

Parent-Child Discrepancies in the Assessment of Internalizing/ Externalizing Behavior

Associations With Grade, Sex, and Parenting

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Abstract. This study focused on informant discrepancies in reports on internalizing/externalizing child behavior and associations with parenting dimensions. The study was based on two longitudinal samples followed from Grade 2 to 4 and from Grade 4 to 6. Internalizing/externalizing symptoms were assessed yearly by children's self-reports and parent-proxy reports. Responsiveness and behavioral and psychological control assessed by the children and their parents were included as parenting dimensions. Child reports on symptoms were higher than parent-proxy reports. Regarding internalizing symptoms, the discrepancies decreased with children's age. Relations to parenting were shown mainly for psychological control. If parents perceive themselves as psychologically controlling, the discrepancies are smaller, while discrepancies are larger when children perceive their parents as psychologically controlling. Psychologically controlling parents may have a strong focus on the behavior of their children, leading to a stronger agreement between child reports and parent-proxy reports. Children, however, may report more problem behavior if they feel themselves to be under close observation by their parents.

Key words: cross-informant discrepancies, parenting, internalizing and externalizing behavior, sex, grade

Beurteilerdiskrepanzen bei der Erfassung internalisierenden/externalisierenden Verhaltens: Zusammenhänge zu Klassenstufe, Geschlecht und Erziehungsverhalten

Zusammenfassung. Die Studie untersucht den Zusammenhang zwischen Beurteilungsdiskrepanzen bei internalisierenden/externalisierenden Verhaltensproblemen im Kindes- und Jugendalter und dem Erziehungsverhalten. Sie basiert auf zwei Längsschnittstichproben, die von der zweiten bis zur vierten bzw. von der vierten bis zur sechsten Klasse befragt wurden. In jährlichen Abständen wurden internalisierende und externalisierende Probleme der Kinder sowohl von den Kindern selbst als auch von ihren Eltern eingeschätzt. Darüber hinaus wurde das Elternverhalten (Responsivität, behaviorale und psychologische Kontrolle) aus der Kinder- und der Elternperspektive erhoben. Es zeigte sich, dass sich in den Selbstberichten der Kinder ein höheres Ausmaß an Verhaltensproblemen widerspiegelt als in den Elternberichten. Bei den internalisierenden Problemen zeigte sich eine Abnahme der Diskrepanzen über das Alter hinweg. Beziehungen zwischen Verhaltensproblemen und dem Erziehungsverhalten ergaben sich vor allem in Bezug auf die psychologische Kontrolle. Wenn die Eltern sich als kontrollierend einschätzen, sind die Diskrepanzen geringer, während sie größer sind, wenn die Kinder ihre Eltern als kontrollierend wahrnehmen. Psychologisch kontrollierende Eltern mögen demnach besondere Aufmerksamkeit auf das Verhalten ihrer Kinder richten mit dem Ergebnis geringerer Beurteilungsdiskrepanzen. Kinder wiederum berichten möglicherweise mehr Problemverhalten, wenn sie sich unter strenger elterlicher Beobachtung erleben.

Schlüsselwörter: Beurteilerdiskrepanzen, Erziehungsverhalten, Internalisierendes und externalisierendes Verhalten, Geschlecht, Klassenstufe

Multimethod approaches including different assessment perspectives (e.g., assessments of children and their parents) are often used to gather information about problem behavior in children and adolescents. The problem is, however, that assessments from different perspectives often do not lead to corresponding results (De Los Reyes et al., 2011). As Achenbach, McConaughy, and Howell (1987) showed, the associations between the assessments of different sources were typically small to

moderate, with a mean of $r = .22$ in their comprehensive meta-analysis. The correspondence between self-reports and other assessment sources (e.g., parents) seldom exceeds values beyond 6% in terms of explained variance. This basic result was replicated in several studies focusing on nonclinical as well as clinical samples (Achenbach, Dumenci, & Rescorla, 2002; Duhig, Renk, Epstein, & Phares, 2000; Kolko & Kazdin, 1993; Theunissen et al., 1998; Vierhaus & Lohaus, 2008). A

second basic result replicated in several studies is that children from nonclinical samples report more problem behavior than their parents do, while this relation is reversed in clinical samples (Rey, Schrader, & Morris-Yates, 1992; Seiffge-Krenke, & Kollmar, 1998; Verhulst & van der Ende, 1992; Waters, Stewart-Brown, & Fitzpatrick, 2003; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Although reports of different informants may be useful or even essential, diagnostic assessments become difficult if they have to be based on discrepant information. To understand the meaning of discrepancies between self-reports and the reports of significant others, several studies were conducted to search for associated factors. Two of the most prominent factors studied are child sex and age (or school grade). Reviewing the existing literature, De Los Reyes and Kazdin (2005) state that child sex appears to be unrelated to informant discrepancies (although it may be related in specific populations). Furthermore, the results regarding the relation between child age and informant discrepancies are rather inconsistent, which may at least in part be due to inconsistent measures across relevant studies (De Los Reyes & Kazdin, 2005).

