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Maternal Psychological Control and Mother–Adolescent Conflict Discussion Quality: Different Perceptions Are Key

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Parental psychological control is associated with poor adolescent outcomes, but little research has examined discrepancies between observed and perceived psychological control in predicting conversational outcomes. The present study used a multimethod, multi-informant approach to examine whether independent and joint associations between observer, adolescent, and mother perceptions of maternal psychological control during mother–adolescent conflict discussions were associated with adolescents' and mothers' perceptions of the quality of these conversations. Mother–adolescent dyads ($N = 123$ dyads) participated in a conflict discussion and subsequently reported on their satisfaction with the process and outcome of the discussion. Mothers' behavior was coded for psychological control and mothers and adolescents separately reported on mothers' psychological control during the discussion. Findings indicate that higher adolescent-perceived psychological control was associated with poorer adolescent- and mother-reported discussion quality controlling for overall relationship discord. Central to our hypotheses, observer, adolescent, and mother perceptions of psychological control significantly interacted with one another to predict discussion quality, though the specific pattern of findings varied across mother- and adolescent-reported discussion quality. Findings suggest that adolescent perceptions of discussion quality are poorest when adolescents attribute psychologically controlling behavior to mothers, particularly when mothers and outside observers report relatively lower levels of psychological control. This study highlights the importance of adolescent perceptions of parents' behavior and of obtaining information about behavior during parent–adolescent conversations from multiple reporters (observers, adolescents, and parents) to develop targeted interventions with parents and adolescents managing conflict.

Keywords: psychological control, parent–adolescent relationship, observational method

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Parent–child relationships undergo significant biological, cognitive, and social changes during adolescence that necessitate a realignment of the parent–child relationship from hierarchical to more egalitarian (Collins & Laursen, 2004). Parent–adolescent conflict discussions offer a window into the quality of the relationship (Main et al., 2016) and parent–adolescent behaviors during conflict discussions are important predictors of adolescent psychological and behavioral adjustment (see Beveridge & Berg, 2007).


However, adolescents' interpretations of parental discussion behaviors may be equally important (see Campione-Barr & Smetana, 2004). Research on parent–adolescent relationships typically measure perceptions of parental behaviors through adolescent or parent report or use third-party observers to capture parent behaviors during interactions. Yet, these different measures often result in discrepant reports of parental behaviors (Korelitz & Garber, 2016). The present study takes an innovative approach by simultaneously assessing observed parent behaviors in addition to adolescents' and mothers' perceptions of these same behaviors during mother–adolescent interactions. This approach allows us to better understand how discrepancies between different informants' perceptions (adolescents', mothers', and observers') of maternal behavior within a conversation might be associated with mothers' and adolescents' perceptions of the quality of that same interaction.

Psychological Control and Parent–Adolescent Communication

Parental behaviors during parent–adolescent conversations are important for parent–adolescent relationship quality and adolescent adjustment, with aspects of control being particularly central (Beveridge & Berg, 2007). This may be particularly true for conflict discussions, which serve as an important opportunity for parental emotion socialization and can settle into patterns of increasingly negative regulation (Lougheed et al., 2020). In this context,

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psychological control may be an especially problematic parental communication behavior, as it involves behaviors that intrude upon and manipulate a child's emotions and thoughts (Barber & Harmon, 2002).

Psychological control often includes guilt induction, love withdrawal, and ignoring the child as forms of discipline, and is conceptually distinct from behavioral control, which involves restricting the child's behavior through rules and by setting age-appropriate limits (Barber, 1996). Psychological control has been shown to have a negative impact on children and adolescents' psychological well-being, including links with greater internalizing (Soenens et al., 2012) and externalizing problems (Doyle & Markiewicz, 2005; Rathert et al., 2011), and may be particularly detrimental during adolescence as it is a period of increased autonomy development (Rathert et al., 2011). Psychological control can also negatively impact the parent-adolescent relationship; adolescents are less likely to disclose to parents in the context of high parental psychological control (Hasebe et al., 2004; Smetana & Daddis, 2002; Urry et al., 2011). Interestingly, one study found that adolescents were more likely to disclose to parents when parents were psychologically controlling, perhaps because they felt coerced to do so (Smetana et al., 2006). However, this study relied on parent report of psychological control. Research using behavioral measures combined with parent and adolescent perceptions of parental behavior is needed to better understand associations between parental psychological control and the quality of parent-adolescent communication.

Better quality parent-child communication is associated with decreased delinquency and risky behaviors in adolescents (Wang et al., 2013) and general positive adolescent adjustment (Collins & Laursen, 2004). Parent-child communication during conversations about conflict may be particularly important. Adolescents' striving for autonomy can spur greater conflict with parents (Sillars et al., 2010) and the quality of conflict management with parents (e.g., positive problem solving vs. conflict engagement—see Van Doorn et al., 2011) is associated with conflict resolution and adolescent problem behavior (Moed et al., 2015). Indeed, parent-adolescent interactions that are characterized by escalating negative emotion are less likely to be perceived as resolved productively (Moed et al., 2015). Such immediate conversation outcomes are, in turn, important for parent-adolescent relationship quality over time (Granic, 2005).

