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Reconsidering Changes in Parent-Child Conflict across Adolescence: A Meta-Analysis

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Abstract

A series of meta-analyses addresses whether and how parent-child conflict changes during adolescence and factors that moderate patterns of change. The meta-analyses summarize results from studies of change in parent-child conflict as a function of either adolescent age or pubertal maturation. Three types of parent-adolescent conflict are examined: conflict rate, conflict affect, and total conflict (rate and affect combined). The results provide little support for the commonly held view that parent-child conflict rises and then falls across adolescence, although conclusions regarding pubertal change as well as conflict affect are qualified by the limited number of studies available. Two diverging sets of linear effects emerged, one indicating a decline in conflict rate and total conflict with age and the other indicating an increase in conflict affect with both age and pubertal maturation. In age meta-analyses, conflict rate and total conflict decline from early adolescence to mid-adolescence and from mid-adolescence to late adolescence; conflict affect increases from early adolescence to mid-adolescence. Puberty meta-analyses revealed only a positive linear association between conflict affect and pubertal maturation. Effect-size patterns varied little in follow-up analyses of potential moderating variables, implying similarities in the direction (although not the magnitude) of conflict across parent-adolescent dyads, reporters, and measurement procedures.

INTRODUCTION

The origins and developmental course of conflict in the normally nurturing relationships between parents and children are classic themes in theory and research on socialization (Maccoby, 1992). Particular attention has been given to the course of conflict during adolescence, reflecting both impressions that parent-child conflict is more common during adolescence than during childhood and beliefs that effective management of conflict promotes a successful transition to adult roles and responsibilities (Hill, 1988). Consequently, much of the empirical research on parent-adolescent conflict is designed to provide a better understanding of processes that foster continuity of parental influences and that minimize the disruption of these influences. The present study advances this goal by delineating descriptive detail about alterations in key aspects of parent-child relationships across adolescence. A series of meta-analyses summarizes changes in parent-child conflict rate and affect as a function of adolescent age and pubertal maturation.

A time-honored contention of theoretical and popular perspectives holds that expressions of parent-child conflict follow an inverted U-shaped function that peaks during adolescence. Early theorists, such as Sigmund Freud (1905/1962) and G. Stanley Hall (1904), regarded turbulent relations with parents as an unfortunate, but inevitable, by-product of adolescent maturation. Contemporary narrative reviews of the empirical literature have moved well beyond depictions of storm and stress to describe a period of temporary perturbations instrumental to the transformation of parent-adolescent relationships (Buchanan, Eccles, & Becker, 1992; Collins, 1990; Pai-koff & Brooks-Gunn, 1991; Silbereisen & Kracke, 1993; Steinberg, 1990). In a widely cited narrative summary of research on the subject, Montemayor (1983) described this curvilinear relation: "Conflict increases during early adolescence, is reasonably stable during middle adolescence, and declines when the adolescent moves away from the home" (p. 89).

Some dispute the view of parent-adolescent perturbation. Margaret Mead (1928) suggested that the course of parent-child conflict is an artifact of culture and circumstances, a theme echoed in Albert Bandura's (1964) critique of the "fiction" of adolescent turmoil. Others concluded that reports of parent-child conflict vary with social and historical context; early research may have exaggerated conflict during adolescence because participants and investigators conformed to prevailing stereotypes of turmoil and strife (Gecas & Seff, 1990). Our own narrative reviews determined that previous findings provide little consistent evidence of change in parent-adolescent conflict as a function of either age or pubertal maturation (Collins & Laursen, 1992; Laursen & Collins, 1994).

Why is there persistent disagreement over this fundamental aspect of parent-adolescent relationships? Conceptual ambiguity is responsible for some of the confusion. The assertion that parent-child conflict crests during adolescence encompasses a range of possibilities. For example, conflict may increase with the onset of puberty and then decline following the apex of maturational changes. Conflict may increase between childhood and early adolescence, after which it may decline immediately or plateau through mid-adolescence before declining in late adolescence; alternatively, conflict may increase between early adolescence and mid-adolescence, and then decline thereafter. Age and puberty may interact such that changes in parent-child conflict are exacerbated for those maturing off-time relative to peers. Narrative reviews rarely distinguish among these and other alternative explanations, leaving the exact nature of changes open to debate. Another source of disagreement is the tendency of different scholars to focus on different aspects of conflict. Hinde (1979) convincingly argued that to understand the significance of an interaction it is necessary to consider qualitative aspects, such as affective tenor, apart from quantitative features, such as frequency. Yet narrative reviews typically lump together all studies that address parent-adolescent disagreement or discord, with little attention given to systematic differences that arise from defining conflict in terms of rate or affective intensity.

Divergent interpretations of the literature prompted a reconsideration of changes in parent-adolescent conflict using techniques that avoid difficulties inherent in the narrative review process. Unintentional subjective judgments are inevitable in a narrative review because the process relies on the limited human capacity to assimilate, summarize, and interpret large amounts of disparate empirical data (Glass, McGaw, & Smith, 1981). Meta-analysis provides an objective quantitative procedure for synthesizing material, treating findings from multiple studies as a single complex data set. Hypotheses are evaluated by computing a common population effect based on effect size estimates from individual studies (Hedges & Olkin, 1985). Less frequently applied in developmental psychology than in other areas of psychology (Cooper & Lemke, 1991), meta-analysis offers several advantages over narrative review (Wolf, 1986): (1) a systematic process to determine the inclusion of studies for review; (2) an equivalent weighting of studies in the interpretation of findings; (3) an objective metric for the interpretation of findings; and (4) a means to consider moderating variables to explain results.

The present meta-analysis imposes order on an unwieldy set of results by specifying the direction and magnitude of change associated with clearly defined periods of adolescence. Are there differences in parent-child conflict across adolescence as a function of age or pubertal status? Do changes follow a curvilinear or linear trajectory? Separate analyses summarize changes in parent-child conflict from early adolescence to late adolescence and from prepuberty to postpuberty. Too few studies were available to consider changes associated with pubertal timing or changes associated with transitions from childhood to adolescence and from adolescence to adulthood. The procedure also clarifies ambiguities in the literature because it requires a reliable and objective definition of conflict. A widely accepted definition of conflict was adopted that emphasizes behavioral opposition or overt disagreement (Shantz, 1987). This definition sharpens distinctions between the frequency of conflict and the negative expression of emotion, which permits separate analyses of each.