The present longitudinal study focused on perceived parenting as a factor that may be associated with assessment discrepancies between parents and their children. Thus, the study reports on the relation between perspectives of family members on two important and prominent variables in the field of family research (emotional/behavioral problems and parenting). Regarding parenting, the focus was on responsiveness and demandingness, which were assumed to be basic dimensions, initially differentiated by Baumrind (1971) and elaborated by Maccoby and Martin (1983). Parental responsiveness was defined as “the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children’s special needs and demands,” while parental demandingness refers to “the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts, and willingness to confront the child who disobeys” (Baumrind, 1991, pp. 61–62). Parental responsiveness is also referred to as parental warmth or supportiveness, and parental demandingness as behavioral control. Steinberg and others (e.g., Gray & Steinberg, 1999; Steinberg, Darling, & Fletcher, 1995; Steinberg, Mounts, Lamborn, & Dornbusch, 1991) introduced an additional dimension called psychological control versus psychological autonomy granting. They differentiate between psychological control (the relative degree of emotional autonomy that parents allow) and behavioral control (the level of monitoring and limit setting that parents use; Gray & Steinberg, 1999). Effective behavioral control is related to the regulation and supervision of child behavior, whereas psychological control tries to keep the child emotionally

dependent on the parent and thus interferes with the child’s development of autonomy (Pettit, Laird, Dodge, Bates, & Criss, 2001). Both behavioral and psychological control are facets of parental control, but related to different components. This can also be underlined empirically. For example, Barber, Olsen, and Shagle (1994) showed that increased psychological control was more predictive of internalizing behavior (such as loneliness and depression), while poor behavioral control was more closely related to externalizing behaviors (such as alcohol consumption; see also Gray & Steinberg, 1999). As a consequence, the present study differentiated between responsiveness and control as basic parenting dimensions. In addition, behavioral control and psychological control were subdivided as facets of parental control.

This study focused on the relation between perceived parenting dimensions and discrepancies between self-reports and parental reports on internalizing and externalizing child behavior. According to Treutler and Epkins (2003), very few studies have examined whether aspects of the parent–child relationship are related to parent–child assessment discrepancies. For example, low parental acceptance of the child (Kolko & Kazdin, 1993), a low quality of the parent–child relationship as assessed by the child (Treutler & Epkins, 2003), and an insecure (pre-occupied) attachment characterized by inconsistent and intrusive caregiving (Berger, Jodl, Allen, & McElhaney Davidson, 2005) were related to increased parent–child discrepancies.

Although previous studies focused on the relation between parenting and parent–child discrepancies, they did not systematically distinguish between different dimensions of parenting. Thus, the present study extended the focus on perceived responsiveness, as well as on perceived behavioral and psychological control as core dimensions of parenting, and related them to parent–child discrepancies in reports of internalizing and externalizing behavior. Additionally, the study extended the existing research, as it considered both the child’s perspective and the parent’s perspective on dimensions of parenting, which can be assumed being differentially related to the parent–child discrepancies. With reference to Kolko and Kazdin (1993) as well as to Berger et al. (2005), the underlying assumption is that from the child’s perspective, higher levels of control (especially psychological control) are associated with higher levels of informant discrepancies. On the other hand, perceived parental responsiveness can be assumed to be related to lower levels of discrepancies. With regard to the parent’s perspective, the latter assumption is based on the consideration that both responsiveness as well as control are associated with parental attention paid to the child. A warm and responsive parent, for example, is assumed to focus on the psychological needs of the child and should therefore be able to identify internalizing as well as externalizing problems of the child. As a consequence, the parent’s assessments are

assumed to be closely in line with the child's assessments. Further, psychological and behavioral control are also expected to be associated with a focus on the child's behavior. As a consequence, it is assumed that parents reporting responsiveness and control get more information about the child's behavior and are thus in closer correspondence with the child's self-report.

This study was based on longitudinal data on internalizing and externalizing child behavior based on self-reports and parental reports. Because the study used nonclinical samples, based on the existing literature it was hypothesized that children would report more internalizing and externalizing behavior than their parents (Hypothesis 1). Possible age and sex effects were addressed, although it was difficult to outline a clear expectation, given the inconsistent pattern of previous results regarding this issue (see De Los Reyes & Kazdin, 2005). With reference to the few existing studies addressing this topic, the main hypothesis is related to the expectation that the parenting dimensions (responsiveness and control) show differential associations with discrepancies between informant reports, dependent on the informants' perspective on parenting (Hypothesis 2): From the child's perspective, higher levels of control are associated with higher levels of informant discrepancies, while from the parents' perspective, parental responsiveness as well as parental control are assumed to be related to lower levels of discrepancies.

Method

Participants

Two samples of children participated in this study. Sample 1 consisted of 432 second graders (202 girls and 230 boys) with a mean age of 7.9 years ($SD = 0.52$). This sample was followed longitudinally and started when the children were second graders. The children were re-assessed 1 and 2 years later, with 95.1 % still participating in the assessment after 1 year (in Grade 3) and 88.4 % after 2 years (in Grade 4). Sample 2 was also traced longitudinally and consisted of 366 fourth graders (202 girls and 164 boys) with a mean age of 10.1 years ($SD = 0.60$). The initial assessments took place when the children were in Grade 4, and the assessments were repeated when the children were in Grades 5 and 6 (with 96.7 % and 92.3 % of the original sample still participating, respectively). It should be noted that there was no systematic dropout, as there were no differences with regard to the initial assessments of the relevant variables (internalizing/externalizing problems and the parenting dimensions) between children who had dropped out and those who participated at all time points. The children of both samples were from 15 German elementary schools. The schools included covered the whole range of performance levels in elementary school children and can thus be seen as representative samples of

children of these age groups. In both samples, the participation of the children in the study required the permission of their parents. All children were Whites from middle-class socioeconomic backgrounds. The data collections for both longitudinal samples were conducted between 2003 and 2005. They were originally used in publications on school transition (Lohaus, Elben, Ball, & Klein-Heßling, 2004), on the development of health-related behavior (Klein-Heßling, Lohaus, & Ball, 2005), and on coping (Vierhaus, Lohaus, & Ball, 2007). As the data collection included assessments of internalizing and externalizing behavior and of parenting, it was possible to use the data for the research questions addressed here.

