# "It Depends on What You Mean by 'Disagree'": Differences between Parent and Child Perceptions of Parent-Child Conflict

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Abstract We examined a new structured interview of parent-child conflict that assesses parent and child perceptions of behavioral conflict about daily life topics (e.g., doing chores, homework), and whether discrepancies exist on beliefs about these topics. In a sample of 100 parents and children ages 10 to 17 years (M=13.5 years, 52 males, 57 % African-American), informants could reliably distinguish between perceived behavioral conflicts and perceived discrepant

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beliefs about topics. These scores were also significantly related to questionnaire reports of parent–child conflict. Parent and child questionnaire reports did not significantly differ, yet on the structured interview, parents reported significantly greater levels of perceived conflict and discrepant beliefs relative to child reports. Additionally, structured interview reports of conflict demonstrated incremental validity by relating to child self-reports of delinquent behaviors, when accounting for questionnaire conflict reports. The findings have implications for increasing understanding of the links between parent–child conflict and psychosocial outcomes.

**Keywords** Parent–child conflict · Multiple informants · Informant discrepancies · Informant disagreement · Structured interview · To(may)to-To(mah)to Interview

The presence of frequent, intense, and aversive verbal and/ or physical interactions (i.e., conflict) between parents and children and adolescents (collectively referred to as "children") poses risk for a host of poor child psychosocial outcomes, including increased behavioral and emotional problems, delinquent behavior, and substance use (e.g., Burt et al. 2003; Farrell and White 1998; Gilvarry 2000). Researchers assess parent-child conflict in many ways, including questionnaires, structured interviews, and controlled laboratory observations of parent-child interactions (Gunnar et al. 2009; Laursen et al. 1998; Prinz et al. 1979). A common strategy is to administer questionnaires separately to parents and children to identify potential sources of "disagreement" regarding daily life topics, such as how children spend free time and whether they do chores around the house (e.g., Donenberg and Weisz 1997; Edwards et al. 2001). Researchers use these "disagreement" reports to quantify parent-child conflict, as well as to construct laboratory tasks of such conflict (e.g., Cicognani and Zani 2010; Davis et al. 2000; Gonzales et al. 1996; Honess et al. 1997; Prinz et al. 1979; Whittle et al. 2008). In this study, we examine a new structured interview developed to distinguish between parent-child conflict and related constructs (i.e., disagreements in beliefs about daily life topics). We surmised that distinguishing these two domains for informants may have the added benefit of yielding more precise estimates of parent-child conflict. In so doing, we sought to increase our understanding of the extent to which parents and children provide discrepant reports of conflict as a function of the measure used to assess conflict.

One issue receiving relatively little attention is whether parents and children react to, and thus similarly interpret, the content of existing parent—child conflict measures. That is, do parents and children *consistently* perceive the term "disagreement" as a cue to provide conflict reports? Indeed, when researchers administer conflict measures to parents

and children, these measures are typically parallel forms that equate item content, scaling, and measure instructions (e.g., Laursen et al. 1998; Whittle et al. 2008). Researchers administer reports in this way so that if the reports yield discrepant outcomes, one can immediately rule out some methodological factors (e.g., differences in item content) that might account for discrepant outcomes.

However, in child and family research, even when measurement methodology is held constant and there is clear evidence supporting the reliability and validity of informants' reports, researchers nonetheless commonly observe reporting discrepancies (see De Los Reves 2011; in press; De Los Reyes et al. 2010a; De Los Reyes and Kazdin 2004, 2005; De Los Reyes et al. 2011). Further, these informant discrepancies yield meaningful information on the contexts in which these behaviors are expressed (e.g., De Los Reyes et al. 2009, in press), and yield reliably distinct patterns of outcomes within and between controlled trials (De Los Reyes and Kazdin 2006, 2009). Thus, informant discrepancies do not simply reflect the shortcomings of informants' reports. Instead, they may meaningfully relate to systematic differences between informants in how they observe and interpret behavior and thus provide reports.

In light of the utility of multi-informant reports and disagreements among reports, it is important to think about what discrepancies between parent and child reports of parent-child conflict might mean (De Los Reyes and Kazdin 2005). Assessments of parent-child conflict focus on behaviors that are expressed within interactions between the two informants (Shantz 1987). That is, by construction, parents and children observe behaviors indicative of parent-child conflict within the same context. Further, prior work indicates that parents and children concur that everyday topics like doing chores and spending time with the family are the issues from which conflict interactions arise (Smetana 1989). It may be that parents and children provide discrepant reports not because they vary in what they think counts as conflict. Rather, parents and children are asked questions about conflict using terms that they react to in different ways.

If parents and children vary in how they react to "disagreement" measures of conflict, this may explain why studies are often quite inconsistent as to whether parents and children report different levels of conflict (cf. Ehrlich et al. 2011; Gonzales et al. 1996; Sagrestano et al. 1999; Smetana and Gaines 1999; Treutler and Epkins 2003). Indeed, some studies using these measures identify no differences between parent and child reports for some conflict domains (e.g., intensity) and differences on other conflict domains (e.g., number of conflict topics discussed; see Ehrlich et al. 2011; Treutler and Epkins 2003). Among those studies that do identify reporting differences, sometimes parents report greater levels of conflict and other times



children report greater conflict levels (cf. Sagrestano et al. 1999; Smetana and Gaines 1999). Importantly, differences in reporting levels may "wash out" across studies, as meta-analyses of parent-child conflict indicate that overall, parents and children report similar trajectories of changes in frequency and intensity of conflict across developmental periods (Laursen et al. 1998).

Yet, we argue that it may be the case that parents perceive conflict at greater rates or levels than do their children. Theorists have posited that parents view parent-child conflict as social conventions which serve to regulate parentchild interactions within the context of family and cultural norms (Smetana and Gaines 1999). Conversely, children may view parent-child conflict as a method for either establishing or maintaining their independence (Smetana and Gaines 1999). Thus, parents may view parent-child conflict positively as a means to normalize parent-child interactions, whereas children may view conflict, at times, negatively as a threat to their independence. We surmise that, in the absence of an expressed need to reduce levels of conflict (e.g., reports provided in a non-clinic community based assessment), informants may report greater levels of behaviors if they perceive these behaviors in positive versus negative terms (see Gosling et al. 1998). Thus, these distinctions in appraisals of conflict should translate into parents reporting greater levels of conflict relative to children.