In addition to identifying prevailing population effects, the meta-analysis isolates factors that may be moderators of change in parent-adolescent conflict. Previous narrative reviews (Collins & Laursen, 1992; Montemayor, 1983) have drawn attention to three categories of potential moderators: dyad composition, measurement procedures, and source of information about conflict. In the meta-analyses reported here, possible moderators from each of these categories are considered in turn. With respect to the dyadic composition of the parent-child relationship, analyses addressed the assertion that mother-daughter relationships are more contentious than other parent-adolescent relationships. With respect to conflict metric or measurement procedure, analyses examined the possibility that specific frequency measures reveal more conflict than general rating scales. With respect to the reporter serving as the source of the data, the analyses ascertained whether children recount more conflict than parents. Should there be significant changes in parent-adolescent conflict, the strongest associations are expected in mother-daughter relationships and in reports obtained from children or derived from frequency measures.

METHOD

A three-step review process located studies to be included in the meta-analyses. First, computer and manual abstract searches identified research reports for further consideration. Second, studies that qualified for the meta-analyses were selected. Third, eligible research reports were coded to determine effect size estimates as well as study and sample characteristics.

Reviewing Abstracts

In the first phase, three coders searched *Psychological Abstracts* for the years 1926 to 1973 and *ERIC*, *PSYCHLIT*, and *Dissertation Abstracts* for the years 1974 to 1994. A search of word roots (i.e., *adolesc*, *argu*, *conflict*, *disagree*, *famil*, and *pubert*) and key words (i.e., *son*, *daughter*, *mother*, *father*, *child*, and *parent*) generated more than 7,000 abstracts representing at least 2,500 independent research reports. From these abstracts, studies identified for further consideration met three criteria: (1) available in English; (2) describe original research; and (3) address parent-adolescent conflict. Of the 2,500 independent abstracts identified from key words, 350 qualified for the second stage of review.

To assess interrater reliability, three independent coders reviewed a total of 750 randomly selected abstracts. Agreement on whether a study met the criteria for further consideration ranged from 90% to 97% ($\kappa = .83$ to $.92$). Differences among coders were resolved through discussion.

Reviewing Research Reports

In the second phase, two coders considered the complete texts of the 350 research reports identified in the first phase. Studies selected for the meta-analyses met three criteria: (1) Conflict was a dyadic interpersonal event involving overt behavioral opposition (Shantz, 1987), including quarrels, disagreements, and arguments. Studies defining conflict as competition, aggression, speech interruptions, personality traits, and intrapsychic events were excluded (Collins & Laursen, 1992; Laursen & Collins, 1994). (2) Measures of conflict were specific to exchanges between 10- to 22-year-old adolescents and a parent. Studies of global family discord that conflate marital or sibling conflict with parent-child conflict were excluded. (3) Parents and offspring represented nonclinical populations. Of the 350 studies reviewed, 53 qualified for the third stage of coding.

To assess interrater reliability, two independent coders reviewed a total of 70 randomly selected research reports. Agreement on selecting a study for the meta-analyses was 93% ($\kappa = .86$). Differences were resolved through discussion.

Coding Research Reports

In the third phase, two coders reviewed the 53 research reports that met the selection criteria to classify study and sample characteristics and to obtain effect size estimates. Coders attempted to contact 19 principal investigators whose research reports lacked sufficient detail to either calculate effect sizes or categorize the sample and method. Of the 12 acknowledging the inquiry, three provided the necessary information. All reports included in the meta-analyses met two criteria: (1) central characteristics of the study and sample could be ascertained, including the number of participants, the age or pubertal status of the adolescents, and the type of conflict; and (2) parent-child conflict effects could be estimated for contrasts of at least two adolescent age or pubertal groups. Of the 53 qualified research reports, 37 were included in the meta-analyses.

Table 1 describes the study and sample characteristics of these research reports. It contains not a complete summary of each study but, rather, an overview of data contributed to the meta-analyses. Selection and coding procedures may alter the form and appearance of data from that presented in the original report. In some studies, missing cases (e.g., Lempers & Clark-Lempers, 1992; Steinberg, 1988) and attrition (e.g., Bulcroft, 1991; Galambos & Almeida, 1992) limited the number of participants in the meta-analyses such that sample sizes differed from the published method. In other studies, specific subsamples were omitted from a report because more complete data from participants were available elsewhere (e.g., Smetana, Yau, Restrepo, & Braeges, 1991).

To ensure that samples were represented only once in each meta-analysis, investigations with the same participants and methods in multiple reports were identified. In these instances, the research report containing the largest number of participants was selected for the meta-analyses. Data from research reports describing the same participants and different methods were combined. An effect size from each method was calculated and converted to a standardized score using Fisher's r to Z transformation. The average of these standardized scores was then converted back to an effect size. In this manner, five studies qualifying for the puberty meta-analyses were consolidated into two independent samples: (1) findings from the Hill laboratory include data from participants in three research reports (Hill & Holmbeck, 1987; Holmbeck & Hill, 1991; Updegrove, 1988), and (2) findings from the Steinberg laboratory include data from participants in two research reports (Steinberg, 1987, 1988).

Two independent coders reviewed all 53 research reports. Interrater reliability on whether a study met the inclusion criteria was 100% ($\kappa = 1.0$).

Classification of Research Reports for Meta-Analyses

Two coders classified each research report on seven dimensions: (1) age (or grade) and pubertal status of adolescent, (2) sex of adolescent, (3) family demographics, (4) type of conflict, (5) sampling technique, (6) source of data, and (7) conflict metric.

Interrater reliability for coding study and sample characteristics ranged from 92% to 100% ($\kappa = .87$ to 1.0). Differences were resolved through discussion.

Age (or grade) and pubertal status—A total of 24 reports included effect size estimates of comparisons across at least two adolescent age groups, 10 described comparisons across at least two pubertal status groups, and three included contrasts across at least two age and pubertal status groups. Separate meta-analyses were conducted on studies of age and on studies of puberty.

Of studies included in age meta-analyses, 21 involved early adolescents (10- to 12-year-olds or fifth to seventh grades), 27 described mid-adolescents (13- to 16-year-olds or eighth to tenth grades), and 15 included late adolescents (17- to 22-year-olds or eleventh grade to college undergraduate). Among the latter, four studies contained college students: some or all participants lived at home with parents in two studies and information on living arrangements was unavailable for two other studies. Small samples precluded separate follow-up analyses of college participants.

Of the studies included in puberty meta-analyses, five provided direct comparisons across prepuberty (no discernible pubertal development), mid-puberty (apex of pubertal development or onset within the past year), and postpuberty (onset of puberty more than 1 year ago). In addition to, or in lieu of, these direct contrasts, eight studies reported findings of overall linear associations between puberty and parent-child conflict, and 11 studies reported estimates of overall curvilinear associations between these variables. Techniques to determine pubertal status varied widely across reports. No studies of pubertal status included college students.