Adolescent Perceptions of Parental Behavior

As the research outlined above indicates, parenting behaviors are important predictors of the quality of parent-adolescent interactions. However, children's perceptions of parenting behaviors are of equal or greater importance (Barry et al., 2008; Campione-Barr & Smetana, 2004). This may be especially true in adolescence, when relationships become more egalitarian (De Goede et al., 2009) and adolescents' perspective taking skills improve (Eisenberg et al., 2005), potentially allowing them to have a deeper appreciation of their parents' motivations. According to the Operations Triad Model (see De Los Reyes & Ohannessian, 2016), divergence in parent and adolescent perceptions of parental behavior can serve either adaptive or maladaptive functions depending on the context. For example, cognitive developments may allow adolescents to question parental expectations leading to advances in autonomy seeking (a healthy aspect of adolescent development), whereas discrepancies in how much parents think they know about

their adolescents' whereabouts and activities versus what adolescents actually disclose are associated with more behavioral problems (e.g., Goodman et al., 2010). With regard to psychological control, if an adolescent believes that their parent is more controlling than does the parent, this may reflect underlying conflicts within the relationship. Furthermore, if outside observers perceive the parent to be less controlling than does the adolescent, this could reflect a hostile attribution bias (i.e., the tendency to interpret social cues as threatening or hostile; Orbio de Castro et al., 2002) on the part of the adolescent. Generally, parent-adolescent discrepancies in perceptions of parenting and familial behaviors predict adolescent maladjustment, although agreement about high levels of family dysfunction can also be problematic (e.g., De Los Reyes et al., 2019).

Nevertheless, most studies of parent-adolescent communication have used either observations of parent behaviors (e.g., Main et al., 2016), youth-reported aspects of parenting (see Mastrotheodoros et al., 2020), or parent-reported parenting as a predictor of parent-adolescent relationship dynamics (e.g., Keijsers et al., 2009). Little research has been conducted examining reporter-observer discrepancies (though see Campione-Barr & Smetana, 2004; Mastrotheodoros et al., 2020) and few studies have examined reporter discrepancies and observed behavior during parent-adolescent interactions. One paper found across multiple studies that parent-adolescent discrepancies in reports about conflict were greater when observed communication was low (Ehrlich et al., 2016). However, no studies to our knowledge have examined how discrepancies between multiple reporters (parents, adolescents, and outside observers) are associated with parent-adolescent discussion quality in real-time conversations. Knowing how observed and perceived parental behavior interact would inform clinical work with parents and adolescents struggling with poor communication by providing information to clinicians regarding where the focus for interventions should be (i.e., parent behavior, youth perceptions).

The Present Study

The present study used a multimethod, multi-informant approach to assess observed maternal psychological control and adolescents' and mothers' perceptions of these behaviors during mother-adolescent conflict discussions. We examined the independent and joint associations of these perceptions with the quality of the interaction (adolescents' and mothers' satisfaction with the discussion). We hypothesized that dyads in which adolescents perceived mothers to be higher on psychological control would have the lowest discussion satisfaction, particularly when observers rated mothers relatively lower on psychological control. We also expected that to see this pattern when mothers rated themselves as lower on psychological control, but adolescents reported mothers as higher on psychological control. As an exploratory aim, we also tested whether observers' perceptions of maternal psychological control interacted with mothers' perceptions of their own psychological control. We expected interactions between different informants' perceptions to be significant above and beyond individual perceptions (observer, adolescent, and mother) of maternal psychological control alone. Adolescent-parent discussion outcomes are likely to depend not only on parental behaviors within the interaction but also on the broader relationship history (which itself structures specific interaction behaviors; Granic, 2005). Thus, in the present study, we also controlled for overall relationship discord when assessing links

between real-time interaction behaviors (observed and perceived) and discussion outcomes.

Method

Participants

Participants in this study were 123 mother–adolescent dyads from urban and suburban areas in the southeastern United States. Adolescents ranged from 12 to 17 years of age ($M_{\text{age}} = 13.99$, $SD = 1.58$) and were roughly half (54%) female. Mothers ($M_{\text{age}} = 43.07$, $SD = 7.60$) were primarily biological (97%) or adoptive parents. Families were moderately diverse in race (53% White, 29% Black, 12% Hispanic) and socioeconomic status. The median family income was \$55,000/year, with 26% of the sample reporting a family income less than \$30,000/year and 22% of the sample reporting a family income greater than \$100,000/year; 68% of mothers had earned at least a 2-year college degree.

Procedure

The University of South Florida Institutional Review Board approved this study (Pro#00028494) prior to data collection. Participants were recruited through online and physical community flyers; presentations at local youth activities, community health events, and Parent–Teacher Association meetings; and inviting participants to recruit family and friends after completing their visit. Interested families contacted the study staff by phone or email to ensure eligibility and arrange a lab visit. Lab visits consisted of a 2.5-hr session on a university campus, during which mothers and adolescents completed online surveys, engaged in video-recorded discussion tasks, and reviewed and rated their prior discussions. Families were provided with parking and childcare during the session and a \$50 gift card as compensation for their time. Upon arrival in the lab, adolescents and mothers separately completed brainstorming worksheets, where they listed up to three issues that they “commonly get into disagreements or conflict about” with one another and circled the topic that occurs most often. While participants completed online surveys in separate rooms, research staff identified issues that matched or were most similar across the adolescent and mother forms, prioritizing the circled issues. Family members were then asked to have an 8-min discussion about the identified topic, presenting their own perspectives and working toward a resolution or solution for the future. These discussions were video-recorded for observational coding.

Measures

Observed Psychological Control

Mothers’ use of psychological control during the conflict discussion was coded based on a modified version of the Psychological Control Scale (Barber, 1996; Kho et al., 2019) and included the following behaviors: constraining verbal expression (lecturing, dominating the conversation, asking leading questions), invalidating feelings (e.g., “what you think is not important”), personal attack (e.g., “you’re so lazy!”), guilt induction (e.g., “it makes me sad when you do that”), and erratic emotional behavior (e.g., unexpected laughter during interaction). Each behavior was coded every 30 s on a scale of 0 (*not true*) to 3 (*very true*). Each mother was assigned an

overall psychological control score by averaging these ratings across the entire interaction. To establish interrater reliability, the lead author trained two undergraduate research assistants to reach satisfactory reliability ($r > .70$ across all behaviors) across 10 videos. After satisfactory reliability was reached, the main coder independently coded all the videos, and the reliability coder coded a subset of 30% of the videos. Coding disagreements were resolved through weekly discussions between the main coder and the reliability coder. The study aims and hypotheses were masked from the coders to avoid potential bias. Intraclass correlations were used to calculate interrater reliability. The average intraclass correlation for the psychological control behaviors was .92 (range = .83–.99).

