	.59**									
3. W1 Depressed	1.7	'9	0.52	.05	.08								
4. W2 Depressed	1.7	74	0.55	.08	.30**		.68**						
5. W1 Support	3.63 0.64		22**	08	-	13	10						
6. W2 Support	3.60 0.64		19*	10	-	18*	17*	.62	2**				
7. W1 Neg Int	1.94		0.68	.33**	.35			.29**	21*		22**		
8. W2 Neg Int	2.01		0.76	.30** .36		.26**		.33**	24	**33**		.67**	
Tell Only If Asked	М	SD	1	2	3	4	5	6	7	8	9	10	11
9. W1 Accept	3.41	1.00	.00	.05	.15*	.02	05	03	.08	.02			
10. W2 Accept	3.44	1.02	.29**	.18*	.09	01	04	12	.13+	.09	.46**		
11. W1 Use	0.38	0.26	16*	14^{+}	22**	18*		.03	15^{*}	25**	01	.01	
12. W2 Use	0.36	0.27	12	14^{+}	06	04	04	21**	16*	18*	.06	04	.18*
Avoid the Topic	М	SD	1	2	3	4	5	6	7 8		13	14	15
13. W1 Accept	3.07	0.97	.34**	.32**	.20**	.20** .19*		33**	.25**	.36**			
14. W2 Accept	3.06	1.03	.29**	.27**	.10	.03	18*	33**	.28**	.31**	.56**		
15. W1 Use	0.19	0.19	.32**	.17*	.24**	.13	32**	29**	.30**	.35**	.28**	.42**	
16. W2 Use	0.18	0.19	.17*	$.14^{+}$.08	.07	22**	19*	$.14^{+}$.26**	.33**	.39**	.51**
Omit – Boys	М	SD	1	2	3	4	5 6		7	8	13	14	15
13. W1 Accept	2.84	0.98	.35**	40**	.23*	.26*	14	13	.15	.39**			
14. W2 Accept	2.94	1.05	.17	.34**	.04	.04	18	39**	.17	.22*	.40**		
15. W1 Use	0.10	0.17	.07	.05	.07	.04	.18	00	04	.01	06	07	
16. W2 Use	0.13	0.20	$.18^{+}$.25*	04	.10	03	.07	.01	.11	.03	01	.36**
Omit – Girls	М	SD	1	2	3	4	5	6	7	8	21	22	23
21. W1 Accept	2.99	1.05	.39**	.22*	.29**	.25*	23*	35**	.41** .4		* *		
22. W2 Accept	2.90	1.00	.38**	.27**	.28**	.33*	05	29**	.49*			*	
23. W1 Use	0.13	0.16	02	$.19^{+}$	02	00	03	13	09	21	• .07	.03	
24. W2 Use	0.13	0.18	.033	.13	.02	02	.24*	.05	.08	04	.07	.17	.09
Lie – Personal	М	SD	1	2	3	4	5	6	7	8 25		26	27
25. W1 Accept	3.09	0.96	.31**	.30**	.24**	.21**	26**	29**	.27**	.42**			
26. W2 Accept	2.99	1.00	.16*	.21*	.16*	.05	21**	31**	.10	.21**	.56**		
27. W1 Use	0.029	0.07	.23**	.05	.11	.21**	10	01	.02	.05	.12	.10	
28. W2 Use	0.034	0.11	.14	.10	.21**	.21**	14	25**	.10	.18*	.23**	.20**	.21**
Lie – Prudential	М	SD	1	2	3	4	5	6	7 8		33	34	35
33. W1 Accept	1.96	1.13	.38**	.41**	.14	.26**	18*	25**	.21**	.32**			
34. W2 Accept	2.06	1.15	.33**	.38**	.09	.11	13	35**	.29**	.28**	.59**		
35. W1 Use	0.21	0.33	.30**	.04		04	25*	26*	.09	.13	.32**	.23**	
36. W2 Use	0.21	0.33	.10	.08		01	19*	18*	.02	.09	.11	.18*	.44**

TABLE 2 Means, Standard Deviations, and Zero-Order Correlations for Variables in Each Path Model

Note. All variables are teen report. Prob beh = problem behavior, Neg Int = negative interactions, Accept = strategy acceptability, Use = strategy use.