Sex of adolescent—Among studies selected for age meta-analyses, 25 included sons and daughters. The two remaining studies were restricted to daughters. Among studies in puberty meta-analyses, 10 included sons and daughters, two included daughters only, and one included sons only.

Family demographics—A total of 16 studies included in age meta-analyses reported that the majority of participants were European American, four reported that most participants were non-North American, and seven lacked information to classify the sample. Among studies in puberty meta-analyses, 10 reported that the majority of participants were European American, one reported that most participants were non-North American, and two lacked sufficient information to characterize the sample.

With respect to family composition, nine studies included in age meta-analyses reported that the majority of participants were from intact families, one indicated that most were from single-parent families, one was divided among intact, blended, and single-parent families, and 16 did not report family composition. Among studies in puberty meta-analyses, nine reported that the majority of participants were from intact families, one indicated that participants were divided among intact, blended, and single-parent families, and three did not report family composition.

Socioeconomic status classifications revealed that in 10 studies included in age meta-analyses the majority of participants were middle-class and that 17 studies did not report socioeconomic data. Among studies in puberty meta-analyses, six reported that the majority of participants were middle-class and seven did not report socioeconomic data.

Separate analyses of parent-adolescent conflict as a function of family demographics could not be performed because most studies involved intact, middle-class, European American families.

Type of conflict—A total of 12 studies included in age meta-analyses described conflict rate (frequency or number of disagreements), five concerned conflict affect (emotional intensity of disagreements), and 10 involved conflict rate and conflict affect. Of studies in puberty meta-analyses, five described conflict rate, four concerned conflict affect, and four involved conflict rate and conflict affect. Conflict rate and conflict affect data were combined to produce a total conflict variable. Some studies lacked data on all types of conflict, so total conflict effect size estimates from these reports were the same as those available for conflict rate or conflict affect. Separate effect sizes were converted to a standardized score using Fisher's r to Z transformation. The average of these standardized scores was then converted back to an effect size.

Sampling technique—A total of 24 studies included in age meta-analyses were cross-sectional, two were longitudinal, and one was retrospective. Of these, 11 assayed conflict at more than one time period or for more than one sample within an age range, producing data that were later combined. Separate effect sizes were calculated for each sample or age period and converted to a standardized score using Fisher's r to Z transformation. The average of these standardized scores was then converted back to an effect size. Among studies in puberty meta-analyses, nine were cross-sectional, two were longitudinal, and two were cross-sectional and longitudinal. Of these, seven assayed conflict at more than one time period or for more than one sample within a pubertal group, producing data that were later combined. Follow-up analyses of parent-child conflict as a function of sampling technique could not be performed because most studies were cross-sectional.

Source of data—A total of 24 studies included in age meta-analyses were based on self-reports from questionnaires or interviews, two described observations, and one involved self-reports and observations. Self-reports were provided by children in 13 studies, by parents in two, and by parents and children in 10. Among studies in puberty meta-analyses, eight were based on self-reports, four described observations, and one involved self-reports and observations. Self-reports were obtained from children in two studies, from parents in two, and from parents and children in five. The small number of observational studies limited follow-up analyses to parent reports and child reports.

Conflict metric—Two types of conflict instruments were identified: frequency measures and rating scales. Frequency measures entailed a specific recounting of all conflict events (e.g., Smetana, 1989) or summed checklists either listing specific conflict issues (e.g., Issues Checklist: Prinz, Foster, Kent, & O'Leary, 1979; Robin & Foster, 1984) or specific affective expressions (e.g., Conflict Behavior Questionnaire: Robin & Foster, 1989). Rating scales included Likert-style reports describing general impressions of conflict in a relationship (e.g., Network of Relationships Inventory: Furman & Buhrmester, 1985). Altogether, eight studies included in age meta-analyses were based on frequency measures, 15 involved rating scales, and four contained frequency measures and rating scales. Of this total, three involved reports from multiple instruments that were later combined. Separate effect sizes for each instrument were calculated and converted to a standardized score using Fisher's r to Z transformation. The average of these standardized scores was then converted back to an effect size. Among studies in puberty meta-analyses, six were based on frequency measures, five involved rating scales, and two contained frequency measures and rating scales. Of this total, two involved reports from multiple instruments that were later combined.

Statistical Analyses

Effect size estimates—The Pearson product moment correlation r is the recommended index for describing nonexperimental (i.e., correlational) data in a meta-analysis (Hedges & Olkin, 1985). Cohen (1992) suggests that correlational data be interpreted in terms of small ($r = .1$), medium ($r = .3$), and large ($r = .5$) effects. Effect size estimates of r were calculated directly from means and standard deviations or indirectly from F , t , and χ^2 values (Schwarzer, 1989). In the absence of data necessary to calculate r , effect sizes were estimated as zero for unspecified results that did not reach statistical significance (Wolf, 1986). Table 2 and Table 3 present effect size estimates for each sample in the meta-analyses.

In group contrasts, r represents an association between conflict and age or pubertal status, reported in terms of the standardized difference between two age or pubertal groups in parent-child conflict. The hypothesis that parent-child conflict peaks at mid-adolescence or at the apex of puberty yields two expected patterns. The direction of the effect is a measure of support for the hypothesis: Positive effects are consistent with predicted patterns; negative effects are not. First, in age analyses, there should be positive effects in contrasts involving mid-adolescence, indicating that conflict is greater at mid-adolescence than in early adolescence and late adolescence. Negative effects in these contrasts indicate less conflict in mid-adolescence than in early adolescence and late adolescence. Similarly, in puberty analyses, there should be positive effects in contrasts involving mid-puberty, indicating that conflict is greater at mid-puberty than in prepuberty and postpuberty. Negative effects indicate less conflict in mid-puberty than in prepuberty and postpuberty. Second, in age analyses, there should be positive effects in contrasts of early adolescence and late adolescence, indicating more conflict in late adolescence. Negative effects indicate that conflict is greater in early adolescence than in late adolescence. Similarly, in puberty analyses, there should be positive effects in contrasts of prepuberty and postpuberty, indicating more conflict in postpuberty. Negative effects indicate that conflict is greater in prepuberty than in postpuberty.

In linear and curvilinear associations, r represents the standardized correlation of adolescent puberty with parent-child conflict. Contrast correlations were calculated, which may slightly overestimate the magnitude of population effects (Rosnow & Rosenthal, 1996). Positive curvilinear effects indicate increases in conflict during the initial stages of puberty and decreases during the later stages of puberty, whereas negative curvilinearity indicates decreases in conflict during the initial stages of puberty and increases during later stages of puberty. Positive linear effects indicate that conflict increases with pubertal maturation and negative effects indicate that conflict decreases with pubertal maturation.