Adolescent- and Mother-Reported Psychological Control

Immediately following the discussion task, adolescents and mothers separately rated the mothers’ level of psychological control during the task on a 1 (*not at all*) to 5 (*completely*) scale. Specifically, adolescents and mothers indicated the extent to which mothers were “unfair or manipulative.” Terminology for the psychological control item was based on Barber’s conceptual definition of psychological control as emotionally manipulative (Barber & Harmon, 2002) and unfair or disrespectful to the child as a person (Barber et al., 2012).

Adolescent- and Mother-Reported Discussion Quality

Next, participants rated on a scale of 1 (*not at all*) to 5 (*completely*) “I was satisfied with the way the discussion went” and “I was satisfied with the outcome of the discussion” (see Main et al., 2016). These items were highly correlated within-informant for both adolescents ($r = .88$, $p < .01$) and mothers ($r = .90$, $p < .01$). Discussion quality was computed as a mean of these two items separately for adolescents and mothers.

General Relationship Discord

As part of the initial online survey, adolescents self-reported on their relationship with their mother using the 15-item Discord subscale of the Network of Relationships Inventory: Relationships Quality Version (NRI-RVQ; Buhrmester & Furman, 2008). Items were rated from 1 (*never or hardly at all*) to 5 (*always or extremely much*). The Discord subscale was the average of the 3-item conflict, criticism, pressure, exclusion, and dominance subscales and contained items such as “how often do you and your mother get mad at or get in fights with each other?” “how often does your mother criticize you” and “how often does your mother get you to do things her way?” The scale demonstrated good reliability in the present study ($\alpha = .90$).

Analysis Plan

Analyses were conducted using SPSS (version 24) and Mplus (version 7.4) statistical software (Muthén & Muthén, 1998–2017). Correlation analyses were used to examine zero-order associations among study variables. Path analyses were used to test the hypothesized paths from observed and perceived psychological control to discussion quality. Interaction terms were computed by multiplying the main effect predictors, which were both centered at the mean to

reduce multicollinearity and aid interpretation (Aiken & West, 1991). Each interaction term was included in a separate model to most cleanly test the discrepancy effects of interest (i.e., without controlling for other discrepancy effects). To probe the significant interactions, we used the Johnson–Neyman technique to establish regions of significance for conditional associations (Bauer & Curran, 2005). This technique plots the association between the predictor and the outcome, along with its 95% confidence interval, at all values of the moderator. Any regions where the 95% confidence interval around the association does not include zero indicate levels of the moderator where the predictor is significantly associated with the outcome.

The just-identified models were tested using full information maximum likelihood to handle missing data. To increase confidence that associations among variables did not simply reflect overall relationship quality, adolescent-reported relationship discord was included as a covariate in the path model. As part of sensitivity analyses, the models were conducted without discord as a control variable, in which the associations remained largely unchanged (see supplemental materials). Based on the significant correlation with observed psychological control, adolescent age was also included as a covariate in the final models. In line with best practices (Ganzach, 1997), quadratic effects of the psychological control variables were also added to the model in a further step to ensure that significant interactions did not merely reflect curvilinear associations between predictors and outcomes. The addition of quadratic effects did not produce a significant increase in R^2 values for either adolescent- or mother-reported discussion quality across any of the three models. Moreover, the simpler models evidenced lower Bayesian information criterion (BIC) values, indicating better fit than the more complex models (Kline, 2005). Thus, results are presented for models without curvilinear effects present.

Results

Means, standard deviations, normality statistics, and zero-order correlations among study variables are presented in Table 1. Due to the positive skew and kurtotic nature of the psychological control variables, we utilized the Maximum Likelihood Robust (MLR) estimator to adjust the standard error estimates. Here we summarize the correlations that are most relevant to our study hypotheses. There was a positive correlation between adolescent and mother reports on

psychological control and between mother-reported and observed psychological control, suggesting some cross-informant convergence across the adolescent, mother, and observer reports. Second, adolescents who reported higher psychological control reported lower discussion quality and had mothers who also reported lower discussion quality. In addition, mothers who displayed higher levels of psychological control during the discussion (observed psychological control) also reported lower discussion quality. Of the covariates, higher levels of relationship discord were associated with higher levels of adolescent-reported psychological control, and lower levels of adolescent and mother-reported discussion quality. Adolescent age was not significantly associated with any of the study variables, with an exception of observed psychological control; mothers of older adolescents displayed less psychological control behaviors during the discussion than mothers of younger adolescents.

The first model tested the main and interactive associations between *adolescent*-reported and *observed* psychological control and adolescent- and mother-reported discussion quality (Figure 1). Higher adolescent-perceived psychological control was associated with lower discussion quality for both adolescent and mothers. Although there were no significant relations between mother-perceived and observed psychological control and discussion quality, there was a significant interaction between adolescent-perceived and observed psychological control predicting adolescent-reported discussion quality. Adolescents who perceived greater psychological control during the discussion reported lower discussion quality, but only when observed psychological control was average or low (<0.10 above average; see Figure 2). Specifically, when observers perceived mothers as displaying higher levels of psychological control, there were no significant associations between adolescent report of psychological control and discussion quality. This means that adolescents reported the least discussion satisfaction when they perceived higher levels of psychological control in the discussion but observers did *not*.