 $^{+}p < .10; *p < .05; **p < .01.$

boys but not girls were more accepting of managing information about prudential issues at Wave 2 than at Wave 1 (M = 2.62, 2.29, p < .01 for boys, M = 2.47,

2.46, *ns* for girls), but parents of boys and girls did not differ. Means and standard deviations for acceptability ratings can be found in Table 1.

Associations With Strategy Acceptability

To address the second and third aims of the study, we analyzed cross-lag path models of the associations among adolescents' reports of strategy acceptability, strategy use, adjustment, and parent– adolescent relationship quality over 1 year. These analyses were conducted using structural equation modeling in MPlus 6.0 (Muthén & Muthén, 1998– 2012) with FIML estimation of missing data. Models were run separately for each information management strategy and included all autoregressive paths and within-wave correlations.

Differences in the path models due to domain, adolescent reports of mothers versus fathers, and teen gender were examined using multigroup modeling with the first two comparisons nested within individuals using the "type = complex" MPlus function. Fit indexes were computed using the MLR estimator, which is robust to nonnormality and nonindependence of observations (Muthén & Muthén, 1998–2012). Chi-square difference tests were computed using Satorra–Bentler scaled chisquare adjustments (Satorra & Bentler, 2001).

Model fit was not significantly reduced when paths were constrained to be equal across parent, teen gender (except for omitting information), or domain (except for lying). Therefore, these variables were combined for the models of avoiding information and telling only if asked. However, boys and girls were examined separately in the model of omitting information, and personal and prudential issues were examined separately for the model of lying. The resulting models had acceptable chi-square, CFI, and RMSEA fit values (see Figures 1–4). Zero-order correlations among the variables included in the path models are presented in Table 2.

Links With Strategy Use

Consistent with bivariate correlations, the path models showed significant links over time between strategy acceptability and strategy use for lying (Figure 1) and avoidance (Figure 2) but not for omitting important details (Figure 3) or telling only if asked (Figure 4). Adolescents who found it more acceptable to lie about personal issues increased in their lying about these issues over the year, but the reverse was not found. Links for avoidance were bidirectional: The more adolescents initially accepted avoiding discussions, the more they increased in their use of avoidance, and the more adolescents avoided discussing issues with parents, the more accepting they became of such avoidance over time.

Links with Relationship Quality

As hypothesized, greater acceptance of lying (Figure 1), avoiding the topic (Figure 2), and omitting important details (Figure 3) were associated with poorer parent–adolescent relationships 1 year later. Controlling for strategy use, adolescents' greater acceptance of these strategies was associated with more negative interactions with and less positive support from parents over time. The



FIGURE 1 Structural path model for lying. Estimates are for personal and prudential models, respectively. $\chi^2(12) = 11.44$, 13.04, p > .05; CFI = 1.00, .997, RMSEA = .00, .022, Significant paths are bolded. Neg = negative. Lie = teens' lying behavior. Accept: lie = teens' acceptance of lying. Within-wave correlations were modeled but are omitted here for clarity. Standardized coefficients for the autoregressive paths were all .48 or greater (p < .001) except for personal strategy use, $\beta = .17$, p < .05. $^+p < .05$, $^*p < .05$.



FIGURE 2 Structural path model for avoiding the topic. $\chi^2(12) = 11.13$, p > .05; CFI = 1.00, RMSEA = .00. Significant paths are bolded. Neg = negative Avoid = teens' avoidance of topics. Accept: avoid = teens' acceptance of avoiding topics. Within-wave correlations were modeled but are omitted here for clarity. Standardized coefficients for the autoregressive paths were all .48 or greater (p < .001). *p < .05, **p < .01.



FIGURE 3 Structural path model for omitting important details. Estimates are for boys and girls, respectively. $\chi^2(12) = 19.26$, 16.05, p > .05, CFI = .96, .98 RMSEA = .085, .061. Significant paths are bolded. Neg = negative. Omit = teens' omitting important details. Accept: omit = teens' acceptance of omitting important details. Within-wave correlations were modeled but are omitted here. Standardized coefficients for the autoregressive paths were .38 or greater (p < .005) except for boys' and girls' strategy use, $\beta = .36$, p = .057 and $\beta = .10$, $ns^+p < .05$, **p < .01.

expected differences between omissions and fabrications in their associations with relationship quality did not materialize. Likewise, there was little moderation by domain or teen gender: Links with increased negative interactions were robust across these variables. However, links with reductions in parental support were significant for lying about prudential, but not personal issues and for girls' but not boys' omissions. The reverse paths were rarely significant; only girls' negative interactions with parents were associated with increased acceptance of omitting information.