However, an open question is the extent to which inconsistent patterns in parent–child reporting discrepancies of conflict reflect a lack of specificity in the terms used to prompt informants to provide conflict reports. That is, parents may be quite variable in whether they *all* perceive the term "disagreement" as a prompt to provide reports about parent–child conflict. The same may be true of children when prompted with the term "disagreement" on their own parent–child conflict measures. Therefore, it may be important to examine parent–child discrepancies on measures that unambiguously prompt parents and children to provide their impressions of parent–child conflict. This examination would provide an important comparison to patterns of parent–child discrepancies observed on traditional "disagreement" measures of conflict.

The purpose of this study was to advance the literature on comprehensive assessments of parent-child conflict. We extend previous work by studying the psychometric properties of parent and child conflict reports on a new structured interview of parent-child conflict. Specifically, the To(may)to-To(mah)to Interview (TTI; De Los Reyes and Suarez 2009) is a structured interview administered separately to parents and to children in which trained interviewers ask parents and children questions about everyday life topics (e.g., chores, homework). In one interview section, interviewers administer questions to

assess the construct "behavioral conflict" (e.g., How often do you argue or fight with your child about your child doing his/her chores?; hereafter referred to as "TTI-Behavioral Conflict"). In a separate section, interviewers administer questions to parents and children about whether, relative to each other, they perceive themselves to have "different beliefs" about the nature and extent of the same topics assessed in the TTI-Behavioral Conflict section (e.g., Do you think that you and your child have different beliefs about how often children his/her age should do their chores?; hereafter referred to as "TTI-Discrepant Beliefs"). We chose to assess the construct "discrepant beliefs" because we surmised that questions about this domain lie outside of the purview of "conflict", in much the same way that Shantz (1987) argued that "intrapsychic conflict" (i.e., conflict existing within the individual) was outside the purview of "conflict between individuals." That is, two individuals "having different beliefs" about a topic does not directly indicate that behaviors indicative of conflict take place between these two individuals when the topic arises. Yet, we argue that improved estimates of parent-child conflict may come from clearly distinguishing this discrepant beliefs domain from the behavioral conflict domain. Thus, the TTI was developed to distinguish parent and child reports of conflict from their reports of related yet conceptually distinct constructs. To this end, we examined the TTI in relation to widely used "disagreement" questionnaire methods of parent-child conflict. Specifically, on these instruments we examined their internal consistencies, convergent validity (i.e., correlations between scores on these instruments), patterns of parent-child discrepancies in their reports of parent-child conflict, and the incremental validity of the TTI in reference to "disagreement" questionnaire methods.

In sum, the purpose of this study was three-fold, to examine: (a) the internal consistency and validity of the TTI, (b) differences between parent and child perceptions of conflict across multiple measures of conflict, and (c) how questionnaire reports of parent—child conflict relate to the different domains assessed on the TTI. To address these aims, we tested six hypotheses:

- First, we expected to find that parents and children would each be able to provide internally consistent reports on the TTI.
- Second, we hypothesized that domains assessed on the TTI would exhibit convergent validity by significantly relating to questionnaire "disagreement" reports of parent-child conflict.
- Third, we hypothesized that parent and child conflict reports would agree in the low-to-moderate range, regardless of method (i.e., rs between 0.10 and 0.40; Cohen 1988).



- Fourth, we expected to find that parents and children
  would each be able to reliably distinguish between their
  TTI-Behavioral Conflict and TTI-Discrepant Beliefs
  reports. That is, we expected both informants to provide
  reports on these domains that significantly differ from
  each other (i.e., significant within-informant differences
  in reported levels on domains).
- Fifth, we surmised that parents report greater levels of parent—child conflict than children. Further, these differences may bear themselves out consistently if parents and children are prompted to provide such conflict reports using clearly defined concepts that map onto behavioral conflict and domains related to such conflict (e.g., discrepant beliefs about daily life topics). Therefore, we expected to find that parent-reported TTI domains of Behavioral Conflict and Discrepant Beliefs would evidence greater mean levels relative to child reports on these same domains. Given the inconsistent findings in prior work, we did not have any hypotheses for parent—child differences between their "disagreement" questionnaire reports.
- Sixth, we expected to find that the TTI would relate to associated features of parent-child conflict incrementally and relative to questionnaire "disagreement" reports of conflict. As mentioned previously, parent-child conflict is a robust predictor of child delinquency (e.g., Farrell and White 1998). Thus, we expected to find that parent and child TTI reports would predict child delinquent behavior reports over-and-above the predictive utility of questionnaire "disagreement" reports of parent-child conflict.

### Method

#### **Participants**

Data reported below are based on information collected from 100 families. In order to participate in the current study, families had to speak English and to have a child in the home between the ages of 10 and 17 years. The sample for this study included families with a child aged 10 to 17 years (52 males and 48 females; M=13.5 years; SD=2.2 years) that lived in a large metropolitan area in the Mid-Atlantic United States. The parent identified the child's race as White, Caucasian American, or European (33 %), African American or Black (57 %), Asian American (3 %), or bi-/multi-racial (7 %). Parents had a mean age of 45.8 years (SD=6.9 years, range of 29–67 years) (6 parents did not provide proper age data). Parents identified themselves primarily as biological (93 %; 20 biological fathers and 73 biological mothers), with a minority identifying as

grandmother (3 %), adoptive (2 %; 1 adoptive father and 1 adoptive mother), legal guardian (i.e., child's aunt; n=1), or stepmother (n=1). For the purposes of this paper, these caregivers are collectively referred to as "parents." Approximately one-quarter (25.8 %) of the families had a weekly household income of \$600 or less; 60.8 % earned greater than \$900 per week (3 families did not provide income data). The economic and racial background figures for our sample are in keeping with the economic and ethnic representation of the geographic area of our sampling range (U.S. Census Bureau 2010).

#### Procedure

All procedures were approved by the Internal Review Board of the large Mid-Atlantic university in which we conducted the study. We recruited participants in two ways. First, we recruited participants through a multiwave longitudinal study (Lejuez 2010) of the development of risk-taking in youths. Participants recruited from this study (n=49) included a sample of children and their parents recruited in a large metropolitan area in the Mid-Atlantic United States via media outreach and mailings with area schools, libraries, and Boys and Girls Clubs. The remaining participants (n=51) were recruited from the same geographic region through community agencies, events, and via advertisements posted online (e.g., Craigslist) in qualifying neighborhoods (i.e., neighborhoods targeted because of demographic variability).