The second model tested the main and interactive associations between *adolescent*- and *mother*-reported psychological control and discussion quality (Figure 3). Similar to the first model, there was a negative association between adolescent-perceived psychological control and adolescent- and mother-reported discussion quality. There was also a significant interaction between adolescent- and mother-reported psychological control predicting adolescent-reported discussion quality. Similar to the interaction between adolescent

Table 1
Descriptive Statistics and Zero-Order Correlations Among Study Variables

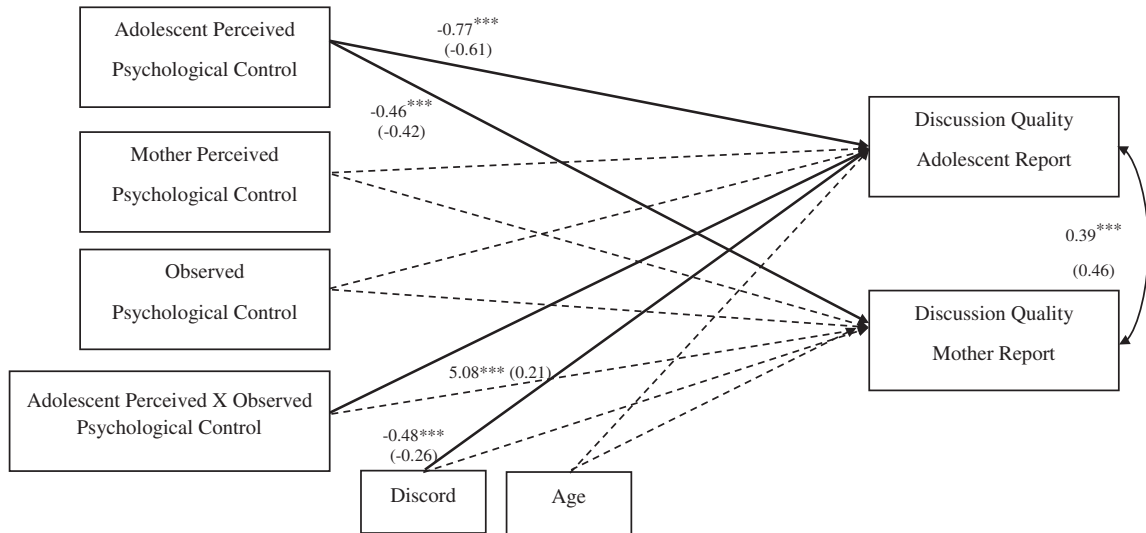
Study variables	1	2	3	4	5	6	7
1. Psychological control (A)	—						
2. Psychological control (M)	.23**	—					
3. Psychological control (O)	.17	.23*	—				
4. Discussion quality (A)	-.65**	-.03	-.12	—			
5. Discussion quality (M)	-.43**	-.11	-.20*	.56**	—		
6. Relationship discord (A)	.44**	-.12	.15	-.53**	-.25**	—	
7. Adolescent age (years)	.09	-.02	-.19*	-.09	-.02	.10	—
<i>M</i> (<i>SD</i>)	1.41 (0.95)	1.08 (0.33)	0.10 (0.06)	3.76 (1.26)	3.72 (1.12)	2.56 (0.68)	13.98 (1.59)
Skew	2.49	4.39	1.02	-0.88	-0.58	0.03	0.51
Kurtosis	5.39	20.05	1.74	-0.33	-0.36	-0.60	-0.86

Note. A = adolescent report; M = mother report; O = observed; *M* = mean; *SD* = standard deviation.

* $p < .05$. ** $p < .01$.

Figure 1

Path Analysis With Interaction Between Adolescent Perceived and Observed Psychological Control Predicting Discussion Quality



Note. Dashed lines represent nonsignificant paths. Covariances among exogenous variables are present but not shown. Numbers prior to parentheses represent unstandardized path coefficients; numbers within parentheses represent standardized path coefficients.

$^{***} p < .001$.

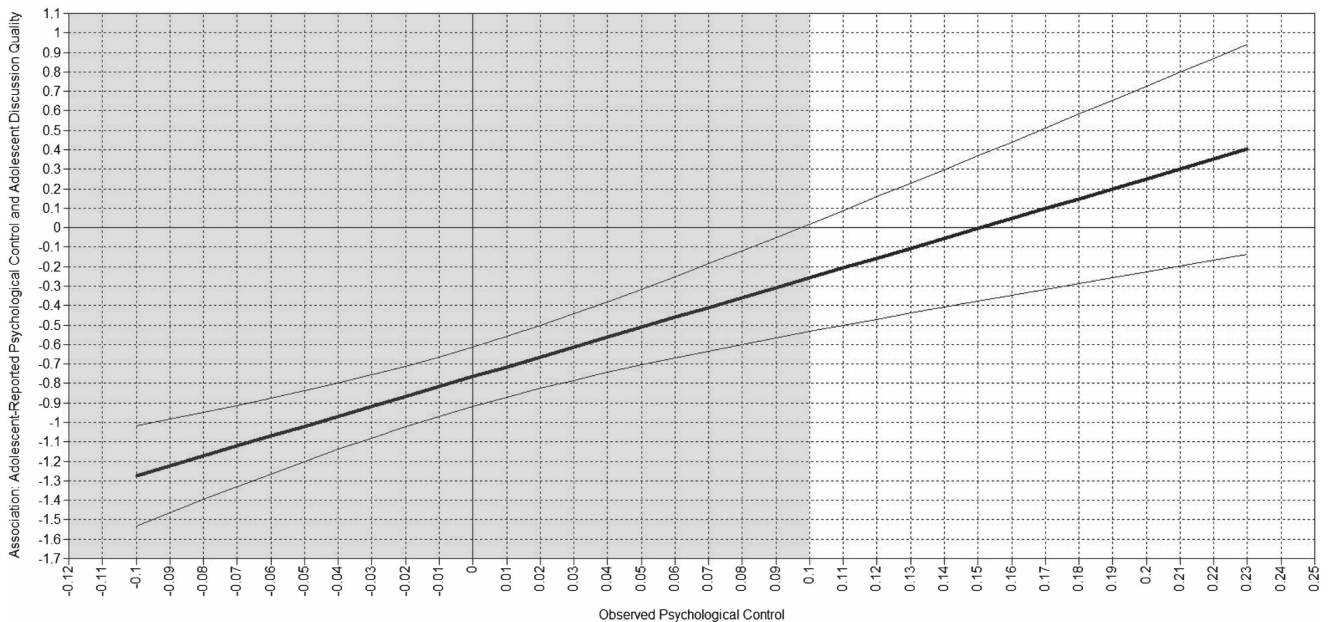
and observer reports, greater adolescent-perceived psychological control was only linked to their reports of lower discussion quality when mothers reported average or low psychological control (<0.65 above average; Figure 4). When mothers reported relatively high

psychological control, there were no significant associations between adolescent reports of psychological control and discussion quality.