Compared with strategy acceptance, associations between strategy use and relationship quality were less robust. Controlling for strategy acceptance, adolescents who avoided discussing issues had more negative interactions with their parents over time. Surprisingly, however, girls who omitted information had less negative interactions with parents over time. Consistent with Laird and Marrero (2010), telling only if asked functioned positively, being reciprocally related to less negative interactions with parents (see Figure 4).

Links With Adjustment

As hypothesized, acceptance of lying, avoiding, and omitting information (for boys only) was asso-



FIGURE 4 Structural path model for telling only if asked. $\chi^2(12) = 17.61$, p > .05; CFI = .99, RMSEA = .052. Significant paths are bolded. Neg = negative. Tell if asked = teens' telling parents only if asked. Accept: tell if asked = teens' acceptance of telling parents only if asked. Within-wave correlations were modeled but are omitted here. Standardized coefficients for the autoregressive paths were all .49 or greater (p < .001) except for strategy use, $\beta = .14$, ns * p < .05, **p < .01.

ciated with more problem behavior over time; acceptance of lying was associated with more depressed mood (although only for prudential issues). Only one reverse path was significant; more problem behavior was associated with increased acceptance of telling only if asked over time. Controlling for strategy acceptance, associations between strategy use and adolescent adjustment did not reach significance, despite the prevalence of significant bivariate correlations, as shown in Table 2.

DISCUSSION

Mean Level Differences in Strategy Acceptability

Considerable research has examined adolescents' use of different information management strategies and their associations with adolescent and family outcomes. This study is unique, however, in assessing adolescents' and parents' beliefs about the acceptability of those strategies. As expected, the primarily middle class, European American middle adolescents in our sample were more accepting than were their parents of all information management strategies. These findings are consistent with substantial research demonstrating that adolescents typically desire more autonomy than parents are willing to grant (Feldman & Quatman, 1988) and believe that their actions are less legitimately controlled by parents than parents believe (Smetana, 2011). Additionally, and as expected, parents and adolescents were more accepting of information management regarding personal than prudential issues and distinguished between the acceptability

of all four information management strategies (with their ratings forming a continuum reflecting the deceptiveness of the strategies). Although this pattern of acceptability ratings was maintained across family members, it is interesting that compared to parents, the deceptiveness of the strategy appeared to have less of an effect on adolescents' ratings of strategy acceptability for personal issues but more of an effect for prudential issues. Thus, consistent with parent-adolescent differences in concern with personal versus other aspects of behaviors (Smetana & Asquith, 1994), adolescents may focus more than parents on their right to privacy and autonomy than on the deceptiveness of nondisclosure when behaviors are personal. In contrast, parents may focus less than adolescents on the deceptiveness of nondisclosure than on the fact that information is withheld when behaviors are risky.

As expected, and consistent with increases in adolescent control over prudential issues with age (Smetana, 2011), information management about prudential issues became viewed as more acceptable over time, especially by boys. Surprisingly, however, concealment of personal issues was viewed as less acceptable over time, although only for forms of concealment that are more likely to violate relational trust (lying and omitting information). However, the change may reflect adolescents' increasing ability to coordinate personal and moral concerns as they transition from middle to late adolescence (Smetana, 2011).

Counter to hypotheses, but consistent with findings for autonomy and authority beliefs, mothers and fathers did not differ much in their ratings of strategy acceptability. Gendered parenting roles closeness, monitoring knowledge) than on desired interactions (i.e., disclosure and honesty). Also, contrary to expectations, boys and girls did not differ in their acceptance of information management strategies. Although unexpected from a gender socialization perspective, it is consistent with a lack of gender differences in the social desirability of various behaviors (Nesbitt & Penn, 2000). Importantly, however, boys did increase more than girls in their acceptance of prudential strategy use, which is consistent with gender differences in domain-differentiated autonomy expectations and with our hypotheses.