Combining and disaggregating effects—In a meta-analysis, effect size estimates from several studies are combined to obtain a weighted population effect reflecting the mean of the effect size estimates (Hedges & Olkin, 1985). To this end, r values from individual research reports were converted to Z scores with Fisher's r to Z transformation prior to combining effects. An average Z score, weighted by sample sizes ($n - 3$), was calculated and then transformed back to r .

To determine whether individual research reports provided consistent estimates of population effects, separate analyses of homogeneity were conducted. The homogeneity statistic Q resembles the χ^2 test with $k - 1$ degrees of freedom, where k represents the number of effect sizes (Hedges & Olkin, 1985). Lack of statistical significance on homogeneity tests suggests that effect size estimates for individual studies are similar in magnitude and direction. Statistically significant results indicate the absence of homogeneity (i.e., heterogeneity), which may signal outliers, interactions, or highly variable phenomena. Heterogeneous population effects were disaggregated by dividing research reports into distinct subsets, with separate follow-up meta-analyses conducted on each subset. Heterogeneous population effects

composed of homogeneous follow-up effects could be the product of systematic differences among research reports such that all estimates within a subset share a common effect size even though the total set does not.

To ensure comparability across meta-analyses, an a priori decision was made to disaggregate each age population effect according to eight categorical variables, regardless of the results of homogeneity tests. In this process, a population effect (e.g., mid-adolescent and late adolescent conflict rate) was broken down into effects for distinct subcategories (e.g., source of data: parent report or child report). That is, for all of the age analyses, the total set of studies contributing to each population effect was divided into at least two subsets of studies for follow-up analyses, each subset consisting of independent effect size estimates. Too few studies were available to systematically disaggregate puberty population effects.

Plan of analyses—The present meta-analyses of population effects addressed two issues. The first is whether changes in parent-child conflict across adolescence are a function of age or pubertal status. The second is whether pubertal changes follow a curvilinear or linear trajectory. Follow-up meta-analyses examined moderator effects, addressing whether age changes in parent-child conflict vary systematically as a function of parent-child dyad (mother-son, mother-daughter, father-son, and father-daughter), source of data (adolescent report and parent report), and conflict metric (frequency measures and rating scales).

To investigate differences in parent-child conflict as a function of age, effect sizes were computed for three distinct contrasts: (1) early adolescence and mid-adolescence, (2) mid-adolescence and late adolescence, and (3) early adolescence and late adolescence. For each, separate meta-analyses were computed for the three types of conflict: conflict rate, conflict affect, and total conflict (rate and affect combined). To investigate differences in parent-child conflict as a function of puberty, meta-analyses were completed for three contrasts: (1) prepuberty and mid-puberty, (2) mid-puberty and postpuberty, and (3) prepuberty and postpuberty. Some planned comparisons failed to meet the minimum recommended criterion of independent samples ($k = 3$) for a meta-analysis; consequently, results from several analyses (e.g., pubertal group contrasts of conflict rate and conflict affect) are not reported. Meta-analyses also examined linear and curvilinear associations between puberty and parent-adolescent conflict. In each, separate metaanalyses were conducted for conflict rate, conflict affect, and total conflict. Too few studies were available to consider curvilinear and linear changes as a function of age.

RESULTS

First, population effect sizes describe results from age meta-analyses and puberty meta-analyses. Next, follow-up age meta-analyses detail moderator effects.

Population Effects

A series of meta-analyses contrasted parent-child conflict across age groups: early adolescence and mid-adolescence, mid-adolescence and late adolescence, and early adolescence and late adolescence. Each contrast entailed separate meta-analyses for the three types of conflict: conflict rate, conflict affect, and total conflict. Additional meta-analyses contrasted pubertal groups on parent-child conflict: prepuberty and mid-puberty, mid-puberty and postpuberty, and prepuberty and postpuberty. Too few studies were available for pubertal group comparisons of conflict rate and conflict affect, so analyses were restricted to total conflict. Meta-analyses also examined linear and curvilinear associations between puberty and conflict rate, between puberty and conflict affect, and between puberty and total conflict. Table 4 summarizes the population effect sizes for these 18 meta-analyses.

Age—Significant population effects emerged for all age group contrasts of conflict rate and total conflict. The results indicated that conflict is greater in early adolescence than in mid-adolescence, greater in mid-adolescence than in late adolescence, and greater in early adolescence than in late adolescence. Thus, small decreases at each age period collectively produce a moderate decline in the rate of parent-child conflict from early adolescence to late adolescence. Analyses of parent-child conflict affect revealed age-related patterns that differed from conflict rate and total conflict. A significant population effect revealed greater negative affect during mid-adolescence than during early adolescence. Differences between mid-adolescence and late adolescence, and between early adolescence and late adolescence failed to reach statistical significance. Thus, parent-child conflict negativity increases slightly from early adolescence to mid-adolescence, then settles back during late adolescence to a level somewhere between the two earlier age periods. Taken together, these results imply that parent-child conflict is less frequent, but more heated, in mid-adolescence than in early adolescence; late adolescence brings a further decline in the rate of conflict but little change in affective expression.

Puberty—Population effects for pubertal group contrasts of total conflict failed to reach statistical significance. Similarly, there were no statistically significant curvilinear associations between puberty and conflict rate, between puberty and conflict affect, and between puberty and total conflict. In meta-analyses of linear effects, puberty was positively linked to conflict affect, but associations between puberty and conflict rate, and between puberty and total conflict, failed to reach statistical significance. The results suggest that, aside from a small linear increase in negative affect, few changes in parent-child conflict are a function of puberty. These findings should be interpreted with caution because of the limited number of studies available.

Moderator Effects

To determine whether population effects obscured differences in patterns of conflict, a series of eight follow-up meta-analyses was conducted, divided according to the four parent-child dyads, the two sources of data, and the two conflict metrics. In each, separate meta-analyses were conducted for conflict rate, conflict affect, and total conflict. Too few studies were available for puberty meta-analyses on most moderator variables, so follow-up contrasts were limited to age meta-analyses. Insufficient data limited conflict affect contrasts to early adolescence and mid-adolescence for all moderator variables except child reports and rating scales. Table 5 summarizes the moderator effect sizes for these 60 age meta-analyses.