Families provided informed consent and assent. Two research assistants (i.e., undergraduates and/or post-baccalaureate research personnel) then administered the TTI to the parent and child in separate rooms. Following the TTI, the parent and child completed a counter-balanced battery of measures, which included parent and child questionnaire reports of conflict. At the conclusion of the study, participants were either monetarily compensated \$50 (distributed to 49 parents [\$25] and children [\$25]), or monetarily compensated \$100 (distributed to 51 parents [\$50] and children [\$50]). This difference in monetary compensation was attributable to study length being shorter for participants compensated \$50 (90 min) versus \$100 (4–5 h).

We administered all assessments on a computer in which either the interviewer (TTI) or participants (all questionnaire measures) directly inputted responses to items. Responses were recorded using IBM SPSS Data Collection survey administration software (Version 5.6; IBM Corporation 2009). Research assistants practiced administering the TTI to each other approximately 4–6 times and videotaped these practices to be observed by the first author at weekly supervision meetings. At these meetings, the first author reviewed practice assessments to



determine interviewers' readiness to administer the interview. Additionally, periodically we implemented continued reviews of videotaped administrations of the TTI to actual participants to ensure that research assistants continued to administer the interview as trained. All TTI administrators were kept blind to study hypotheses.

#### Measures

Structured Interview of Behavioral Conflict and Discrepant Beliefs

The TTI (De Los Reyes and Suarez 2009) is a structured interview and includes both parent and child versions. The TTI is administered independently to parents and to children, with a duration of approximately 30-45 min. The TTI assesses informants' perceptions about 16 daily life topics derived from research in the developmental literature on topics of parent-child disagreement (e.g., the child's computer time, spending time with the family, quality of grades; whether parents like their child's friends; Darling et al. 2006). A full list of these 16 topics can be found in the Appendix. Manuals and scoring sheets for the TTI are available from the first author. The key portions of the interview consist of two sections developed to measure: (a) behavioral conflict between parents and children (i.e., whether parents and children argue about topics) and (b) whether differences exist between the beliefs parents and children have about topics.

TTI: Introductory Section The TTI begins with the interviewer orienting the informant to the questions that follow. This introduction consists of the interviewer describing the format of the questions and soliciting responses on practice questions to assess informants' understanding of the questions. None of the practice questions appear in the actual interview. After the introduction, the interviewer prompts the informant to identify caregivers living in the family home. For this study, we trained interviewers who simultaneously administered the TTI to parents and children to verify with each other that the caregiver for whom parents and children were going to provide responses were identical (e.g., both the biological mother and child were going to provide responses in relation to the child's biological mother).

Before administration of behavioral conflict and discrepant beliefs items, the interviewer prompts the informant to provide three examples of situations in which the parent and child typically interact (e.g., What is one situation in which you interact with each other?). We trained interviewers to praise the informant each time they identified a situation, and interviewers provided informants with laminated sheets of paper and markers to write down identified situations. Importantly, the purpose of having an informant indentify

situations is to provide them with practice in thinking about specific situations in which parents and children interacted. We surmised that this practice would facilitate providing responses to questions. The sheet with the informant's situations is kept in front of them throughout item administration. The interviewer makes clear that the informant does not necessarily have to think about the specific situations that they wrote down on the sheet when providing responses. Rather, the interviewer instructs the informant to think about circumstances in which they interact with the person about whom they were reporting (e.g., parent about child, child about parent) as they answer questions.

TTI: Scaling and Response Options Informants provided responses to items on scales of "0" (value labels represent the quantity "None"), "1" (value labels represent the quantity "Some"), and "2" (value labels represent the quantity "A lot"). The scale labels were worded for their relevance to separate items for each topic: (a) self-perceptions of the current status of topics (How often does your child get to listen to music at home? [response options: none of the time; some of the time; a lot of the time]), (b) behavioral conflict (How often do you and your child argue or fight about your child getting to listen to music at home? [response options: we do not argue or fight about this; we argue about this some of the time; we argue about this a lot of the time]), and (c) discrepant beliefs (Do you think that you and your child have different beliefs about how often children your child's age should get to listen to music at home? [response options: we have the same beliefs; we sometimes have the same beliefs, sometimes not; we have different beliefs]).

TTI: Domain Sections Questions were administered in separate sections: (1) current status of topics ("how often" questions), (2) behavioral conflict ("argue or fight" questions), and (3) discrepant beliefs ("different beliefs" questions). For section "3", informants were asked questions about discrepant beliefs for each of the 16 topics using three questions for each topic: (3a) question about the informant's own beliefs (e.g., How often do you think children your child's age should get to listen to music at home?), (3b) question about the informant's perceptions of the other informant's beliefs (e.g., How often does your child think children his/her age should get to listen to music at home?), and (3c) question about discrepant beliefs (e.g., Do you and your child have different beliefs....). We asked questions in this way to facilitate for both parents and children the complicated processes involved in providing estimates of the differences between two people's perceptions of the same daily life topic (i.e., estimating your own beliefs, estimating the other person's beliefs, estimating the difference between the two beliefs). Further, researchers often assess discrepant perceptions on the same construct by



taking the difference between one informant's report and the other informant's report (see De Los Reyes and Kazdin 2004). However, we measured discrepant beliefs using a direct assessment of informants' perceived discrepancies in order to equate measurement methodology with the behavioral conflict domain. In this way, we could directly compare responses between domains.

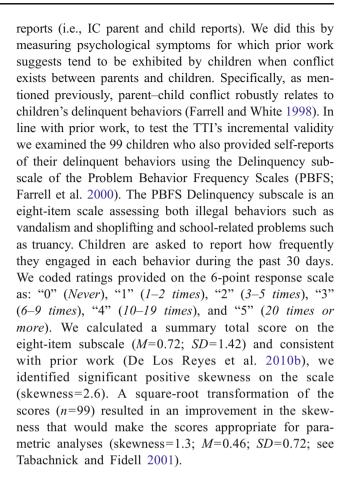
TTI: Total Summary Scores We calculated total summary scores of the 16 topics in the TTI-Behavioral Conflict section. Within the TTI-Discrepant Beliefs section, we calculated total summary scores based on the third question asked (*Do you and your child have different beliefs....*) about each of the 16 topics. Thus, scores within each section can range from 0 to 32.