Associations With Strategy Acceptability

Associations between strategy acceptability and strategy use were found only for lying and avoidance. These findings are somewhat consistent with previous work showing that attitudes predict behavior (Kraus, 1995) and that greater acceptability of deception makes such deception more likely (Buller & Burgoon, 1994). However, it is unclear why associations were only significant for certain strategies. Some of the variation may relate to strategy differences in blameworthiness or guilt. For instance, adolescents may feel less guilt or fear negative consequences less when avoiding a topic than lying (as indicated by justifications that omissions are not lies; Marshall et al., 2005); this may potentially explain why strategy use was associated with increased acceptance for avoidance but not lying. However, this explanation does not explain the null findings for omitting details or telling only if asked. Consequently, other factors (such as trust and parents' previous reactions to disclosure) may be particularly important to consider when predicting associations between adolescents' attitudes toward and actual concealment of information (Smetana et al., 2009; Tasopoulos-Chan et al., 2009; Tilton-Weaver et al., 2010).

As expected, greater adolescent acceptance of concealment strategies (lying, omitting information, and avoiding the subject) was associated with more negative parent–adolescent interactions and less parental support over time. However, these associations were more robust for increases in negative interactions than for reductions in positive support, emphasizing that these constructs are related but independent aspects of parent–adolescent relationships. This also indicates that parents may be trying to confront and counteract negative teen

attitudes rather than withdrawing (as they do in response to secrecy and deviance; Keijsers et al., 2010; Kerr, Stattin, & Pakalniskiene, 2008). Indeed, while effective strategy use may circumvent conflict (Bakken & Brown, 2010), teens' acceptance of concealment strategies may more commonly increase conflict and antagonism in adolescent-parent relationships. Furthermore, strategy acceptance was more consistently associated with change in relationship quality than vice versa, a pattern opposite from what Keijsers et al. (2010) found for strategy use. Therefore, while bidirectional effects for both strategy use and acceptance are possible, acceptance of information management as an attitudinal construct may have stronger prospective effects on relationship quality, whereas strategy use may be more a response to relationship factors. This hypothesis warrants attention in future research. Finally, these paths did not differ by parent gender, indicating that factors impacting parent-adolescent relationship quality may function similarly for mothers and fathers even while relationships differ between them.

Counter to Jensen et al.'s (2004) findings, girls' rather than boys' acceptance of omitting information was more consistently linked with reductions in parental support and increased negative interactions with parents; in contrast, the reverse pattern was found for links with problem behavior. While these gender differences were only apparent for one of the four information management strategies considered, they are consistent with Keijsers et al.'s (2010) findings regarding adolescent secrecy. They are also consistent with boys' greater involvement in problem behaviors (Farrington, 2009) and girls' greater dependence on and sensitivity to relationships with their parents (Geuzaine, Debry, & Liesens, 2000). Thus, although rare, when links between family processes, adjustment, and acceptance of information management strategies vary by gender, the differences appear conceptually associated with broader differences in boys' versus girls' interpersonal interaction patterns.

The results did not support our hypothesis that acceptance of strategy use would have less negative associations for personal than prudential issues. In fact, acceptance of lying was linked with less positive support for personal but not prudential issues. Although surprising, this result is consistent with findings that topic avoidance is most detrimental for parent–adolescent relationship satisfaction when it is due to a lack of closeness (Caughlin & Afifi, 2004)—a reason primarily used to justify nondisclosure about personal issues (Smetana et al., 2006). However, the relative scarcity of domain-differentiated findings in the path models indicates that the primary effects of domain are on mean-level differences in strategy acceptability, rather than on the associations between strategy acceptance and adjustment or relationship quality.

As hypothesized, acceptance of lying, avoidance, and omitting information (although only for boys) was associated with more problem behavior, but only acceptance of lying about prudential issues was associated with more depressive symptoms. This is consistent with a more robust association between concealment and externalizing than internalizing problems (Frijns et al., 2010; Laird & Marrero, 2010). It also implies that acceptance of lying about prudential issues (usually the most unacceptable type of concealment) may stem from a broader set of relational and adjustment issues than does acceptance of other forms of concealment, which appears more normative. Additionally as expected, acceptance of telling only if asked functioned differently than the other information management strategies. However, in contrast to the beneficial effects that have been found for use of this strategy (Laird & Marrero, 2010; Laird, Marrero, Melching, & Kuhn, 2013), its acceptance did not predict better adjustment; paths were generally nonsignificant. This finding, along with the association between initial involvement in problem behavior and increased acceptance of telling only if asked, indicates that teens may be focusing more on the "nondisclosure" than "disclosure" aspects of telling only when asked when judging its acceptability, but the reverse may be true for links between strategy use and adjustment.