Parent-child dyads—Significant effects emerged for all age group contrasts on conflict rate. These results indicate that for each parent-child dyad, conflict rates are higher in early adolescence than in mid-adolescence, which, in turn, are higher than in late adolescence. Effect sizes vary for mother-child and father-child dyads. Contrasts revealed small to moderate declines across successive age periods in mother-son and mother-daughter conflict, and small declines across successive age periods in father-son and father-daughter conflict. From early adolescence to late adolescence there was a moderate to large decline in conflict among mother-child dyads and a small to moderate decline in conflict among father-child dyads. Conflict affect among father-son dyads increased slightly between early adolescence and mid-adolescence, an effect that failed to reach statistical significance in other relationships. Taken together, the results imply that substantial decreases across adolescence in the rate of mother-child conflict are replicated on a smaller scale in father-child relationships, but that small increases in conflict affect between early adolescence and mid-adolescence can be reliably demonstrated only in the father-son relationship.

Source of data—Significant effects emerged for all age group contrasts on conflict rate and total conflict. These results suggest that similar views of age-related change may be attributed to parents and children: Both agree that there is less conflict in mid-adolescence than in early adolescence and, further, that there is less conflict in late adolescence than in mid-adolescence. Perceptions differ, however, as to the magnitude of changes in overall conflict, with children reporting a moderate decline and parents reporting a small to moderate decline. Child reports indicated a small increase in conflict affect from early adolescence to mid-adolescence, but the effect for parent reports did not reach statistical significance. Child reports of conflict affect revealed no statistically significant effects for contrasts of mid-adolescence and late adolescence, and for contrasts of early adolescence and late adolescence. Taken together, parents and children report declines in the rate of conflict across adolescence, but only children report a discernible increase in conflict affect from early adolescence to mid-adolescence. Children perceive the overall change in conflict rates from early adolescence to late adolescence as greater than the sum of the changes they report from early adolescence to mid-adolescence and from mid-adolescence to late adolescence, whereas parents perceive the overall change as smaller than the sum of their reports of successive change.

Conflict metric—Significant effects emerged for all age group contrasts on conflict rate and total conflict. Frequency measures and rating scales both indicate that conflict rates decline from early adolescence to mid-adolescence, and again from mid-adolescence to late adolescence. Effect sizes differed: Rating scales revealed small decreases from one age period to the next, whereas frequency measures revealed a moderate to large decrease from early adolescence to mid-adolescence, and a small to moderate decrease from mid-adolescence to late adolescence. The overall decline from early adolescence to late adolescence was large when measured by frequencies, yet small to moderate when measured by ratings. Frequency measures indicated a small increase in conflict affect from early adolescence to mid-adolescence; the rating scale effect did not reach statistical significance. Conflict affect ratings revealed no statistically significant effects in contrasts of mid-adolescence and late adolescence, and in contrasts of early adolescence and late adolescence. Taken together, frequency measures and rating scales agree that the rate of parent-child conflict decreases across adolescence, but only frequency measures detected a slight increase in conflict affect from early adolescence to mid-adolescence. Rating scales yielded modest conflict rate changes relative to frequency assessments.

DISCUSSION

The investigation revealed developmental changes in parent-child conflict that were not detected in previous narrative reviews, thus providing a textbook example of the ability of meta-analytic summaries to discern order where none is apparent. The results indicated that parent-child conflict rates and total conflict decline across the adolescent years. Simultaneously, the affective intensity of conflict increases from early adolescence to mid-adolescence. Population effects for age analyses and effects within groups defined by potential moderator variables were similar in direction although they varied in magnitude. Contrasts of early adolescence and late adolescence revealed medium effects for conflict within mother-child dyads and small effects for conflict within father-child dyads, medium effects based on child reports and small effects based on parent reports, and large effects for frequency measures and small effects for rating scales. Few developmental differences in parent-adolescent conflict emerged in puberty analyses, with the exception of a positive linear association that linked puberty to conflict affect but not to conflict rate or total conflict. The limited number of studies available on parent-adolescent conflict and puberty suggest that caution is warranted in interpreting these results.

The most parsimonious interpretation of the findings is that the evidence does not support the common assertion that parent-child conflict rates are a curvilinear function of adolescent age or pubertal maturation. Instead, effects emerging from the metaanalyses tended to be linear: Conflict rates decrease with adolescent age, and conflict affect increases with adolescent age and pubertal maturation. Prior narrative reviews (our own as well as those of others) did not discern the progressive decline in rates of parent-child conflict across the adolescent years. Decreases from early adolescence to mid-adolescence and from mid-adolescence to late adolescence accounted for .4% to 2% of the total variance in conflict rate and total conflict, and declines from early adolescence to late adolescence accounted for 9.6% to 11.6% of the total variance in conflict rate and total conflict. Prior narrative reviews also failed to detect increases in conflict affect, which accounted for 2.3% of the total variance in puberty meta-analyses of linear change and .5% of the total variance in age contrasts of early adolescence and mid-adolescence.

The small magnitude of most of these population effects raises the possibility that changes in conflict may be a less robust and distinctive component of adolescent development than has previously been assumed. The meta-analyses do not address broader changes in parent-child relationships, and we cannot rule out the possibility that conflict is greater during adolescence than during either middle childhood or adulthood; specifically, the findings do not contradict claims that parent-child conflict peaks at the transition to adolescence and declines thereafter (Smetana, 1989). Yet the results are also consistent with the assertion that the interdependent affiliations of adolescents are resistant to rapid behavioral reorganization (Collins & Laursen, 1992; Laursen & Collins, 1994). Family members and friends offer adolescents stability during a period of change in other arenas, so alterations in conflict behavior within these relationships unfold gradually as participants adjust to new patterns of social exchange. Transformations, rather than disruptions, characterize these relationships. Declines in the rate of conflict mirror declines in the rate of social interaction (Csikszentmihalyi & Larson, 1984; Laursen & Williams, 1997), and it is likely that parents and children disagree less simply because they are together less. Increases in conflict affective intensity coincide with increases in autonomy and emotional dysphoria that occur as adolescents spend more time alone and with peers (Larson & Richards, 1994; Steinberg, 1990). These changes in the interpersonal landscape usher in new challenges for parents and children during a period of heightened adolescent emotional lability, so conflicts are apt to be a bit more affectively charged.