## Questionnaire Conflict Reports

We collected questionnaire reports of parent-child conflict using the Issues Checklist (IC; Prinz et al. 1979). On the IC, parents and children were instructed to report on topics about which they disagreed in the past 4 weeks. We chose to measure conflict using the IC because it is one of the most commonly used measures to quantify parent-child conflict as well as to identify topics for discussion in studies that administer laboratory parent-child conflict tasks. As done in previous investigations (e.g., Adams and Laursen 2007; Fuligni 1998; Ehrlich et al. 2011; Smetana and Gaines 1999; Steinberg 1987; Treutler and Epkins 2003), we modified the IC for the purposes of both time constraints and to assess levels of conflict related to topics about which parents and children across developmental levels typically encounter (e.g., chores, homework, and friends). Specifically, our modified checklist included 19 of the 44 topics listed on the original IC. Topics include general issues that families may discuss at home (e.g., doing chores, doing homework, time spent with family, and being on time). A list of the 19 IC topics we assessed is available from the first author. We also modified the response format so that participants, working independently, could rate conflict about each topic using a 5-point Likerttype scale ranging from "1" (do not disagree) to "5" (disagree much). Informants completed the checklist in relation to the person (i.e., parent or child) about whom they completed the TTI. Total scores consisted of a summation of responses across the 19 items, resulting in a possible total score range from 19 to 95. The psychometric properties of the particular version of the IC used in this study and evidence of its reliability and validity have previously been reported elsewhere (Ehrlich et al. 2011).

Incremental Validity Index for Conflict Reports

We sought to provide supportive evidence of the incremental validity of the TTI over and above questionnaire conflict



# Demographics

Parents completed a parent, child and family demographics form.

# Data-Analytic Plan

We first conducted preliminary analyses to detect deviations from normality and subsequently excluded outlier cases in instances of extreme skewness and/or kurtosis.

To test our first hypothesis, we calculated internal consistency (i.e., coefficient alpha) estimates for parent and child IC and TTI reports of parent—child conflict. To test our second hypothesis, we computed cross-method bivariate correlations between informants' IC and TTI reports of parent—child conflict. However, tests of our second hypothesis involved examining multiple informants' (parent, child) parallel reports of multiple domains of parent—child conflict (behavioral conflict, discrepant beliefs). The correlated nature of our data violated key assumptions underlying general linear models (GLM) of data analysis. Thus, we also tested this hypothesis using generalized estimating equations (GEE): an extension of the GLM that assumes correlated observations of dependent and/or independent variables (Hanley et al. 2003).



For all GEE analyses, we used an identity link function with an unstructured correlation matrix. We used an unstructured correlation matrix, in light of the small number of dependent variables and the fact that we had complete data on all constructs for the 100 families we examined. Further, we structured each GEE analysis in line with the nature of the research question we wished to address. Specifically, we conducted two separate GEE analyses, one per domain assessed on the TTI. For each analysis, we statistically modeled the two questionnaire measures (i.e., parent and child IC reports) per dyadic case as a nested, repeated-measures (within dyadic subjects) dependent variable. We statistically modeled the dependent variable as a function of one factor (informant, coded in ascending order of parent and then child), a continuous covariate (TTI domain examined in the analysis), and the interaction between the factor and covariate. We tested for the significance of main and interaction effects, over and above the variance accounted for by the two demographic covariates of child age and gender, which prior work suggests relate to parent-child conflict (Laursen et al. 1998). All continuous independent variables were centered before conducting these analyses.

We tested our third hypothesis by computing crossinformant bivariate correlations on parallel measures to assess inter-informant agreement. We tested our fourth and fifth hypotheses using paired t tests and GEE. Specifically, we conducted a paired t test to compare parent and child questionnaire reports of conflict on the IC. Next, we used GEE to statistically model the four TTI structured interview measures (i.e., parent and child reports of behavioral conflict and discrepant beliefs) per dyadic case as a nested, repeated-measures (within dyadic subjects) dependent variable, varying as a function of three factors: (a) informant (coded in ascending order of parent and then child), (b) domain (coded in ascending order of discrepant beliefs and then behavioral conflict), and (c) informant×domain interaction. We tested for the significance of main and interaction effects, over and above the variance accounted for by child age (centered) and gender. Further, we conducted post-hoc comparisons testing for the significance of the differences between mean structured interview reports, both between informants' reports (i.e., between-informant comparisons within TTI domains) and within their reports (i.e., within-informant comparisons between TTI domains).

Finally, we tested our sixth hypothesis by conducting two hierarchical regression analyses, one analysis for each version of the TTI (parent and child). In both analyses, the PBFS Delinquency subscale served as the criterion variable. For analyses examining the parent version of the TTI, we entered child age (centered) and gender in the first step as independent variables, along with childreported IC scores (centered). We entered child-reported IC scores in order to reduce shared informant variance among the independent variables (i.e., when the parent was the informant on the TTI). In the second step, we entered as independent variables the TTI-Behavioral Conflict and TTI-Discrepant Beliefs scores, and in the third step, the interaction term for these two variables. The analyses examining the child version of the TTI were identical, except that parent-reported IC scores (centered) were entered in the first step, again, to reduce shared informant variance among the independent variables (i.e., when the child was the informant on the TTI). In the presence of a significant interaction effect, we used Holmbeck's (2002) guidelines for post-hoc probing of significant moderator effects. This included: (a) computation of slope estimates using centered variables (reducing multicollinearity) and (b) examining the statistical significance of these slopes for high (1 SD above the mean) and low (1 SD below the mean) levels of TTI-Behavioral Conflict (i.e., the moderator variable).

#### **Results**

Preliminary Analyses

Frequency distributions for all variables were examined to detect deviations from normality before conducting primary analyses. The original sample included 120 families. However, we identified 19 families who provided extreme data on at least one of our parent-child conflict measures, and one family included a parent who was unable to enact responses to our measures due to lack of computer knowledge. Specifically, we identified 11 instances in which we observed extreme data on one of the child-reported conflict measures (IC=2 dyads; TTI-Behavioral Conflict=3 dyads; TTI- Discrepant Beliefs=6 dyads). We also identified 8 instances in which we observed extreme data on one of the parent-reported conflict measures (IC=5 dyads; TTI-Behavioral Conflict=2 dyads; TTI- Discrepant Beliefs=1 dyad). Thus, for each dyad either the parent or child provided a report on at least one of the measures that was over three standard deviations from the sample mean on that particular measure. After excluding these dyads from analyses, we detected no deviations from normality on any variables (i.e., skewness on all variables  $\approx$  1.0). Excluding these data led to a final analytic sample of 100 families. Means and standard deviations for the main study variables are presented in Table 1.