The third model tested the main and interactive associations between *mother-reported* and *observed* psychological control and

Figure 2

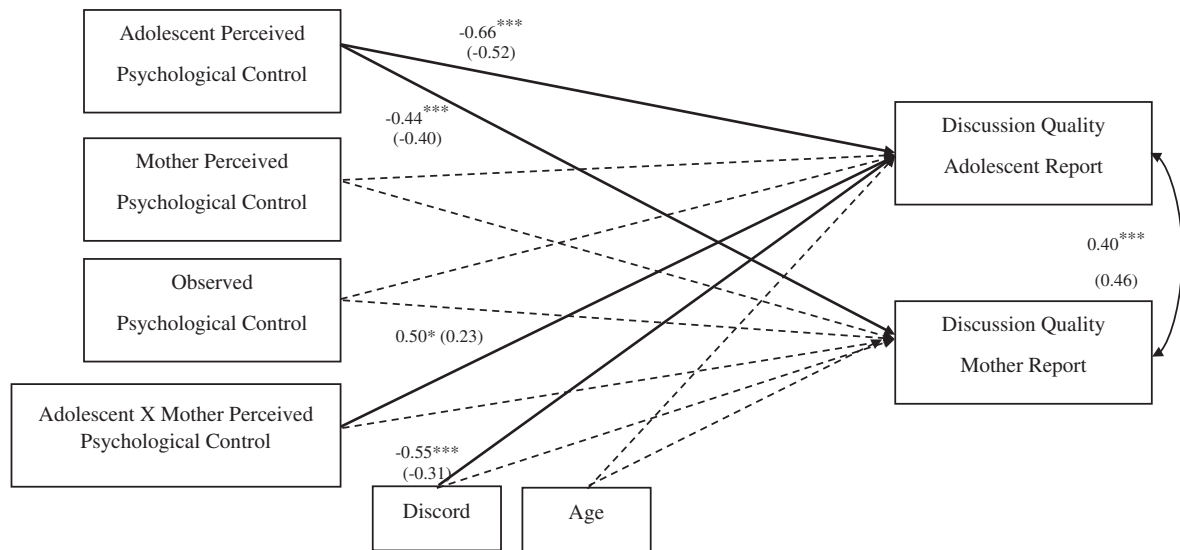
Interactions Between Adolescent-Reported and Observed Psychological Control Predicting Adolescent-Reported Discussion Quality



Note. All variables are centered at the mean. Gray box represents region of significance. Bolded line represents the simple slope. Nonbold lines represent the lower and upper 95% confidence interval limits.

Figure 3

Path Analysis With Interaction Between Adolescent and Mother Perceived Psychological Control Predicting Discussion Quality



Note. Dashed lines represent nonsignificant paths. Covariances among exogenous variables are present but not shown. Numbers prior to parentheses represent unstandardized path coefficients; numbers within parentheses represent standardized path coefficients.

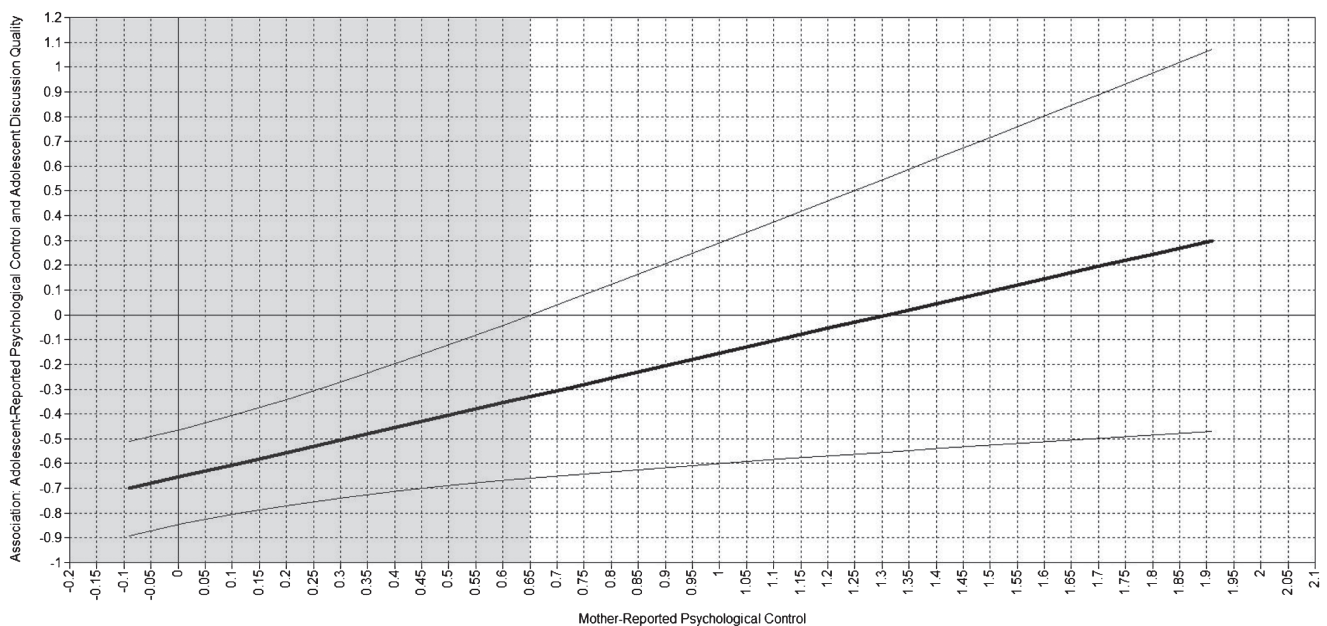
* $p < .05$. *** $p < .001$.