Strategy Acceptance versus Use

Although adolescent strategy use was primarily included in the models as a control and to examine its links with strategy acceptance, it showed fewer significant associations with adjustment and relationship quality than did ratings of strategy acceptability. Indeed, strategy use and acceptance were both associated with adjustment and relationship quality when examined individually (see Table 2), but only strategy acceptance consistently remained significant when both variables were present. Adolescent beliefs about the acceptability of information management may therefore capture something unique about adolescent adjustment and parentadolescent relationships that is overlooked when only strategy use is examined. Any comparison between the two variables must, however, be tempered by a recognition that strategy acceptance was measured on a continuous scale, whereas strategy use was measured as combination of dichotomous items and thus had more restricted variance. Nevertheless, these results are consistent with the findings of Jensen et al. (2004) regarding family cohesion and Laird et al. (2013), who, despite using continuous ratings of strategy use, found limited associations between the strategies we considered and changes in depression or antisocial behavior.

Limitations and Future Directions

Although this study was novel in examining adolescents' and parents' acceptance of various information management strategies, there are some limitations that should be considered. First, this sample consisted of primarily White, middle-class families. Adolescents of multiple ethnicities have been shown to use similar information management strategies with parents (Bakken & Brown, 2010; Tasopoulos-Chan et al., 2009). However, the prevalence of specific strategies, as well as the reasons and conventions regarding their use, varies across ethnic groups (Bakken & Brown, 2010; Darling, Cumsille, Peña-Alampay, & Coatsworth, 2009; Fuligni, 1998). Therefore, parents' and adolescents' acceptance of information management strategies should be examined in broader, more multiethnic samples.

Adolescents also rated the acceptability of using information management strategies toward their parents in general, rather than toward mothers and fathers separately. As adolescents' relationships with mothers and fathers differ (Collins & Russell, 1991), future research should examine whether adolescents evaluate strategy acceptability differently for mothers and fathers. Similarly, despite a multiinformant design, the path models were run only on adolescents' reports. This was due, in part, to the complexity of the models but also because we believe that adolescent reports are more instructive and accurate than are parent reports for the processes we examined. Nevertheless, in future research, it may be useful to incorporate parents' ratings of strategy acceptability and family relationships in the models.

We believe that our use of CFA was a strength of this study and provided support for the equivalence of strategy acceptability and use across waves and individuals. However, there were some differences in equivalence and in correlated error terms that must be acknowledged. Some of these differences were significant (and variations in correlations necessary) because a large number of models were fit. Indeed factor loadings were usually significant for individuals and waves even when they appeared statistically nonequivalent. However, these differences also imply that mothers, fathers, and teens (and parents' ratings of sons and daughters) differ slightly in the extent to which they view certain issues as characteristic of a domain, despite similarly characterizing issues as personal or prudential in general.

Finally, it should be noted that, while the prudential issues examined here are consistent with prior work examining domain differences in adolescent information management (Smetana et al., 2009), they consisted largely of illegal activities and did not encompass the full range of prudential issues relevant to adolescents (such as riding a motorcycle, eating junk food, and not finishing homework). Thus, the differences observed here between personal and prudential issues might be slightly attenuated had a broader range of items been included. However, as adolescents distinguish between legal prudential issues and personal issues when disclosing and evaluating lying (Perkins & Turiel, 2007; Smetana et al., 2006), the current findings are likely to be robust.

Despite these limitations, this study addressed a set of novel questions that provide a first step in understanding how parents and adolescents conceptualize information management in their daily lives. Adolescents' greater acceptance of information management, compared to parents' acceptance, provides new insights into why concealment has negative effects on parent-adolescent relationships. Concealment may not only disrupt relational trust and parental knowledge, but its acceptability may itself be a source of parent-adolescent disagreement. Furthermore, the robust differences among strategies in their acceptability ratings provide an intriguing contrast to the relative scarcity of differences between strategies in their effects on child adjustment and relationship quality. These results imply that the aspects that influence the acceptability of concealment may not be the same as those producing its impact on parent-child relationships and adjustment. Overall, the results of this study raise new questions and suggest the need for further research on the processes through which parent-adolescent communication and beliefs about it impact adolescents' relationships and adjustment.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1. Factor Loading and Model Fit Information for CFAs.