We conducted exploratory analyses to examine whether the 100 families examined in this study differed from the 20 families that we did not examine as a function of



**Table 1** Means (M), standard deviations (SD), and internal consistency ( $\alpha$ ) estimates of questionnaire and structured interview reports of parent-child conflict (n=100)

Variable	Questionnaire			Structured Interview: Behavioral Conflict			Structured Interview: Discrepant Beliefs		
	$\overline{M}$	SD	α	$\overline{M}$	SD	α	$\overline{M}$	SD	α
IC									
Parent Report	36.90	10.51	0.84						
Child Report	37.07	11.07	0.80						
TTI									
Parent Report				8.17	5.06	0.84	12.91	6.84	0.85
Child Report				5.93	4.55	0.84	6.86	4.96	0.82

IC Issues Checklist; TTI To(may)to-To(mah)to Interview

demographic characteristics (e.g., child age, child gender, child race, parent age, parent relationship to child, family weekly household income). We conducted a large number of tests (n=6) and did not have a priori hypotheses to advance. Thus, we set a pre-defined bonferroni-corrected p-value threshold for these tests of 0.008 (i.e., 0.05/6). Across these 6 tests, none of these factors evidenced a significant relation to inclusion/exclusion into this study.

Hypothesis 1: Internal Consistencies of Questionnaire and Structured Interview Reports

In Table 1 we report internal consistencies for all methods of assessing parent–child conflict tested in this study. We observed acceptable internal consistencies for both parent and child IC reports, as well as for their TTI-Behavioral Conflict and TTI-Discrepant Beliefs reports.

Hypothesis 2: Relations between Questionnaire and Structured Interview Reports

To examine the relations between questionnaire and structured interview reports of parent–child conflict, we calculated bivariate correlations between each informant's IC and TTI domain reports. We report these correlations in Table 2. Consistent with our hypotheses, we observed significant within-informant correlations (e.g., correlations between parent IC and TTI reports) between both parent and child IC reports and both TTI-Behavioral Conflict and TTI-Discrepant Beliefs reports, with correlations in the moderate-to-high range. Interestingly, as seen in Table 2, we observed significant between-informant correlations as well (e.g., correlations between parent IC and child TTI reports). These findings support the convergent validity of the TTI.

We hypothesized that parent and child structured interview reports of behavioral conflict and discrepant beliefs about daily life topics would predict questionnaire reports of parent-child conflict. To test this, we ran two sets of GEE

analyses using the analytic plan described previously. We report findings from these GEE analyses in Tables 3 and 4. In both analyses, we observed significant main effects of TTI Domain, indicating positive relations between TTI-Behavioral Conflict and TTI-Discrepant Beliefs scores and IC scores. Further, we observed non-significant main effects of Informant and non-significant interactions between Informant and TTI Domain for the two TTI domains, indicating the relations between TTI-Behavioral Conflict and TTI-Discrepant Beliefs scores and IC scores were consistent across parent and child reports.

Hypothesis 3: (Dis)agreement Between Parent and Child Reports

In Table 2, we also report correlations between parent and child reports on both questionnaire and structured interview methods of assessing parent—child conflict. As expected, parent and child IC reports, as well as parent and child TTI-Behavioral Conflict and TTI-Discrepant Beliefs reports, positively correlated in the low-to-moderate range.

Hypotheses 4 and 5: Differences between Domains Assessed on Parent and Child Structured Interview Reports

We hypothesized that both parents and children could reliably distinguish their perceptions of behavioral conflict about daily life topics from their discrepant beliefs about these same topics. As a preliminary test, we conducted paired t tests to examine mean differences between TTI-Behavioral Conflict and TTI-Discrepant Beliefs reports within each of the parent and child structured interviews. We also conducted paired t tests to examine mean differences between parent and child reports on each of the TTI-Behavioral Conflict and TTI-Discrepant Beliefs reports. Additionally, for comparison we conducted these same paired t tests to examine mean differences between parent and child IC reports.



**Table 2** Correlations among questionnaire and structured interview reports of parent–child conflict (n=100)

Variable 1 2 3 4 5 6 0.34\*\*\* 0.68\*\*\* 0.60\*\*\* 0.27\*\*  $0.21^{*}$ 1 IC, Parent Report  $0.26^{**}$ 0.35\*\*\* 0.45\*\*\* 2 IC, Child Report  $0.35^{*}$ 0.60\*\*\*  $0.27^{**}$ 3 TTI-Behavioral Conflict, Parent Interview 0.15  $0.20^{*}$  $0.27^{*}$ 4 TTI-Discrepant Beliefs, Parent Interview 5 TTI-Behavioral Conflict, Child Interview 0.60\*\*6 TTI-Discrepant Beliefs, Child Interview

*IC* Issues Checklist; *TTI* To-(may)to-To(mah)to Interview; \*p<.05; \*\*p<.01; \*\*\*p<.001

Consistent with our hypotheses, we observed significant differences between mean parent structured interview scores for the Behavioral Conflict and Discrepant Beliefs sections of the TTI, t(99)=8.56, p<0.001. We also observed significant mean differences between the child structured interview scores for these sections of the TTI, t(99)=2.17, p<0.05. In both cases, informants reported significantly greater mean Discrepant Beliefs scores than they did Behavioral Conflict scores. Further, parents had significantly greater mean Behavioral Conflict scores than their children, t(99)=3.84, p<0.001, as well as significantly greater mean Discrepant Beliefs scores than their children, t(99)=8.33, p<0.001. However, parents and children did not significantly differ in their IC questionnaire reports, t(99) = -0.14, p > 0.85. Thus, we found consistent patterns of parent-child discrepancies on conflict reports using the TTI but observed no such differences on the IC.