discussion quality (Figure 5). The same pattern of main effects was observed, and there was a significant interaction between mother-reported and observed psychological control predicting mother-reported discussion quality. However, a contrasting pattern was

seen for this interaction compared to what emerged for adolescent-reported psychological control. Specifically, mothers who reported higher levels of psychological control tended to perceive lower discussion quality, but only when observed psychological control

Figure 4

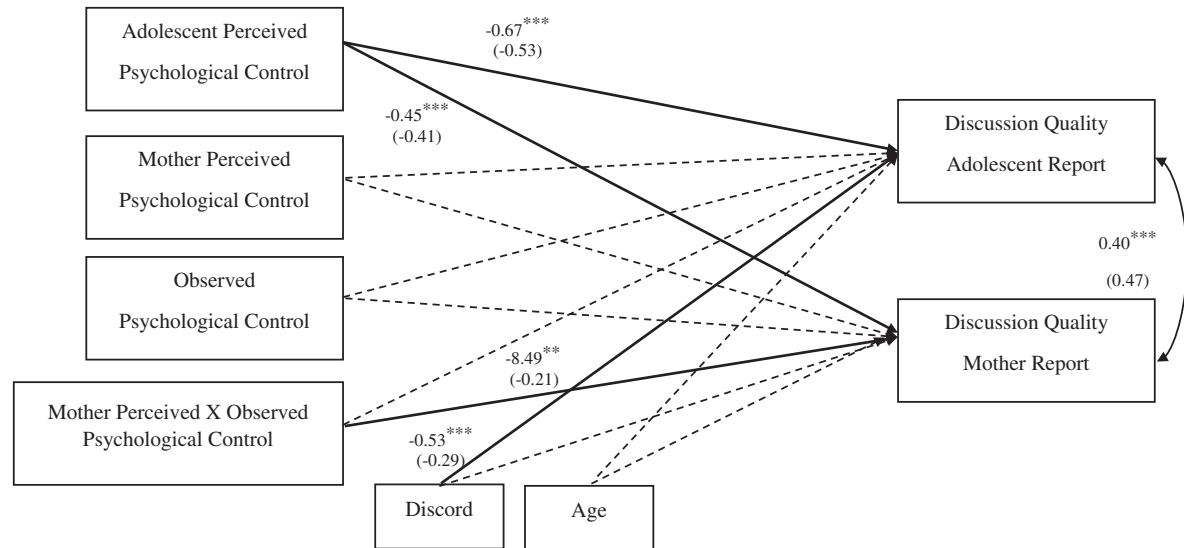
Interactions Between Adolescent- and Mother-Reported Psychological Control Predicting Adolescent-Reported Discussion Quality



Note. All variables are centered at the mean. Gray box represents region of significance. Bolded line represents the simple slope. Non-bolded lines represent the lower and upper 95% confidence interval limits.

Figure 5

Path Analysis With Interaction Between Mother Perceived and Observed Psychological Control Predicting Discussion Quality



Note. Dashed lines represent nonsignificant paths. Covariances among exogenous variables are present but not shown. Numbers prior to parentheses represent unstandardized path coefficients; numbers within parentheses represent standardized path coefficients.

** $p < .01$. *** $p < .001$.

was relatively high (>0.10 above average; Figure 6). Thus, mothers reported lower discussion quality when they *agreed* with observers that psychological control was high. When mothers reported higher psychological control, but observers did not, there were no significant associations between mother-reported psychological control and discussion quality.