Moderator effects corroborate the presence of systematic variation in parent-adolescent conflict. Scholars have argued that across adolescence, parent-child conflict involves mothers more often than fathers (Collins, 1990; Montemayor, 1983). The results extend these conclusions, indicating that rates of mother-adolescent conflict decline more than rates of father-adolescent conflict. This is not surprising, given similar changes in social interaction, but it does raise the possibility that the brunt of parent-adolescent relationship reorganization falls upon mothers and children. Additionally, scholars have asserted that perceptions of parent-child conflict differ; adolescents describe more conflict than parents and adolescent reports are more consistent with independent observations than parent reports (Gonzales, Cauce, & Mason, 1996). Given that parents underestimate conflict, they probably also underestimate the magnitude of its decline, and it seems reasonable to assume that changes in the rate of parent-adolescent conflict are closer to the moderate decline described by children than the small decline described by parents. Finally, scholars have speculated on the possibility of measurement bias: How conflict is measured may influence how much conflict is measured (Collins & Laursen, 1992; Montemayor, 1983). Suspicions that measurement practices moderate changes in the rate of parent-child conflict were confirmed. Compared to rating scales, frequency measures revealed considerably greater declines across adolescence, suggesting that the latter is a more sensitive tool than the former. Beyond the practical implications for research design, these findings imply that the process of transforming parent-

adolescent relationships may involve disputes too mundane to register on global assessments of conflict.

These conclusions must be qualified by the parameters of the investigation. First, the operational definition of conflict as behavioral opposition narrowed the scope of the meta-analyses. The possibility that other conceptually and empirically distinct constructs may provide a different developmental profile of changes in the parent-adolescent relationship strengthens rather than weakens the argument that such constructs ought to be examined separately. Second, the number of research reports available for the meta-analyses was limited. Analyses based on a small number of studies or participants are less accurate than larger ones, although they tend to err by overestimating effect sizes (Wolf, 1986). Third, the convention of estimating effect sizes as zero for nonsignificant findings without statistical values limited the contribution of some studies. This practice underestimates effect sizes, but it probably did not change the overall pattern of results because such studies were randomly distributed across comparison groups. Further, the direction and size of these nonsignificant effects are as likely to cancel one another out as to produce a population effect with a consistent direction and meaningful magnitude. Finally, the limited range of research on the topic prohibited the consideration of several important moderator variables. There were too few studies to examine contextual variables (e.g., ethnicity) or characteristics specific to parents (e.g., parenting style) and adolescents (e.g., pubertal timing), although there are indications that each exerts a powerful influence over conflict behavior (e.g., Hagan, Hollier, O'Connor, & Eisenberg, 1992; Molina & Chassin, 1996; Savin-Williams & Small, 1986).

As with any meta-analysis, the file-drawer problem must be considered. Unpublished studies, lurking in offices and laboratories, may contain results that would alter the conclusions. Typically, the file-drawer problem results in an overestimation of effect sizes because nonsignificant findings tend not to be published (Hedges & Olkin, 1985). In the current meta-analyses, as few as four additional null effects in age comparisons of mid-adolescence and late adolescence would alter the parent-child conflict rate population effect such that it would no longer be statistically significant. By contrast, it would take 47 additional null effects in age comparisons of early adolescence and late adolescence to render the parent-child total conflict population effect nonsignificant. In the end, the file-drawer problem is unlikely to mask substantial changes in parent-adolescent conflict because scholars are presumably not hoarding more unpublished studies with significant findings than unpublished studies with null results.

We note the importance of differentiating between the rate of conflict and the affective intensity of conflict. The contrasting patterns emerging from these two indices indicate clearly that the generic study of conflict must be replaced by a more precise measurement of both. The tendency to conflate rate and affect may have contributed to the perception that parent-child conflict rises and falls across adolescence for affect does rise and rates do fall, but they do so concurrently rather than successively. The conclusion that disagreements between parents and children grow less frequent but more unpleasant across adolescence suggests that as we reconsider patterns of change in parent-adolescent conflict we should also reconsider the mechanisms through which parent-adolescent relationships are transformed and the role conflict plays in these relationship alterations.

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Table 1
Study and Sample Characteristics of Reports Included in Parent-Adolescent Conflict Age and Puberty Meta-Analyses

Study	Participants	Child Age or Grade	Child Sex	Sampling Technique	Source of Data	Conflict Metric
<u>Age meta-analyses</u>						
Blase (1989)	96	11.0–19.0	Male & Female	Cross-Sectional	Child	Rating
Block (1937)	528	7th–12th	Male & Female	Cross-Sectional	Child	Frequency
Carlton-Ford & Collins (1988)	60	5th–11th	Male & Female	Cross-Sectional	Parent & Child	Frequency & Rating
Connor, Johannis, & Walters (1954)	119	9, 8	Female	Retrospective	Child	Frequency
Flannery, Monte-mayor, Eberly, Biebelhausen, & Morabeto (1991)	85	11.0–15.0	Male & Female	Cross-Sectional	Parent & Child	Frequency
Furnan & Buhrmes-ter (1992)	471	12.5–19.3	Male & Female	Cross-Sectional	Child	Rating
Galampos & Almeida (1992)	66	11.6–14.1	Male & Female	Longitudinal	Parent & Child	Rating
Greene & Grimsley (1990)	72	12.2–16.8	Male & Female	Cross-Sectional	Child	Frequency
Hagan, Hollier, O'Connor, & Eisen-berg (1992)	164	11.5–13.7	Male & Female	Longitudinal	Parent, Child, & Observer	Rating
Inoff-Germain et al. (1988)	60	9.0–14.0	Male & Female	Cross-Sectional	Observer	Rating
Johnstone (1975)	1,317	13.0–20.0	Male & Female	Cross-Sectional	Child	Rating
Kahlbaugh (1992)	20	11.0–14.0	Male & Female	Cross-Sectional	Parent & Child	Frequency & Rating
Kahlbaugh, Lefkowitz, & Sigman (1994)	41	11.0–14.0	Male & Female	Cross-Sectional	Parent & Child	Frequency & Rating
Khatri, Voegler, & Pandya (1993)	171	11.2–15.3	Male & Female	Cross-Sectional	Child	Rating
Laursen (1993)	685	15.0–18.8	Male & Female	Cross-Sectional	Child	Rating
Lempers & Clark-Lempers (1992)	1,089	11.0–19.0	Male & Female	Cross-Sectional	Child	Rating
Noack (1993)	38	13.5	Male & Female	Cross-Sectional	Observer	Frequency
Papini, Clark, Barnett, & Savage (1989)	279	7th–11th	Male & Female	Cross-Sectional	Child	Rating
Rajalu (1991)	365	13.0–19.0	Male & Female	Cross-Sectional	Child	Frequency
Schoenleber (1988)	66	11.0–17.0	Male & Female	Cross-Sectional	Parent	Rating
Sidhu & Singh (1987)	64	16.0–19.0	Female	Cross-Sectional	Child	Rating
Smetana (1989)	76	11.1–17.1	Male & Female	Cross-Sectional	Parent & Child	Frequency