Assessments

The Youth Self-Report (YSR) questionnaire was used (Achenbach, 1991a) to assess emotional, somatic, and behavioral problems at all measurements in Grades 2 to 6. Although this instrument was originally designed and evaluated for adolescents (from age 11 to 18), previous studies have demonstrated its usability in younger age groups (e.g., Ebesutani, Bernstein, Martinez, Chorpita, & Weisz, 2011; Vierhaus, Lohaus, & Shah, 2010). However, as in Vierhaus et al. (2010), items that were deemed to be inappropriate in content for elementary school children (e.g., "I think about sex too much") were excluded. The modification resulted in an instrument comprising 26 items for internalizing and 22 items for externalizing behavior (in comparison with 31 and 30 items in the standard YSR). The responses on the items were summed up to construct scores for internalizing and externalizing behavior. The internal consistencies ranged from $\alpha = .83$ to $\alpha = .86$ for the internalizing scale and from $\alpha = .78$ to $\alpha = .85$ for the externalizing scale, depending on grade.

The Child Behavior Checklist (CBCL) was used to derive parental report ratings regarding problematic child behavior. In this instrument the same 48 items of the YSR were presented from the parents' perspective. The corresponding 26/22 items were summed up for the internalizing/externalizing scales. The good reliabilities of the scales (Achenbach, 1991b) were confirmed by the present study: Internal consistencies ranged from $\alpha = .82$ to $\alpha = .87$ for the internalizing scale and from $\alpha = .86$ to $\alpha = .88$ for the externalizing scale, depending on grade. As in the YSR, the reduction of items in the present study did not lead to systematic changes of the internal consistencies (in comparison with Achenbach, 1991b).

An instrument by Reitzle, Winkler-Metzke, and Steinhausen (2001) was used to assess the perceived parenting behavior, based on the framework by Baumrind (1971) and its elaboration by Maccoby and Martin (1983). The questionnaire consists of 32 items with 4-point rating scales that represent different dimensions of parenting related to (a) responsiveness (12 items – e.g., "My mother/

father commends me when I have done well”), (b) behavioral control (6 items – e.g., “My mother/father provides clear rules to show how I have to behave”), and (c) psychological control (9 items – e.g., “My mother/father is constantly trying to change some of my ways”). The children were asked to assess the items for both parents separately. The internal consistencies for the scale “responsiveness” ranged from $\alpha = .89$ to $\alpha = .92$, from $\alpha = .63$ to $\alpha = .74$ for the scale “behavioral control” and from $\alpha = .78$ to $\alpha = .82$ for the scale “psychological control” (depending on sample and parent). All internal consistencies proved to be of comparable sizes to those reported by Reitzle et al. (2001). The perceived parenting behavior was assessed in Grade 4 (Sample 1) and Grade 6 (Sample 2). These time points were chosen because the instrument had not yet been used with children younger than 10 years.

The items of the parenting questionnaire were also given to the parents to include their perspective on their parenting behavior. The items were identical except for the fact that they were reformulated to represent the parents’ perspective. The response format was also identical. The respective internal consistencies for the scale “responsiveness” were $\alpha = .86$ (child in Grade 4) and $\alpha = .87$ (child in Grade 6); for the scale “behavioral control,” $\alpha = .64$ and to $\alpha = .61$; and for the scale “psychological control,” $\alpha = .73$ and $\alpha = .79$, respectively. The parents reported on their parenting behavior when their children were in Grade 4 (Sample 1) and Grade 6 (Sample 2).

Procedures

The data were collected by 11 trained graduate students. The children and adolescents received their questionnaires during school hours and completed them in small groups of three to five participants supported by one of the graduate students in case they had problems understanding the items. The children and adolescents needed about 30 to 35 min to complete this questionnaire. In addition, the children/adolescents received enveloped questionnaires for their parents. The completed and sealed questionnaires had to be returned to the schools. Complete data from parents and their children were available from 328 parent–child dyads in Sample 1 (76 % of the original sample) and from 251 dyads in Sample 2 (69 % of the original sample). In Sample 1, 79 % of the parental questionnaires were completed by the mothers, 6.5 % by the fathers, 13.7 % by both parents jointly, and 0.7 % by other relatives. In Sample 2, 80.4 % of the questionnaires were completed by the mothers and 6.7 % by the fathers, and the respective values for both parents and other relatives were 12.3 % and 0.7 %, respectively. The data from the questionnaire completed by the mothers, the fathers, and both parents were combined in the following analyses, because the data subsets for the assessments of

fathers only, of both parents jointly, and of other relatives were too small to allow separate or comparative analyses. In the following analyses, there may be slight variations of the sample sizes because of missing data.

Statistical analyses

The analyses of discrepancies between the informants (children and parents) were based on analysis of variance and regression analysis. In the case of the analysis of variance, the assessments of the children and their parents regarding internalizing and externalizing behavior (raw scores) were treated as repeated measurements (within-subjects factors). Significant interactions with grade or sex indicated effects of these factors on informant discrepancies. Regression analyses were calculated to indicate associations with the parenting dimensions. According to De Los Reyes and Kazdin (2004), standardized discrepancy scores were used as dependent variables. These were calculated by first *z*-standardizing each informant’s ratings and afterwards subtracting the parent’s *z*-scores from the children’s *z*-scores (for the internalizing and externalizing scores separately).