Discussion

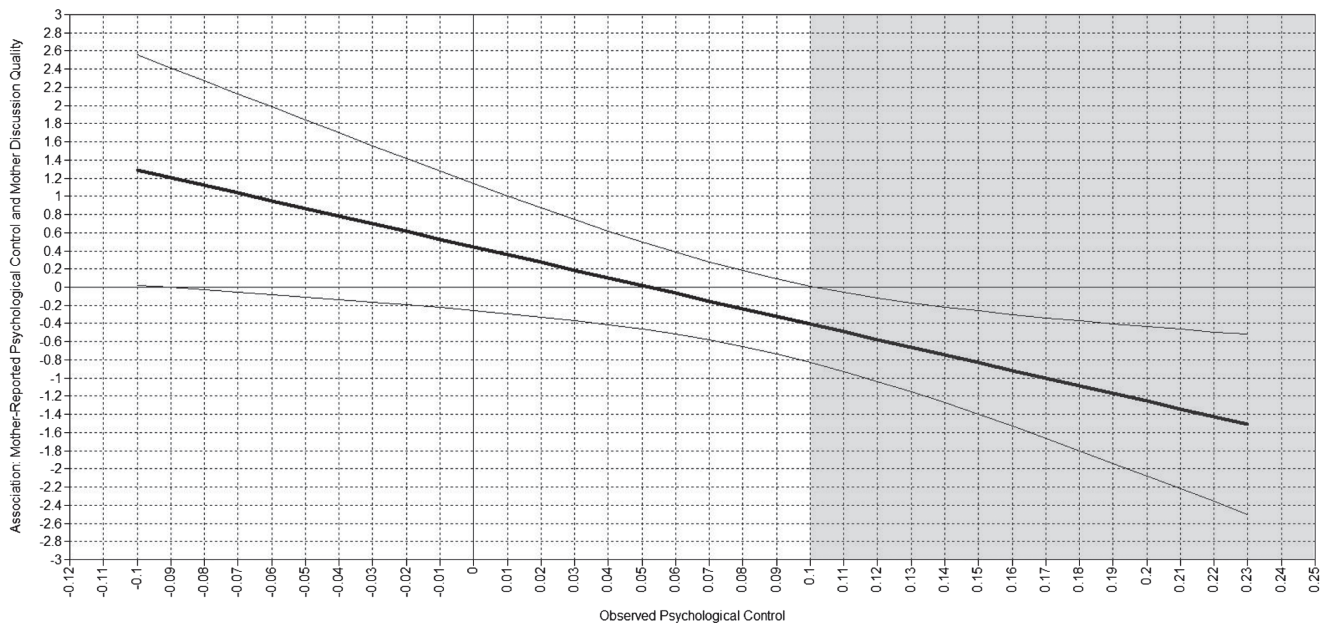
The present study is the first to our knowledge to examine how different perceptions of maternal psychological control (observers, adolescent, and mother) during real-time mother–adolescent conversations are independently and jointly associated with the quality of these conversations. Findings showed that when adolescents perceived mothers to be relatively higher on psychological control, both adolescents and mothers reported lower satisfaction with the process and outcome of the conflict discussion. These cross-reporter effects suggest the importance of adolescent perceptions of parenting for both mother and adolescent perceptions of the quality of interactions (Pettit et al., 2001), in which adolescents' perceptions of maternal psychological control were consistently the most robust predictor of adolescents' perceived discussion quality within the conflict discussion. Central to our hypotheses, there were also significant interactions between observed, adolescent-, and mother-reported psychological control predicting discussion quality. Specifically, adolescents reported significantly lower discussion quality when they perceived relatively higher maternal psychological control but observed or mother-reported maternal psychological control was relatively low. Mothers' perceptions of their own psychological control also interacted with observed psychological control, with mothers only reporting lower discussion quality when they reported using more psychological control if observers agreed

that their use of psychological control was high. Findings underscore the importance of examining informant discrepancies in maternal behaviors during real-time conversations with adolescents. We discuss the findings in more detail below.

Observed and Perceived Maternal Psychological Control

Adolescent perceptions of mothers' psychological control during conflict discussions were uniquely associated with lower adolescent- and mother-reported satisfaction with the process and outcome of a conflict discussion. This finding is consistent with research demonstrating that adolescent perceptions of parenting behaviors are central to their adjustment (Plunkett et al., 2007) and the quality of later conversations with parents (Campione-Barr & Smetana, 2004). Interestingly, mother's reports of their own psychological control did not predict their own or their adolescents' discussion satisfaction. This may indicate that mother's reports of their parenting do not reflect the true tenor of interactions particularly well (potentially due to social desirability bias; Sessa et al., 2001). However, even observer's reports of mothers' psychological control did not significantly predict family members' discussion satisfaction, once adolescent reports were controlled, providing additional support for the salience of adolescent perspectives on parenting for predicting relationship outcomes. Importantly, the effect of adolescent-perceived psychological control on discussion quality was independent of overall relationship discord and was present across mother and adolescent report, suggesting that in-the-moment dynamics are important in predicting both partners' perceived conversation outcomes in parent–adolescent relationships.

More central to the aims of the present study to examine informant discrepancies, there was a significant interaction between

Figure 6*Interactions Between Mother-Reported and Observed Psychological Control Predicting Mother-Reported Discussion Quality*

Note. All variables are centered at the mean. Gray box represents region of significance. Bolded line represents the simple slope. Nonbolded lines represent the lower and upper 95% confidence interval limits.

observed and adolescent-perceived maternal psychological control predicting adolescent-reported discussion quality. Consistent with hypotheses, adolescents reported lower discussion quality when they perceived mothers' psychological control to be relatively higher but mothers' observed psychological control was relatively low. A similar pattern was present for interactions between adolescent- and mother-reported psychological control predicting adolescent discussion quality. These findings suggest that mother-adolescent conversations are perceived most negatively by adolescents when there is a mismatch between how adolescents perceive their mothers' behavior and how outside observers and mothers perceive the same behaviors during real-time conversations. This finding is consistent with evidence that adolescents show worse adjustment when they report more negative family relationships than do parents (Human et al., 2016; Nelemans et al., 2016), but bring such findings into the realm of discrepancies between perceptions of behavior and real-time observations of these behaviors. This is important because discrepancies between parents' and adolescents' reports of family constructs may signal a lack of communication or understanding within those relationships (De Los Reyes et al., 2019), but discrepancies between observer and adolescent reports are likely to represent biases in the way youth perceive family interactions. This is particularly true as observers, adolescents, and mothers reported on behavior within a single conversation, where differences in the contexts participants observe when responding are less likely to contribute to reporter discrepancies (De Los Reyes, Ehrlich, et al., 2013; Lorenz et al., 2007).

There are several possible explanations for these findings. First, adolescents in dyads with greater mismatches between adolescents' and observers' or mothers' perceptions of maternal psychologically controlling behaviors may have lower emotional perception skills or

empathic accuracy. Indeed, adolescents with poor empathic accuracy have worse social and behavioral adjustment (Carlo et al., 2003) and have greater misattributions and discrepancies with parents' views about aspects of conflict in their relationship (De Los Reyes, Lerner, et al., 2013; Sillars et al., 2010). Another possible explanation is that adolescents' greater perceptions of maternal psychological control during conversations with their mothers relative to outside observers may reflect a hostile attribution bias (i.e., the tendency to interpret social cues as threatening or hostile—see Orobio de Castro et al., 2002). Specifically, this discrepancy might serve as a marker of adolescents' hostile attribution biases, which may be particularly predictive of poor-quality parent-adolescent relationship dynamics. Indeed, hostile attribution biases are a risk factor for aggressive behavior (Dodge & Pettit, 2003), and is associated with harsh parenting, including greater psychological control (Nelson & Coyne, 2009; Weiss et al., 1992). Such a bias could not only reduce overall discussion quality, but also make youth less trusting and thus willing to disclose to their mothers (Smetana, 2010).