Study	Participants	Child Age or Grade	Child Sex	Sampling Technique	Source of Data	Conflict Metric
Smetana (1991)	255	13.0–17.0	Male & Female	Cross-Sectional	Parent & Child	Rating
Smetana & Asquith (1994)	68	6th–10th	Male & Female	Cross-Sectional	Parent & Child	Rating
Smetana, Yau, Restrepo, & Braeges (1991)	28	12.0–16.0	Male & Female	Cross-Sectional	Parent & Child	Rating
Wierson, Armistead, Forehand, Thomas, & Fauber (1990)	122	11.3–14.9	Male & Female	Cross-Sectional	Parent	Frequency & Rating
Wierson & Forehand (1992)	184	11.0–15.6	Male & Female	Cross-Sectional	Child	Frequency
<u>Puberty meta-analyses</u>						
Anderson, Hetherington, & Clingempeel (1989)	153	9.0–15.5	Male & Female	Cross-Sectional & Longitudinal	Parent, Child, & Observer	Rating
Bulcroft (1991)	157	9th–10th	Male	Longitudinal	Child	Rating
Flannery, Monte-mayor, Eberly, & Torquati (1993)	85	10.0–14.0	Male & Female	Cross-Sectional	Parent & Child	Frequency
Hill & Holmbeck (1987)	200	7th	Male & Female	Cross-Sectional	Parent	Frequency
Holmbeck & Hill (1991)	111	7th	Female	Cross-Sectional	Observer	Frequency
Inoff-Germain et al. (1988)	60	9.0–14.0	Male & Female	Cross-Sectional	Observer	Rating
Montemayor, Eberly, & Flannery (1993)	85	10.8–15.1	Male & Female	Cross-Sectional	Observer	Frequency
Noack (1993)	38	13.5	Male & Female	Cross-Sectional & Longitudinal	Observer	Frequency
Papini et al. (1989)	279	7th–11th	Male & Female	Cross-Sectional	Child	Rating
Papini & Sebbby (1988)	63	13.0	Male & Female	Cross-Sectional	Parent & Child	Rating
Steinberg (1987)	204	10.0–15.0	Male & Female	Cross-Sectional	Parent & Child	Frequency & Rating
Steinberg (1988)	155	11.0–16.0	Male & Female	Longitudinal	Parent & Child	Frequency & Rating
Updegrave (1988)	100	12.0	Female	Cross-Sectional	Parent	Frequency

Note: Frequency = Frequency measure. Rating = Rating scale.

Table 2
Parent-Adolescent Conflict Effect Size Estimates for Samples Included in Age Meta-Analyses

Study	Effect Size Estimates											
	Early and Mid-adolescence				Mid- and Late Adolescence				Early and Late Adolescence			
	<i>n</i>	Total <i>r</i>	Rate <i>r</i>	Affect <i>r</i>	<i>n</i>	Total <i>r</i>	Rate <i>r</i>	Affect <i>r</i>	<i>n</i>	Total <i>r</i>	Rate <i>r</i>	Affect <i>r</i>
Blase (1989)	63	.05	.00	.10	77	.08	.00	.15	52	-.02	.00	-.04
Block (1937)	352	-.56	-.56		440	.33	.33		264	-.82	-.82	
Carlton-Ford & Collins (1988)	40	-.08	-.08		40	.08	.08		40	-.08	-.08	
Connor et al. (1954)					119	.31	.31					
Flannery et al. (1991)	85	.22		.22								
Furman & Buhrmester (1992)	250	-.01	-.01		337	.14	.14		355	-.15	-.15	
Galambos & Almeida (1992)	66	-.09		-.09								
Greene & Grimsley (1990)	72	.13		.13								
Hagan et al. (1992)	138	-.08	-.14	.09								
Inoff-Germain et al. (1988)	60	.00	-.04	.04								
Johnstone (1975)					1,317	-.01	-.01					
Kahlbaugh (1992)	20	.07	.04	.11								
Kahlbaugh et al. (1994)	41	.04	.11	-.04								
Khatri et al. (1993)	171	.29	.29									
Laursen (1993)					685	.00	.00	.00				
Lempers & Clark-Lempers (1992)	799	-.16	-.16		760	.06	.06		619	-.23	-.23	
Noack (1993)					38	.06	.06					
Papini et al. (1989)	193	.00		.00	201	.07		.07	164	-.08		-.08
Rajalu (1991)					365	-.05	-.05					
Schoenleber (1988)	44	-.22	-.22		44	.00	.00		44	-.22	-.22	
Sidhu & Singh (1987)					64	.03	.03					

Study	Effect Size Estimates											
	Early and Mid-adolescence			Mid- and Late Adolescence			Early and Late Adolescence					
	n	Total r	Rate r	Affect r	n	Total r	Rate r	Affect r	n	Total r	Rate r	Affect r
Smetana (1989)	52	-.16	-.16		50	.19	.19		50	-.32	-.32	
Smetana (1991)	180	.07	.00	.15	158	.16	.16	.16	172	-.08	-.15	.00
Smetana & Asquith (1994)	68	.09	.12	.00								
Smetana et al. (1991)	28	.00	.00	.00								
Wiersen et al. (1990)	122	.00	.00	.00								
Wiersen & Forehand (1992)	184	.14		.14								

Note: n = participants included in effect size estimates. r = effect size estimate. Positive r values in contrasts of early adolescence and mid-adolescence, and in contrasts of mid-adolescence and late adolescence indicate greater conflict during mid-adolescence. Positive r values in contrasts of early adolescence and late adolescence indicate greater conflict during late adolescence.

^aThe number of participants reported for conflict rate and conflict affect differed; values reported here are averages.

Table 3
Parent-Adolescent Conflict Effect Size Estimates for Samples Included in Puberty Meta-Analyses

Study	Effect Size Estimates											
	Prepuberty and Mid-puberty			Mid-puberty and Postpuberty			Prepuberty and Postpuberty			Affect <i>r</i>		
	Total <i>r</i>			Total <i>r</i>			Total <i>r</i>			Total <i>r</i>		
	<i>n</i>	Rate <i>r</i>	Affect <i>r</i>	<i>n</i>	Rate <i>r</i>	Affect <i>r</i>	<i>n</i>	Rate <i>r</i>	Affect <i>r</i>	<i>n</i>	Rate <i>r</i>	Affect <i>r</i>
Papini et al. (1989)	131	.04		253	.03		174	.00				.00
Papini & Sebby (1988)	36	-.06		52	.03		38	-.06				-.06
Hill laboratory ^a	167	.05	.05	93	.15	.15	134	-.09	-.09			
Linear change												
Curvilinear change												
Anderson et al. (1989)	153	.06	.02	153	-.02	-.02						
Bulcroft (1991)	157	-.10	-.10									
Flannery et al. (1993)	85	.34		85	.05							.05
Inoff-Germain et al. (1988)	60	-.01	-.09			.06						
Hill laboratory ^a	200	-.03	-.03	200	.06	.06						
Montemayor et al. (1993)	85	.19		85	.00							.00
Noack (1993)	38	.18	.18									
Steinberg laboratory ^a	155	.05	.03	155	.02	.03						.02