Results

Preliminary Analysis: Intercorrelations of the Included Variables

Table 1 shows the intercorrelations between the parenting scales in Samples 1 and 2. In general, there was a rather consistent pattern across the samples and also across the informants (children versus parents). In all cases, there was a negative correlation between responsiveness and psychological control, while the correlation between responsiveness and behavioral control was positive. Moreover, there were consistently positive correlations between both control scales. All correlations were, however, small to medium size, which underlines the empirical independence of the three parenting scales.

Table 2 shows the intercorrelations between the parenting scales and the scales related to internalizing and externalizing behavior (based on YSR and CBCL). As can be seen from Table 2, there were negative correlations between responsiveness and both internalizing and externalizing behavior (especially within informants). Thus, increased responsiveness was associated with less internalizing and externalizing behavior. On the other hand, psychological control was positively related to internalizing and externalizing behavior. The lowest and most inconsistent correlations could be found for behavioral control. The correlations provided in Table 2 are related to the assessments in Grade 4 (Sample 1) and Grade 6 (Sample 2), because the parenting assessments were only

Table 1. Intercorrelations of the parenting scales in Samples 1 and Sample 2

		Sample 1		Sample 2	
		<i>Child's view on</i>		<i>Child's view on</i>	
		<i>Behavioral control</i>	<i>Psychological control</i>	<i>Responsiveness</i>	<i>Psychological control</i>
Child's view on	Maternal responsiveness	.12*	-.36**	.11*	-.40**
	Maternal behavioral control		.35**		.34**
Child's view on	Paternal responsiveness	.27**	-.31**	.28**	-.29**
	Paternal behavioral control		.35**		.33**
		<i>Parent's view on</i>		<i>Parent's view on</i>	
		<i>Behavioral control</i>	<i>Psychological control</i>	<i>Responsiveness</i>	<i>Psychological control</i>
Parent's view on	Responsiveness	.20**	-.23**	.10	-.43**
	Behavioral control		.18**		.29**

Note: * $p < .05$; ** $p < .01$.

Table 2. Correlations between the parenting and YSR/CBCL scales in Samples 1 and 2

		Internalizing behavior (YSR)	Externalizing behavior (YSR)	Internalizing behavior (CBCL)	Externalizing behavior (CBCL)
<i>Sample 1</i>					
Child's view on maternal parenting	Responsiveness	-.21**	-.19**	-.09	-.13*
	Behavioral control	.14**	.02	.03	-.05
	Psychological control	.41**	.33**	.11*	.15**
Child's view on paternal parenting	Responsiveness	-.21**	-.12*	-.01	-.02
	Behavioral control	.08	.00	.03	-.06
	Psychological control	.35**	.25**	.07	.08
Parent's view on their parenting	Responsiveness	.07	-.04	-.19**	-.21**
	Behavioral control	.02	.03	.01	.01
	Psychological control	.12*	.09	.28**	.39**
<i>Sample 2</i>					
Child's view on maternal parenting	Responsiveness	-.16**	-.29**	-.07	-.24**
	Behavioral control	.20**	.14*	.13*	.14*
	Psychological control	.37**	.42**	.19**	.25**
Child's view on paternal parenting	Responsiveness	-.21**	-.18**	-.06	-.10
	Behavioral control	.14*	.03	.07	-.02
	Psychological control	.35**	.35**	.16**	.22**
Parent's view on their parenting	Responsiveness	-.08	-.14*	-.20**	-.26**
	Behavioral control	.15*	.18**	.12*	.17**
	Psychological control	.13*	.18**	.27**	.37**

Note: CBCL=Child Behavior Checklist; YSR=Youth Self-Report questionnaire. * $p < .05$; ** $p < .01$.

available for these assessments. The longitudinal relations (e.g., assessments of internalizing and externalizing behavior in Grades 2 and 3 and parenting in Grade 4) were typically smaller.

The correlations between the assessments of the children and their parents are shown in Table 3. As can be seen from Table 3, the sizes of the correlations typically

increased with grade. For example, the correlations between the assessments of internalizing behavior increased from .11 in Grade 2, to .40 in Grade 6. The same pattern could be found for externalizing behavior, with an increase from .19 (Grade 2) to .40 (Grade 6). The correlations between the parenting assessments show a similar pattern, with increases from Grade 4 to Grade 6.

Table 3. Correlations between the scales as assessed by the children and their parents in Samples 1 and 2

	Sample 1	Sample 2
<i>Correlation between child and parental view</i>		
	<i>Grade 2</i>	<i>Grade 4</i>
Internalizing behavior	.11*	.27**
Externalizing behavior	.19*	.26**
	<i>Grade 3</i>	<i>Grade 5</i>
Internalizing behavior	.17**	.37**
Externalizing behavior	.30**	.39**
	<i>Grade 4</i>	<i>Grade 6</i>
Internalizing behavior	.17**	.40**
Externalizing behavior	.32**	.40**
Maternal responsiveness	.13*	.38**
Paternal responsiveness	.09	.16**
Maternal behavioral control	.14*	.27**
Paternal behavioral control	.10	.21**
Maternal psychological control	.06	.28**
Paternal psychological control	.05	.24**

Note: * $p < .05$; ** $p < .01$.

The following sections focus on the hypotheses outlined at the outset. Hypothesis 1 expected children to report more internalizing and externalizing behavior than their parents. Moreover, effects of grade and sex are addressed additionally in this section.