Results of GEE models testing our fourth and fifth hypotheses are presented in Table 5. Findings from GEE analyses were consistent with previously reported findings

**Table 3** Generalized estimating equations predicting parent and child questionnaire conflict reports as a function of informant, TTI reports of different beliefs, and the interaction between informant and TTI reports of different beliefs (n=100)

Factor	B (SE)	95 % CI	p				
Main and Interaction Effects							
Child Age	0.15 (0.32)	[0.62, 2.18]	ns				
Child Gender	2.11 (1.42)	[0.50, 135.26]	ns				
Informant	-0.17 (1.21)	[-2.55, 2.21]	ns				
TTI-Discrepant Beliefs	0.78 (0.19)	[0.40, 1.16]	<i>p</i> <.001				
Informant×TTI- Discrepant Beliefs	0.07 (0.21)	[-0.34, 0.48]	ns				

B unstandardized beta; SE standard error; 95 % CI 95 % Wald confidence interval. Factor contrasts based on comparisons in ascending order, with the Informant factor coded Parent and then Child, and the Child Gender factor coded Female and then Male. For statistical tests of main and interaction effects, p values and 95 % CIs reported reflect significance tests for the reported unstandardized betas

using paired *t* tests. Specifically, we observed significant main effects of Informant and TTI Domain and a significant Informant×TTI Domain interaction. Follow-up planned contrasts revealed (a) significantly greater mean TTI-Discrepant Beliefs scores than TTI Behavioral Conflict scores for both parent and child TTI reports and (b) significantly greater mean parent-reported TTI-Discrepant Beliefs and TTI-Behavioral Conflict scores, relative to child report.

Hypothesis 6: Incremental Validity of Domains Assessed on Parent and Child Structured Interview Reports

Results of hierarchical regression models testing our sixth hypothesis are presented in Tables 6 and 7. Consistent with our hypotheses, both parent and child TTI reports incrementally predicted PBFS Delinquency subscale scores when accounting for child age and gender and IC questionnaire reports. However, these predictions followed distinct patterns, depending on the informant providing TTI reports. For parent TTI reports, we observed non-significant relations for the TTI-Discrepant Beliefs and TTI-Behavioral Conflict scores and a

**Table 4** Generalized estimating equations predicting parent and child questionnaire conflict reports as a function of informant, TTI reports of behavioral conflict, and the interaction between informant and TTI reports of behavioral conflict (n=100)

Factor	B (SE)	95 % CI	p
Main and Interaction Effect	ets		
Child Age	-0.28 (0.30)	[-0.87, 0.31]	ns
Child Gender	1.62 (1.38)	[-1.08, 4.33]	ns
Informant	-0.17 (1.11)	[-2.35, 2.01]	ns
TTI-Behavioral Conflict	1.13 (0.20)	[0.73, 1.53]	<i>p</i> <.001
Informant×TTI- Behavioral Conflict	0.23 (0.23)	[-0.22, 0.69]	ns

B unstandardized beta; SE standard error; 95 % CI 95 % Wald confidence interval. Factor contrasts based on comparisons in ascending order, with the Informant factor coded Parent and then Child, and the Child Gender factor coded Female and then Male. For statistical tests of main and interaction effects, p values and 95 % CIs reported reflect significance tests for the reported unstandardized betas



**Table 5** Generalized estimating equations comparing parent and child structured interview reports of parent–child conflict as a function of informant, TTI domain, and informant $\times$ TTI domain interaction (n=100)

Factor	Mean Differences	B (SE)	95 % CI	p
Main and Interaction Effects				
Child Age		0.52 (0.15)	[0.23, 0.81]	<i>p</i> <.001
Child Gender		-0.67 (0.68)	[-2.01, 0.66]	ns
Informant		6.05 (0.72)	[4.63, 7.46]	<i>p</i> <.001
TTI Domain		-0.93 (0.42)	[-1.76, -0.09]	<i>p</i> <.05
Informant×TTI Domain		-3.81 (0.61)	[-5.01, -2.60]	<i>p</i> <.001
Planned Comparisons				
TTI-Discrepant Beliefs vs. TTI-Behavioral Conflict (Parent Reports)	-4.74		[-5.82, -3.66]	<i>p</i> <.001
TTI-Discrepant Beliefs vs. TTI-Behavioral Conflict (Child Reports)	-0.93		[-1.76, -0.09]	<i>p</i> <.05
Parent vs. Child Report, TTI-Discrepant Beliefs	2.24		[1.10, 3.37]	<i>p</i> <.001
Parent vs. Child Report, TTI-Behavioral Conflict	6.05		[4.63, 7.46]	<i>p</i> <.001

B unstandardized beta; SE standard error; 95 % CI 95 % Wald confidence interval for unstandardized beta. Factor contrasts based on comparisons in ascending order, with the Informant factor coded Parent and then Child, the Child Gender factor coded Female and then Male, and the TTI Domain factor coded TTI-Discrepant Beliefs and then TTI-Behavioral Conflict. For statistical tests of main and interaction effects, p values and 95 % CIs reported reflect significance tests for the reported unstandardized betas. For statistical tests of planned comparisons, p values and 95 % CIs reported reflect significance tests for estimated marginal means, adjusted for child age and child gender

significant interaction between these variables (Table 6). Post-hoc probing analyses revealed a non-significant relation between TTI-Discrepant Beliefs and the PBFS Delinquency subscale at relatively high levels of TTI-Behavioral Conflict, and a significant relation between TTI-Discrepant Beliefs and the PBFS Delinquency subscale at relatively low levels of TTI-Behavioral Conflict. For child TTI reports, we observed a significant relation between the TTI-Behavioral Conflict scores and the PBFS Delinquency subscale, a non-significant relation for the TTI-Discrepant Beliefs scores, and a non-significant interactive relation for these variables (Table 7).

# Discussion

# Main Findings

This study extended the literature on comprehensive assessments of parent—child conflict. Our data yielded six observations. First, parents and children provided internally consistent reports on both structured interview and questionnaire methods for assessing parent—child conflict. Second, we observed convergent validity for our structured interview of parent—child conflict (TTI) in the form of significant relations between parent and child reports of each of the behavioral conflict and discrepant belief sections of the interview and scores provided by parents and children on widely used "disagreement" measures used to assess conflict (IC). Importantly, we observed these relations both within and between informants' reports, ruling out shared informant variance as an interpretation of our evidence for convergent validity (see Table 2). Additionally, evidence

supporting the convergent validity of the structured interview was robust to accounting for (a) child age and gender and (b) our correlated data structure (i.e., parent and child both provided reports on all constructs). Third, consistent with prior work on assessments of other dyadic behaviors (e.g., parental monitoring; De Los Reyes et al. 2008), we observed low-to-moderate correlations between all parent and child reports of parent—child conflict across structured interview and questionnaire methods.

Fourth, both parents and children were able to distinguish between their reports of the domains assessed on the structured interview and in the same way. That is, both informants reported more discrepant beliefs about daily life topics than they did behavioral conflict about these same topics. Fifth, parents reported greater behavioral conflict and discrepant beliefs on structured interview reports relative to their children's reports, and yet we did not observe any mean differences between parent and child questionnaire reports of conflict.