Note: *n* = participants included in effect size estimates. *r* = effect size estimate. Positive *r* values in contrasts of prepuberty and mid-puberty, and in contrasts of mid-puberty and postpuberty, indicate greater conflict during mid-puberty. Positive *r* values in contrasts of prepuberty and postpuberty indicate greater conflict during postpuberty. Positive linear *r* values indicate that conflict increases with pubertal maturation. Positive curvilinear *r* values indicate that conflict increases then decreases with pubertal maturation in an inverted U-shaped function.

^aValues represent weighted averages from multiple research reports describing the same sample.

Table 4
Parent-Adolescent Conflict Age and Puberty Meta-analyses: Population Effects

Developmental Contrast	Conflict Rate			Conflict Affect			Total Conflict		
	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity	<i>r</i>	<i>k</i>	<i>N</i>	<i>r</i>	Homogeneity
Age meta-analyses									
Early and mid-adolescence	-.14***	16	2,656	No	.07***	14	1,427	-.09***	21
Mid- and late adolescence	.06***	14	4,494	No	.04	4	1,121	.06***	15
Early and late adolescence	-.34***	8	1,596	No	-.04	3	388	-.31***	9
Puberty meta-analyses									
Pre- and mid-puberty	..	1	..	..	..	2	..	.03	3
Mid- and postpuberty	..	1	..	..	..	2	..	.06	3
Pre- and postpuberty	..	1	..	..	..	2	..	-.04	3
Linear	-.02	6	769	Yes	.15***	5	538	.04	8
Curvilinear	.03	3	514	Yes	.02	3	325	.03	5

Note: *r* = population effect size, *k* = total number of independent samples, *N* = total number of independent participants. Positive *r* values in contrasts of early adolescence and mid-adolescence, and in contrasts of mid-adolescence and late adolescence indicate greater conflict during mid-adolescence. Positive *r* values in contrasts of prepuberty and mid-puberty, and in contrasts of mid-puberty and postpuberty indicate greater conflict during mid-puberty. Positive *r* values in contrasts of early adolescence and late adolescence indicate greater conflict during late adolescence. Positive *r* values in contrasts of prepuberty and postpuberty indicate greater conflict during postpuberty.

***
p < .01;
***
p < .001.

Table 5
Parent-Adolescent Conflict Ace Meta-analyses: Moderator Effects

Developmental Contrast	Conflict Rate				Conflict Affect				Total Conflict			
	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity
<u>Parent-child dyad: mother-son</u>												
Early and mid-adolescence	-.15***	13	1,188	No	.07	9	368	Yes	-.13***	16	1,261	No
Mid- and late adolescence	.19***	8	1,171	No	...	1	...	...	.19**	8	1,171	No
Early and late adolescence	-.43***	6	678	No	...	0	...	...	-.43***	6	678	No
<u>Parent-child dyad: mother-daughter</u>												
Early and mid-adolescence	-.19***	13	1,184	No	.03	9	398	Yes	-.16***	16	1,274	No
Mid- and late adolescence	.08***	10	1,406	Yes	...	1	...	...	.08***	10	1,406	Yes
Early and late adolescence	-.35***	6	694	No	...	0	...	...	-.35***	6	694	No
<u>Parent-child dyad: father-son</u>												
Early and mid-adolescence	-.06*	11	941	No	.09*	8	354	Yes	-.03	14	1,042	No
Mid- and late adolescence	.05*	7	951	Yes	...	1	...	...	.05*	7	951	Yes
Early and late adolescence	-.19***	5	546	Yes	...	0	...	...	-.19***	5	546	Yes
<u>Parent-child dyad: father-daughter</u>												
Early and mid-adolescence	-.06*	11	930	Yes	.06	8	384	Yes	-.03	14	1,052	Yes
Mid- and late adolescence	.08**	8	1,122	Yes	...	1	...	...	.08**	8	1,122	Yes
Early and late adolescence	-.16***	5	562	Yes	...	0	...	...	-.16***	5	562	Yes
<u>Source of data: child reports</u>												
Early and mid-adolescence	-.14***	12	2,064	No	.09**	11	1,000	Yes	-.08***	17	2,664	No
Mid- and late adolescence	.06***	12	4,412	No	.04	4	1,121	Yes	.07***	13	4,613	No
Early and late adolescence	-.34***	7	1,552	No	-.04	3	388	Yes	-.31***	8	1,716	No
<u>Source of data: parent reports</u>												
Early and mid-adolescence	-.07*	10	961	Yes	.05	8	610	Yes	-.05*	12	1,112	Yes
Mid- and late adolescence	.13*	4	292	Yes	...	1	...	...	.13*	4	292	Yes
Early and late adolescence	-.18***	4	306	Yes	...	1	...	...	-.14***	4	306	Yes
<u>Conflict metric: frequency measures</u>												
Early and mid-adolescence	-.37***	5	594	No	.11**	5	491	Yes	-.19***	8	935	No
Mid- and late adolescence	.18***	5	1,002	No	...	0	...	...	.18***	5	1,002	No

Developmental Contrast	Conflict Rate				Conflict Affect				Total Conflict			
	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity	<i>r</i>	<i>k</i>	<i>N</i>	Homogeneity
Early and late adolescence	-.73***	3	354	No	..	0	..	..	-.73***	3	354	No
Conflict metric: rating scales												
Early and mid-adolescence	-.07***	9	2,001	No	.03	6	695	Yes	-.05*	11	2,200	No
Mid- and late adolescence	.03*	9	3,492	Yes	.04	4	1,121	Yes	.04*	10	3,693	Yes
Early and late adolescence	-.19***	5	1,242	Yes	-.04	3	388	Yes	-.17***	6	1,406	Yes

Note: *r* = group effect size, *k* = total number of independent samples, *N* = total number of independent participants. Positive *r* values in contrasts of early adolescence and mid-adolescence, and in contrasts of mid-adolescence and late adolescence, indicate greater conflict during mid-adolescence. Positive *r* values in contrasts of early adolescence and late adolescence indicate greater conflict during late adolescence.

* *p* < .05;
** *p* < .01;
*** *p* < .001.