Hypothesis 1: Discrepancies Between Informants (Parents Versus Children)

Analysis of variance was calculated to analyze the discrepancies between the reports of the children and their parents. Four analyses of variance were calculated for internalizing and externalizing behavior in Samples 1 and 2. In addition, grade and sex were included as independent variables. Source of information (children versus parents) and grade were used as within-subject factors, and sex as between-subject factor. As a result of the number of tests, alpha was set to $\alpha < .01$ as critical value.

The results revealed large effects for the source of information, $F_{(1,326)} = 252.71$, $p < .001$, $\eta^2 = .44$, for internalizing behavior in Sample 1; $F_{(1,326)} = 19.21$, $p < .001$, $\eta^2 = .06$, for externalizing behavior in Sample 1; $F_{(1,248)} = 115.53$, $p < .001$, $\eta^2 = .32$, for internalizing behavior in Sample 2; and $F_{(1,248)} = 31.52$, $p < .001$, $\eta^2 = .11$, for externalizing behavior in Sample 2. In all cases, the scores of the children were larger in comparison with those of the parents (in internalizing behavior even more than in externalizing behavior). Figure 1 displays the discrepancies between the reports of children and their parents on internalizing and externalizing behavior. In addition, Figure 1 indicates changes across grades, typically with decreasing scores. Analysis of variance showed main effects for grade, with $F_{(2,325)} = 39.21$, $p < .001$, $\eta^2 = .19$,

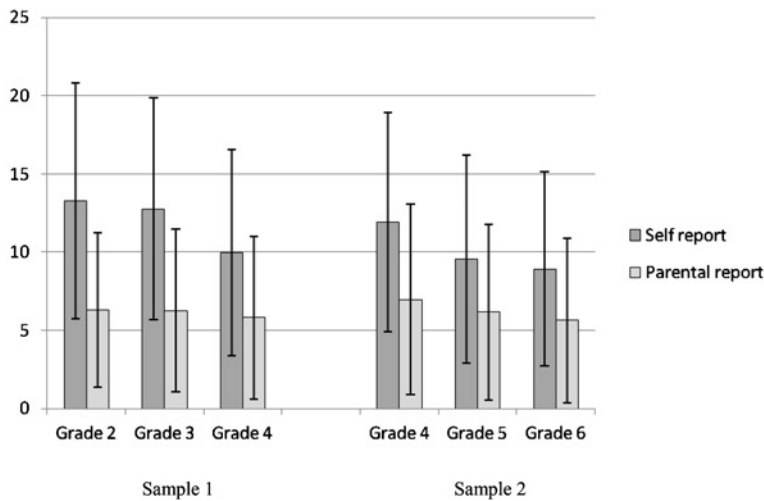
for internalizing behavior in Sample 1; $F_{(2,325)} = 19.93$, $p < .001$, $\eta^2 = .11$, for externalizing behavior in Sample 1; $F_{(2,247)} = 25.52$, $p < .001$, $\eta^2 = .17$, for internalizing behavior in Sample 2; and $F_{(2,247)} = 8.66$, $p < .001$, $\eta^2 = .07$, for externalizing behavior in Sample 2.

For sex, there were no effects on internalizing behavior, but main effects for both externalizing behavior scores in Samples 1 and 2, indicating larger scores in boys, $F_{(1,326)} = 52.68$, $p < .001$, $\eta^2 = .14$, for Sample 1; and $F_{(1,248)} = 16.12$, $p < .001$, $\eta^2 = .06$, for Sample 2. The most interesting question was, however, whether the informant discrepancies (children versus parents) interacted with grade or sex. This was the case for internalizing behavior in Samples 1 and 2, which showed an interaction with grade, $F_{(2,325)} = 28.12$, $p < .001$, $\eta^2 = .15$, in Sample 1; and $F_{(2,247)} = 5.19$, $p < .01$, $\eta^2 = .04$, in Sample 2. In both cases, the discrepancies decreased across grades (cf. Figure 1a). There were no more meaningful interactions with grade or sex. Thus, the results confirmed Hypothesis 1, which expected informant discrepancies with higher scores in self-reports in comparison with parental reports. For internalizing behavior, the discrepancies decreased across grades.

Hypothesis 2: Relationships to Parenting

In Hypothesis 2, associations between parenting and informant discrepancies (children versus parents) were expected. Hierarchical regression analyses were calculated. In the first step of each regression, age and sex were entered into the model as control variables. In the next steps, the parenting dimensions were entered stepwise as predictor variables. Internalizing discrepancy scores in Grade 4 (Sample 1) and Grade 6 (Sample 2) as well as

A. Internalizing behavior



B. Externalizing behavior

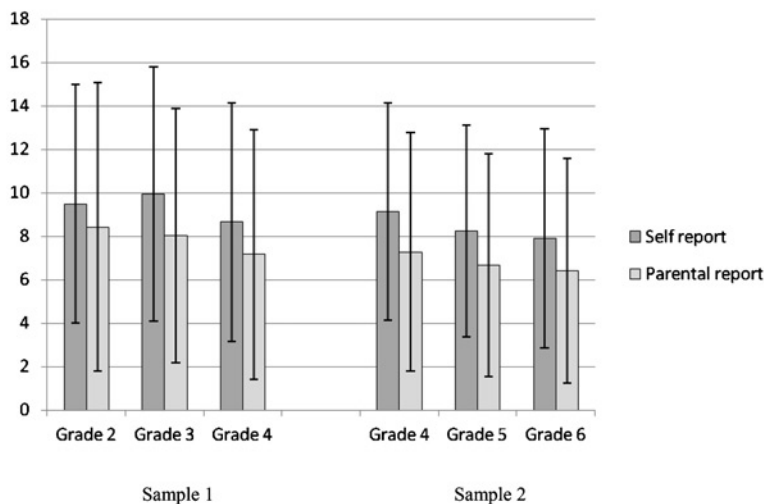


Figure 1. Discrepancies between self-reports and parental reports about children's internalizing and externalizing behavior in different grades from two longitudinal samples.

externalizing discrepancy scores in Grade 4 (Sample 1) and Grade 6 (Sample 2) were used as criterion variables. The calculations were restricted to Grades 4 and 6 because parenting scores were not available for the previous grades. Thus, four regression analyses were calculated.