Sixth, both parent and child structured interview reports of conflict incrementally predicted children's self-reported delinquent behaviors beyond questionnaire conflict reports. An important observation is that the domains assessed on the TTI appear to have differential predictive value as a function of informant. For parent reports on the TTI, both behavioral conflict and discrepant beliefs domains interacted to relate to child delinquent behaviors, whereas for child reports on the TTI, only the behavioral conflict domain related to child delinquent behaviors. The different patterns of validity indices for parent and child TTI reports are in keeping with the observation of informant discrepancies in research findings in other lines of work (e.g., treatment



Table 6 Hierarchical regression analyses examining the incremental validity of parents' structured interview reports of parent-child conflict in predicting children's self-reported delinquent behaviors

Main Regression Model	Post-Hoc Tests of Moderation								
Variable	$\Delta R^2$	В	SeB	β	Variable	$\Delta R^2$	В	SeB	β
Step 1	0.18**				Step 3 (when "0"=1 SD above mean)	0.02			
Child Age		0.07	0.03	0.22*	TTI-Behavioral Conflict, Parent Interview		0.01	0.01	0.06
Child Gender		0.10	0.13	0.07	TTI-Discrepant Beliefs, Parent Interview		0.01	0.01	0.05
IC, Child Report		0.02	0	0.37**	Behavioral Conflict×Discrepant Beliefs		0.003	0.002	0.18
Step 2	0								
TTI-Behavioral Conflict, Parent Interview		0	0.01	-0.04	Step 3 (when "0"=1 SD below mean)	0.04*			
TTI-Discrepant Beliefs, Parent Interview		0	0.01	0.05	TTI-Behavioral Conflict, Parent Interview		-0.01	0.01	-0.09
Step 3	0.05*				TTI-Discrepant Beliefs, Parent Interview		0	0.01	0.01
Behavioral Conflict×Discrepant Beliefs		0	0	0.22*	Behavioral Conflict×Discrepant Beliefs		0.003	0.001	0.23*

For the main regression model (left side of table), regression terms for variables entered at steps 1, 2, and 3 are displayed, based on terms observed for these variables in step 3 of the model;  $\Delta R^2$  statistics for each step were based on variables entered in that step; for the post-hoc moderation tests (right side of table), only Step 3 is reported, with the moderator variable (i.e., TTI-Behavioral Conflict) manipulated to reflect high levels of the moderator (when "0" equals 1 SD above the mean), and low levels (when "0" equals 1 SD below the mean) (see Holmbeck 2002); *IC* Issues Checklist; *TTI* To(may)to-To (mah)to Interview; In this analysis, Child Gender was coded in ascending order of Female and then Male; \*p<.05; \*\*p<.001

outcomes, risk factors; see De Los Reyes and Kazdin 2005, 2006, 2009).

In sum, parents and children can reliably distinguish between their perceptions of how much conflict arises about daily life topics and how much their beliefs on these topics

**Table 7** Hierarchical regression analyses examining the incremental validity of children's structured interview reports of parent–child conflict in predicting children's self-reported delinquent behaviors (*n*=99)

Variable	$\Delta R^2$	В	SeB	β
Step 1	0.07			
Child Age		0.03	0.03	0.10
Child Gender		0.15	0.14	0.11
IC, Parent Report		0	0	0.07
Step 2	$0.06^{*}$			
TTI-Behavioral Conflict, Child Interview		0.05	0.02	0.31*
TTI-Discrepant Beliefs, Child Interview		0	0.02	-0.03
Step 3	0			
Behavioral Conflict×Discrepant Beliefs		0	0	-0.04

Regression terms for variables entered at steps 1, 2, and 3 are displayed, based on terms observed for these variables in step 3 of the model;  $\Delta R^2$  statistics for each step were based on variables entered in that step; *IC* Issues Checklist; *TTI* To(may)to-To(mah)to Interview; In this analysis, Child Gender was coded in ascending order of Female and then Male; \*p<.05

disagree. Further, these perceptions relate to widely used "disagreement" measures of parent-child conflict. Yet, one key question is why we observed significant differences between parent and child reports of conflict when measured via structured interview and not questionnaire? Here, it is helpful to note that on our structured interview, parents and children were instructed to provide reports in a way that allows for the clear distinction between informants' perceptions of behavioral conflict about daily life topics and perceiving daily life topics in different ways. Under these circumstances, parents consistently report more behavioral conflict and discrepant beliefs on daily life topics than do children, consistent with prior theory (see Smetana and Gaines 1999). Conversely, the lack of differences between measures that assess "disagreements" on daily life topics may reflect the fact that there may be individual differences among informants as to whether they are capable of inferring that "disagreement" measures, in fact, aim to assess parent-child conflict. Such individual differences among informants run the risk of "washing out" differences between informants' reports of conflict that may be revealed if conflict is assessed using terms that unambiguously prompt informants to provide conflict reports. Indeed, in support of these observations is the fact that evidence supporting the incremental validity of the TTI in predicting child self-reports of delinquent behavior varied as a function of the TTI informant (cf. Tables 6 and 7). This observation is further evidence supporting the value in administering conflict measures to informants



that clearly distinguish prompts for providing behavioral conflict reports from prompts for providing reports of related behaviors (i.e., discrepant beliefs). However, the mechanisms underlying these differential patterns in predictive findings are unknown and merit further study.

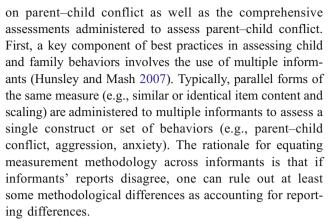
#### Limitations

There were limitations to this study. First, we only compared parent and child structured interview reports to one self-report method of assessing parent—child conflict. Thus, these findings may not generalize to other methods of assessing conflict. Specifically, questionnaire methods seeking to assess levels of the behavioral consequences of "disagreements" (e.g., *How often does your parent get angry at you?*) may not yield estimates of parent—child conflict in line with the estimates of behavioral conflict as assessed with our structured interview. We encourage future research to address these issues with other methods of assessing parent—child conflict (e.g., behavioral observations).