In addition, adolescents who reported greater negative maternal behaviors in the absence of high observed levels of these behaviors may have been privy to a private system of meaning or understanding within the family that outside observers could not perceive (Campione-Barr & Smetana, 2004). It is possible that adolescents who perceived more maternal negativity than did observers were particularly dissatisfied because they believed their mothers were being hostile or unfair but recognized that they were not doing so in an overt or objective way. A final possible explanation is adolescents who rated their mothers as higher in psychological control relative to mothers or observers may experience other psychological adjustment issues (e.g., depression) that biased their perceptions of

their mothers' behavior. Indeed, a similar effect has been observed with mothers' ratings of their children's behavior (e.g., Richters, 1992; Youngstrom et al., 1999), and with adolescents' ratings of maternal hostility (Rote et al., 2021). Regardless of the reason for this difference, findings suggest the importance of adolescent perceptions of parenting and discrepancies between adolescent perceptions and others' perceptions in the context of real-time interactions with parents. Future research should investigate whether there are adolescent dispositional differences (e.g., empathy deficits, depression) that drive these effects to a greater extent than might be assumed if these discrepancies were not explicitly investigated.

Interestingly, the aforementioned patterns were only present when predicting adolescent-reported discussion quality. A different pattern of informant discrepancies predicted mother-reported discussion quality. Specifically, mothers only perceived significantly lower discussion quality when they reported engaging in relatively high levels of psychological control and observers agreed. These mothers might have been particularly overt in their expressions of psychological control, meaning their psychologically controlling behaviors were apparent to outside observers. Upon reflecting on the quality of the discussion, these mothers may have felt particularly guilty about the way they communicated with their adolescent and in turn, how the discussion went. Indeed, parents tend to focus more on interactive processes of conversations with their adolescents than do adolescents, who tend to focus more on content (Sillars et al., 2010), which could explain the link between mothers', but not adolescents', perceptions of discussion quality.

It is important to note that while informant agreements or discrepancies predicted discussion outcomes above and beyond adolescent, mother, and observer report alone, adolescent perceptions of mothers' psychological control were the strongest predictor of discussion quality across the models. Moreover, these associations were robust across both mother and adolescent reports of discussion quality, suggesting that adolescent perceptions are important for both adolescent and parent perceptions of the quality of parent-adolescent interactions (Campione-Barr & Smetana, 2004). Taken together, this study highlights the complexities of how different perceivers of a single parent-adolescent interaction have different associations with immediate conversation outcomes, which have implications for long-term parent-adolescent relationship quality and adolescent adjustment (see Granic, 2005).

Limitations and Future Directions

Despite the strengths of the study in examining observer, adolescent, and mother perceptions of psychological control, there are some limitations the warrant mentioning. First, the inclusion of only mothers limits extension of the findings to other family members. Fathers and other family members could be included in future studies to determine if findings generalize outside the context of the mother-adolescent relationship. Second, though findings demonstrate that observed and perceived parenting behaviors are associated with discussion quality during brief conversations above and beyond overall relationship quality, adolescent perceptions of maternal psychological control were assessed using single-item measures and discussion quality was measured with two items. While this procedure reduced the potential for participant fatigue during a long lab visit, and questions were highly face valid and

worded to closely align with the observed parenting behaviors, the psychometric soundness of the measures could not be assessed. Future research should verify these findings using multi-item reflection measures of parenting behavior during interaction tasks. Third, though psychological control was coded in real time and reports of discussion quality were obtained after completing the conflict discussion, the cross-sectional design precludes a causal interpretation of the model. Indeed, it is possible that feelings about how the discussion is progressing predict adolescents' and mothers' perceptions of psychologically controlling behavior during the discussion as much, or more, than the reverse. A longitudinal design, or time-lagged assessment of these perceptions across shorter intervals of the discussion task, would allow for examination of how observers', adolescents' and mothers' perceptions of psychological control are linked with the quality of conversations and adolescent adjustment over time. Finally, we focused on psychological control due to its significance for adolescent autonomy development, but the low levels of psychological control observed during the discussions warrants examination of other parental behaviors (e.g., warmth, affect, openness of communication—see Ehrlich et al., 2016) as well as adolescent behaviors to test if similar patterns of informant discrepancies exist.

Conclusions and Implications

This study holds implications for future research on parent-adolescent relationships and for clinical practice. Multi-method research that includes adolescent perceptions of behavior in addition to behavior observed in real-time can address mixed findings in prior research. Inclusion of both observed and reported parental behaviors during parent-adolescent conversations is crucial to developing a greater understanding of parent-adolescent dynamics. Clinicians can be trained to be aware of the power of adolescent perceptions of the quality of interactions with their mothers as well as discrepancies between adolescent perceptions of parental behavior and parents' actual behavior and encourage adolescents to be more attuned to parents' intentions. Indeed, interventions targeting reducing hostile attribution biases in adolescents have been found to be effective at reducing aggressive behavior (Van Bockstaele et al., 2020). Targeting these biases may improve the quality of adolescents' relationships with their parents as well. Clinicians can also recommend that parents engage in greater curiosity about adolescents' reactions to their behavior, as many parents may not realize the effects of their behavior on their adolescent. For many, adolescence represents the last few years in the parental home, and thus is an important period of intervention to promote more positive parent-adolescent relationships for the remainder of the lifespan.

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