The only parenting variable that showed significant relationships to the discrepancy scores was psychological control. However, this relationship consistently depended on the perspective on parents' psychological control. There were positive relationships between maternal psychological control as assessed by the child and the discrepancies scores, while there were negative relationships between psychological control as assessed by the parents and the discrepancy scores. For the child assessments, the respective β -values for internalizing behavior were $\beta = .35$, $p < .01$ (Sample 1) and $\beta = .21$, $p < .01$ (Sample 2); for externalizing behavior, $\beta = .25$, $p < .01$

(Sample 1) and $\beta = .23$, $p < .01$ (Sample 2). For the parental assessments, the values for internalizing behavior were $\beta = -.18$, $p < .01$ (Sample 1) and $\beta = -.20$, $p < .01$ (Sample 2); for externalizing behavior, $\beta = -.28$, $p < .01$ (Sample 1) and $\beta = -.25$, $p < .01$ (Sample 2). Thus, the pattern of coefficients was independent of the samples as well as of problem type (internalizing and externalizing behavior). There were no significant relationships to paternal psychological control or to the other parenting dimensions (responsiveness and behavioral control), so they were not entered into the regression models ($p < .01$ was the cutoff point for being included as predictor).

Discussion

In line with Hypothesis 1, the results showed large discrepancies between the assessments of children and

their parents, with regard to internalizing as well as externalizing behavior. In both cases, the self-reported behavior problems exceeded the reports of their parents. This pattern of results can be expected in a nonclinical sample, as several previous studies have shown, and it is replicated in this study. Regarding the effects of grade, the results were in line with a study by Grills and Ollendick (2003), who found an increase of agreement between child and parental assessments, from childhood to adolescence. In the present study, the increasing agreement was reflected by increasing correlations between child and parental assessments as well as by a decrease of informant discrepancies across grades. The latter effect was, however, restricted to internalizing behavior. These results deviate from those of Achenbach et al. (1987), which showed a stronger association between child and parental reports for 6- to 11-year-olds in comparison with 12- to 19-year-olds. The participants in the second sample of the study by Achenbach et al. (1987) were, however, much older than the children at Grade 6 in our study, with a mean age of about 12 years. Thus, it may be possible that the discrepancies increase again in late adolescence. This may be explained by the search for autonomy typically shown by adolescents and by the increasing significance of peer relations. As a consequence, there is less exchange about psychological and behavioral problems between adolescents and their parents and thus less agreement between self-reports and parental reports. Taking these results together, there may be a curvilinear development of the parent-child assessment discrepancies from childhood to late adolescence.

There may be several explanations for an increase of the informant agreement from childhood to early adolescence. The first explanation could be that self-reflection increases during adolescence, promoting a better understanding of one's own personality. As a consequence, the reports of adolescents are more in line with the reports of their parents. A second explanation focuses on the parents, who may gain increasing knowledge about their children during development and thus may be in better agreement with the self-conceptions of their children. A third explanation focuses on language development. In younger age groups, children may not have a full understanding of the meaning of the terms used to describe behavior categories. For example, if they are asked how often they have felt exhausted during recent weeks, they may associate this term mainly with physical exhaustion (as a consequence of sports activities), while their parents may use it mainly for psychological exhaustion. During development, the use of psychological terms may increasingly coincide between children and their parents. This may also reduce the discrepancies between children and their parents. It was not possible to disentangle these explanations in the present study, and all of these explanations may contribute to an increase of the agreement from childhood to early adolescence.

In contrast to the grade effects, there were no sex effects with regard to informant discrepancies. Although boys showed more externalizing behavior than girls, this was not associated with differential effects with regard to informant discrepancies. This is in line with the comprehensive review of De Los Reyes and Kazdin (2005), which showed rather inconsistent results with regard to sex effects across different studies. As Figure 1 shows, the discrepancies were in general smaller in externalizing than in internalizing behavior, which may be explained by the observability of externalized behavior. The observability was, however, similar for boys and girls, which may have led to the consequence that there were no sex differences with regard to informant discrepancies.

With regard to Hypothesis 2, the results showed an interesting pattern of associations between informant discrepancies and the parenting dimensions. All significant effects were related to psychological control. The assessments of psychological control by the children and their parents showed, however, a contrasting pattern to the discrepancy scores: The associations were positive for maternal psychological control from the child's perspective, but negative for psychological control from the parents' perspective. The discrepancies were larger if children had experienced high psychological control, but they were smaller if the parents perceived high psychological control. A possible reason for this contrasting pattern of relationships may be seen in a different interpretation of psychological control by the parents and their children. This, however, would imply that the pattern of correlations to the other parenting dimensions would be different for parents and their children. As Table 1 shows, this was not the case. The patterns of relationships between the parenting dimensions were rather similar for parents and children. Thus, this interpretation is not in line with the general pattern of results.