Second, we scored our questionnaire report of parentchild conflict without taking into account the frequency with which the informant judged the conflict to have occurred. Specifically, total scores of the parent and child questionnaire reports of parent-child conflict examined in this study are typically calculated based both on the intensity of the reported conflict and whether the topics rated by informants are judged by informants as having been topics of conflict within a specified time period (e.g., previous 2 weeks; see Treutler and Epkins 2003). Our modified version of the IC questionnaires instructed parents and children to report the intensity of disagreements on topics encountered in the previous 4 weeks. At the same time, we did not include joint judgments of intensity and frequency. This is because we were interested in equating the methods by which parents and children provided total scores on the measure. If informants were prompted to take into account the two domains of frequency and intensity, it would have been unclear why informants differed in their conflict reports (i.e., frequency, intensity, or both frequency and intensity). Without equating parent and child reporting methods, we would have been unable to compare whether patterns of parent-child reporting discrepancies changed as a function of the method used to assess parent-child conflict (i.e., structured interview versus questionnaire). Nevertheless, future research ought to replicate and extend our work to questionnaire measures of parent-child conflict that include both frequency and intensity ratings.

## Research and Theoretical Implications

Informants and Their Reactions to Standardized Instruments Our findings have important implications for research and theory



To be clear, there are many instances in which informants' reports on the same measure disagree, and yet overall reporting patterns (e.g., factor structure) are consistent across informants' reports (see Achenbach and Rescorla 2001; Baldwin and Dadds 2007). Yet, our findings indicate that the ways current parallel measures assess parent—child conflict (i.e., prompts to report about "disagreements") may "hide" differences between informants' reports that present themselves when clarifying for informants the purpose behind the assessments. We encourage researchers developing parent—child conflict measures to conduct qualitative and quantitative studies to ensure that informants draw similar inferences as to the intent or purpose of these measures.

Construction of Laboratory Measures of Parent–Child Conflict Our findings also have implications for how researchers construct structured laboratory conflict tasks. Specifically, the reliability and validity of these tasks hinge on whether the topics being discussed by parents and children represent stimuli that, when present in the home environment, elicit conflict reactions between parents and children. Crucially, these tasks are the foundation by which researchers gather knowledge of whether conflict elicits aversive biological responses from children. Yet, these tasks inconsistently elicit aversive biological responses from children (Gunnar et al. 2009).

Our data point toward a possible reason for these inconsistent biological reactions to laboratory conflict tasks. Specifically, researchers most often administer a questionnaire to parents and children to identify potential sources of "disagreement" between parents and children (i.e., "conflict topics"; see Donenberg and Weisz 1997; Edwards et al. 2001; Prinz et al. 1979). Upon identifying topics for discussion, researchers instruct parents and children to discuss each topic with each other for a discrete time period (e.g., 5–10 min) with the goal of "coming to a resolution" on the topic (e.g., Granger et al. 1994; Klimes-Dougan et al. 2001). Thus, laboratory conflict tasks might not consistently elicit aversive biological responses from children because researchers rely on parent and child questionnaire reports



about sources of "disagreement" to identify topics to use in the tasks, and thus families may only be inconsistently discussing "conflict topics" during these discussion tasks. This may introduce measurement error and thus imprecision in behavioral assessments of parent—child conflict taken from these tasks.

In line with our findings, we recommend that researchers probe parents and children as to how exactly they view daily life topics, particularly if the researchers plan to use parent and child reports to construct laboratory conflict tasks. Specifically, parents and children should be assessed for whether they view daily life topics such as doing chores around the house as topics that cause behavioral manifestations of conflict, or rather topics about which they simply have opposing views. Knowing parent—child perceptions of these domains (i.e., behavioral conflict versus discrepant beliefs concerning daily life topics) may increase the precision by which researchers measure parent—child conflict in general and construct laboratory conflict tasks meant to assess parent—child conflict.

Parent–Child Conflict and Developmental Psychopathology Research Finally, as mentioned previously, parent–child conflict poses risk for numerous, poor child psychosocial outcomes (e.g., behavioral and emotional problems, delinquent behavior, and substance use). Using current methods of assessing parent–child conflict, much has been learned about parent–child conflict as a risk factor for poor child psychosocial outcomes. At the same time, it is important that researchers continue to improve upon measurement technologies for this construct.

To this end, the findings from our study indicate that asking parents and children questions regarding behavioral conflict about daily life topics and discrepant beliefs on these topics may provide more precise estimates of parent—child conflict than traditional "disagreement" measures of parent—child conflict. In turn, more precise estimates of parent—child conflict should improve estimates of the links between conflict and poor outcomes. Yet, this is an open question that merits prospective longitudinal study. Thus, we encourage future researchers interested in the various domains of behavioral dysfunction to which parent—child conflict poses risk to compare and contrast the predictive qualities of multiple methods for assessing parent—child conflict.

## **Concluding Comments**

In sum, our findings suggest that the TTI reliably and validly assesses parent and child perceptions of parent-child conflict surrounding daily life topics. Both parents and children provide conflict reports on the TTI that can

be reliably distinguished from the related yet distinct construct of perceived discrepant beliefs about daily life topics. Additionally, parent and child TTI reports provide incrementally valid information in the prediction of children's self-reported delinquent behaviors, relative to parent and child reports on widely used questionnaire measures that seek to assess perceived "disagreements" that parents and children may have about daily life topics. These findings have important implications for measurement of parent-child conflict. Notably, laboratory observation tasks seeking to take measurements of parent-child conflict are often constructed based on parent and child "disagreement" reports of conflict. Thus, we encourage researchers to examine whether use of the TTI to construct laboratory conflict tasks yields more reliable and valid observations of such conflict, relative to use of questionnaire "disagreement" reports to construct these same conflict tasks. In turn, this focus on the comparative psychometric qualities of various reporting methods for assessing parent-child conflict may serve to increase our understanding of the links between parent-child conflict and poor child psychosocial outcomes, such as children's delinquent behavior and substance use.

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## **Appendix**

Daily Life Topics Assessed in the TTI-Behavioral Conflict and TTI-Discrepant Beliefs Sections

- · getting to watch TV shows and movies that you like
- getting to hang out with friends that you like
- · getting to do fun things after school
- spending time with the rest of the family
- doing your homework
- getting to go to fun places with friends
- getting good grades
- · getting to do what you want after dinner
- getting to go on the computer or talk on the phone with friends
- getting to hang out at friends' houses
- getting to wear clothes that you like
- · getting to do things that you want to do on the weekend
- getting to spend time outside of the house with friends
- coming home right after school



- · doing your chores
- · keeping yourself clean

Note. We list topics as phrased for the child version of the TTI. Topics on the parent version are phrased in reference to the parent's perspective (e.g., "your child doing his/her chores").

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