Another interpretation could be that parents who see themselves as psychologically controlling may pay specific attention to the behavior of their children. Thus, the level of parental reported problems increases and parents' perceptions are – as a result – more in agreement with the self-perceptions of their children. This interpretation would be in line with the expectations outlined above that, with regard to the parent's perspective, responsiveness as well as control may be associated with increased parental attention paid to the child. If children, on the other hand, perceive high psychological control, they seem to report more problems than in the case of low control. A possible reason could be that children who experience high psychological control may feel themselves to be under close observation by their parents. This may lead to the effect that they report more problems than are reported by their parents. It should be noted that psychological control as assessed by the parents and maternal psychological control as assessed by their children correlated at a level of $r = .05$ (Sample 1) and $r = .28$ (Sample 2), which means that high psychological

control experienced by the children may not have coincided with the perceptions of the parents. As a consequence, the perspective taken may make the difference, and perceived psychological control may reduce informant discrepancies if it is based on the perspective of parents, but it may enlarge informant discrepancies if it is assessed by the children. In general, this effect could be observed for externalizing as well as internalizing problems.

It should be noted that only perceived maternal control, and not paternal control, was related to informant discrepancies. The reason may be that the mother may still be the person who spends the most time with her children. Thus, the children may feel themselves to be more under maternal than paternal control. This is indeed underlined by comparisons of the means for maternal and paternal control, which were 16.9 ($SD=5.3$) and 15.6 ($SD=5.0$) in Sample 1 ($T=4.33$, $df=326$, $p<.001$) and 17.0 ($SD=4.9$) and 16.0 ($SD=4.8$) in Sample 2 ($T=5.92$, $df=384$, $p<.001$). These comparisons underline the fact that an effect of psychological control was more likely to occur for maternal than paternal control.

The associations with informant discrepancies were, however, restricted to psychological control and could not be observed for the other parenting dimensions (responsiveness and behavioral control). The reason could be that psychological control is a kind of control that tries to keep the child emotionally dependent on the parent (Pettit et al., 2001). This may imply that mothers pay more attention to the somatic and psychological condition of their children. It may also imply that children who experience maternal control expect to be under the close supervision of their mothers and that they thus report increased levels of symptoms. This effect may not arise for the other parenting dimensions, because they do not impede the development of autonomy and self-direction (Pettit et al., 2001). The development of autonomy, on the other hand, may be associated with increasing discrepancies between the perspectives of mothers and their children.

A shortcoming of this study can be seen in the small sample of questionnaires completed by fathers and by both parents. The problem is that the main caregiver is in many cases the mother, and that fathers often do not feel responsible or competent enough to concern themselves with the assessments. On the other hand, there were no significant differences regarding informant discrepancies between mothers and fathers, which may justify combining the groups. A second shortcoming may be seen in the fact that parenting data were only available for the last longitudinal assessment. As a consequence, it is not possible to analyze causal influences on intraindividual developments, but it is nevertheless possible to identify associations of parenting dimensions with informant discrepancies. A third shortcoming is related to the exclusive use of the subjective perspectives of children and their parents. Thus, it is difficult to evaluate the validity of the children's and

their parents' assessments. This would require independent data (e.g., observational data) to be used as external criteria for the evaluation of the assessments. Although it may be interesting to identify the validities of the assessments, it should nevertheless be underlined that the subjective perceptions are mainly important for the actual behavior of children and their parents.

Although the results may differ in clinical samples, this study replicated the finding that higher rates of internalizing and externalizing behavior are reported by children in comparison with their parents. The discrepancies decrease, however, during development (especially in the case of internalizing behavior). Moreover, the discrepancies show relations to the kind of parenting: In particular, parental control seems to be associated with discrepancies, although the pattern is different if parental control is perceived by the child or assessed by the parents. As a consequence, the degree of psychological control may be taken into account in the evaluation of informant discrepancies.

References

- Achenbach, T. M. (1991a). *Manual for the Youth Self-Report and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M. (1991b). *Manual for the Child Behavior Checklist / 4-18 and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M., Dumenci, L., & Rescorla, L. A. (2002). Ten-year comparisons of problems and competencies for national samples of youth: Self, parent, and teacher reports. *Journal of Emotional and Behavioral Disorders*, 10, 194-203. doi:10.1177/10634266020100040101
- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of crossinformant correlations for situational specificity. *Psychological Bulletin*, 101, 213-232. doi:10.1037/0033-2909.101.2.213
- Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development*, 65, 1120-1136. doi:10.1111/j.1467-8624.1994.tb00807.x
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monograph*, 4(1, Pt. 2), 1-103. doi:10.1037/h0030372
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *Journal of Early Adolescence*, 11, 56-95. doi:10.1177/0272431691111004
- Berger, L. E., Jodl, K. M., Allen, J. P., & McElhaney Davidson, B. (2005). When adolescents disagree with others about their symptoms: Differences in attachment organization as an explanation of discrepancies between adolescent-, parent-, and peer-reports of behavior problems. *Development and Psychopathology*, 17, 509-528. doi:10.1017/S0954579405050248
- De Los Reyes, A., & Kazdin, A. E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment*, 16, 330-334.

- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin*, 131, 483–509. doi:10.1037/0033-2909.131.4.483
- De Los Reyes, A., Youngstrom, E. A., Pabón, S. C., Youngstrom, J. K., Feeny, N. C., & Findling, R. L. (2011). Internal consistency and associated characteristics of informant discrepancies in clinic referred youths age 11 to 17 years. *Journal of Clinical Child & Adolescent Psychology*, 40, 36–53. doi:10.1080/15374416.2011.533402
- Duhig, A. M., Renk, K., Epstein, M. K., & Phares, V. (2000). Interparental agreement on internalizing, externalizing, and total behavior problems: A meta-analysis. *Clinical Psychology: Science and Practice*, 7, 435–453. doi:10.1093/clipsy.7.4.435
- Ebesutani, C., Bernstein, A., Martinez, J. I., Chorpita, B. F., & Weisz, J. R. (2011). The Youth Self Report: Applicability and validity across younger and older youths. *Journal of Clinical Child & Adolescent Psychology*, 40, 338–346.
- Gray, M. R., & Steinberg, L. (1999). Unpacking authoritative parenting: Reassessing a multidimensional construct. *Journal of Marriage and Family*, 61, 574–587.
- Grills, A. E., & Ollendick, T. H. (2003). Multiple informant agreement and the anxiety disorders interview schedule for parents and children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 30–40. doi:10.1097/00004583-200301000-00008
- Klein-Heßling, J., Lohaus, A., & Ball, J. (2005). Psychological predictors of health-related behavior in children. *Psychology, Health and Medicine*, 10, 31–43. doi:10.1080/13548500512331315343
- Kolko, D. J., & Kazdin, A. E. (1993). Emotional/behavioral problems in clinic and nonclinic children: Correspondence among child, parent, and teacher reports. *Journal of Child Psychology and Psychiatry*, 34, 991–1006. doi:10.1111/j.1469-7610.1993.tb01103.x
- Lohaus, A., Elben, C. E., Ball, J., & Klein-Heßling, J. (2004). School transition from elementary to secondary school: Changes in psychological adjustment. *Educational Psychology*, 24, 161–173. doi:10.1080/0144341032000160128
- Maccoby, E., & Martin, J. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (pp. 1–101). New York: Wiley.
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring. *Child Development*, 72, 583–598. doi:10.1111/1467-8624.00298
- Reitzle, M., Winkler-Metzke, C., & Steinhausen, H. C. (2001). Eltern und Kinder: Der Zürcher Kurzfragebogen zum Erziehungsverhalten (ZKE) [Parents and children: the Zurich Brief Questionnaire for the Assessment of Parental Behaviors]. *Diagnostica*, 47, 196–207. doi:10.1026/0012-1924.47.4.196
- Rey, J. M., Schrader, E., & Morris-Yates, A. (1992). Parent-child agreement on children's behaviors reported by the child behaviour checklist (CBCL). *Journal of Adolescence*, 15, 219–230. doi:10.1016/0140-1971(92)90026-2
- Seiffge-Krenke, I., & Kollmar, F. (1998). Discrepancies between mothers' and fathers' perceptions of sons' and daughters' problem behavior: A longitudinal analysis of parent-adolescent agreement on internalising and externalising problem behavior. *Journal of Child Psychology and Psychiatry*, 39, 687–697. doi:10.1111/1469-7610.00368
- Steinberg, L., Darling, N., & Fletcher, A. C. (1995). Authoritative parenting and adolescent adjustment: An ecological journey. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 423–466). Washington, DC: American Psychological Association.
- Steinberg, L., Mounts, N. S., Lamborn, S. D., & Dornbusch, S. M. (1991). Authoritative parenting and adolescent adjustment across varied ecological niches. *Journal of Research on Adolescence*, 1, 19–36.
- Theunissen, N. C. M., Vogels, T. G. C., Koopman, H. M., Verrips, G. H. W., Zwinderman, K. A. H., Verloove-Vanhorick, S. P., & Wit, J. M. (1998). The proxy problem: Child report versus parent report in health-related quality of life research. *Quality of Life Research*, 7, 387–397. doi:10.1023/A:1008801802877
- Treutler, C. M., & Epkins, C. C. (2003). Are discrepancies among child, mother, and father reports on children's behavior related to parents' psychological symptoms and aspects of parent-child relationships? *Journal of Abnormal Child Psychology*, 31, 13–27. doi:10.1023/A:1021765114434
- Verhulst, F. C., & van der Ende, J. (1992). Agreement between parents' reports and adolescents' self-reports of problem behavior. *Journal of Child Psychology & Psychiatry*, 33, 1011–1023. doi:10.1111/j.1469-7610.1992.tb00922.x
- Vierhaus, M., & Lohaus, A. (2008). Children and parents as informants of emotional and behavioral problems predicting adolescents' health risk behavior: A longitudinal cross-informant study. *Journal of Youth and Adolescence*, 37, 211–224. doi:10.1007/s10964-007-9193-3
- Vierhaus, M., Lohaus, A., & Ball, J. (2007). Developmental changes in coping: Situational and methodological influences. *Anxiety, Stress and Coping*, 20, 267–282. doi:10.1080/10615800701330242
- Vierhaus, M., Lohaus, A., & Shah, I. (2010). Internalizing behavior during the transition from childhood to adolescence: Separating age from retest effects. *European Journal of Psychological Assessment*, 26, 187–193. doi:10.1027/1015-5759/a000025
- Waters, E., Stewart-Brown, S., & Fitzpatrick, R. (2003). Agreement between adolescent self-report and parent reports of health and well-being: Results of an epidemiological study. *Child: Care, Health & Development*, 29, 501–509. doi:10.1046/j.1365-2214.2003.00370.x
- Youngstrom, E., Loeber, R., & Stouthamer-Loeber, M. (2000). Patterns and correlates of agreement between parent, teacher, and male adolescent ratings of externalizing and internalizing problems. *Journal of Consulting and Clinical Psychology*, 68, 1038–1050. doi:10.1037/0022-006X.68.6.1038

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