33 Method effects in survey questions about peer victimization

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Introduction

Much empirical research in the social sciences relies on survey data. What respondents report to the interviewer, on paper, or on their computer enters the researcher's database as 'facts'. What is often forgotten is that respondents' accounts have biases that need attention when translating findings into real-world phenomena. In victimization research, an example that showed how surveys can provide problematic results was provided by Elffers & Averdijk (Elffers & Averdijk, 2007; Averdijk & Elffers, 2012). They compared survey and police data and found that of all victims who said that they reported a crime to the police, only 35% could be traced back to the police registration within the reference period.

Standard criminological research that uses victimization surveys usually focuses on individuals above approximately 12 years old, because this is when respondents are considered old enough to provide reliable accounts. But there is also a large literature that focuses on the victimization of younger children, namely in the field of child development. The types of victimization considered here are not always crimes, either because they are not illegal everywhere (for example, bullying among school children) or because the perpetrators have not yet reached the age of criminal responsibility. However, in the framework of a 'developmental victimology', these forms of victimization can be seen as early manifestations of a longer-term pattern of victimization. In this paper, we considered one of the most prevalent forms of childhood victimization, namely victimization by peers.

Although methodological issues in victimization surveys have received a fair amount of attention in research with adults or adolescents, this is much less the case in studies with children. This is surprising given the specific challenges of the latter field. Young children may not have the cognitive capacities to provide reliable and valid survey answers. Some researchers have therefore relied on parents', teachers', or peers' accounts. However, few studies have assessed to what extent different informants provide similar answers. There is also little knowledge about other methodological issues,

including the extent to which interviewers and interview situations influence victimization rates. In this paper, we investigated four methodological issues, namely whether the reporting of peer victimization differed by (1) who asks the question, (2) who answers the question, (3) how often the question is asked, and (4) where the question is asked. Each of these issues does not receive the same amount of attention in the following, because our data contain more information on some than others.

Data

The data came from the Zurich Project on the Social Development of Children and Youths (Eisner & Ribeaud, 2005). Table 33.1 displays information for the first seven waves. Data were collected from the child, the teacher, and the parent. The initial sample consisted of 1,675 7-year-olds; the response rate at T1 was 81% for the children and teachers and 74% for the parents. From T1 through T3, the children were interviewed in person; the subsequent instruments were paper-and-pencil. The teachers received a mail survey. The parents were interviewed in person from T1 through T4.2. Peer victimization was assessed through the children and the teachers. The

Table 33.1 Data overview across time-points

	T1	T2	T3	T4.1	T4.2	T4.3	T5
Child age*	7.3	8.1	9.1	10.7	11.3	12.6	13.4
Child-reported victimization		×			×		×
Teacher-reported victimization	×	×	×	×	×	×	×
Retention rate** children		.97	.96		.83		.85
Retention rate teachers		.96	.94	.92	.77	.71	.79
Retention rate parents		.95	.95		.86		

* Average across child-, teacher-, and parent-assessment
** Proportion of respondents from T1

children received the peer victimization self-report scale (Olweus, 1993) at T2, T4.2, and T5. At T2, the questions were supported by pictures due to the children's young age (Perren & Alsaker, 2006). The scale covered the frequency of four types of victimization by other children: Teasing, stealing and destroying possessions, physical violence, and rejection/exclusion. At

T2, answer categories ranged from 0 to 4 ('never', 'once or twice', 'more than twice', 'at least once per week', or '(almost) every day' since the school year had started, which was on average about three months earlier). At T4.2 and T5, the reference period was the past year. The answer categories ranged from 0 to 5 ('never', 'once or twice', '3 to ten times', 'about once per month', 'about once per week', and '(almost) every day'). We computed the sum of the items for each time-point.

The teachers answered a one-item measure about the extent to which the child was bullied. The answer categories ranged from 0 (does not apply at all) to 4 (applies a lot).

Who asks the question

An interview is more than an exchange of facts —it is also a personal interaction between two people. As in any human interaction, the interview partners influence each other's behavior. Some interviewers may elicit more valid answers than others, for example because the respondent has greater trust in them. We therefore assessed to what extent respondents' answers were influenced by the interviewer. We used data from the personal interviews at T2. There were 19 interviewers and each was assigned a number of children. Often, interviewers were assigned entire classes. Thus, the children's answers were clustered in two ways: within classes and within interviewers. In a first exploration, we selected those classes to which at least 2 interviewers were assigned and compared the victimization rates between the interviewers. Only interviewers who interviewed at least 3 children per class were selected ($n = 19$ classes). As an intuitive measure that excludes occasional incidents (Olweus, 1993), we computed the percentage of children who reported more than two incidents for each interviewer and within each class (Figure 33.1). The absolute mean difference between interviewers within the same class was 20%.

Second, we computed intra-class correlations (ICCs) for the extent to which interviewers' characteristics determined the children's responses. First, we computed the ICC at the class-level: The proportion of the total variance within classes was 8.0%. Thus, one would conclude that 8% of the total variation in child-reported victimization was due to class characteristics. However, when we included both the class- and the interviewer-level in the second step (in a cross-classified model), the ICC on the class-level dropped to 2.4%, while 6.4% of the differences in victimization between children could be attributed to the interviewer. On the one hand, this indicates that the large majority of variance in victimization between children was not due to interviewer effects. In this light, 6% seems modest. On the other hand, the ICC should not be interpreted in absolute terms: If the amount of variance that is explained by individual characteristics is expected to be

Figure 33.1   Percent repeat victims by interviewer and class
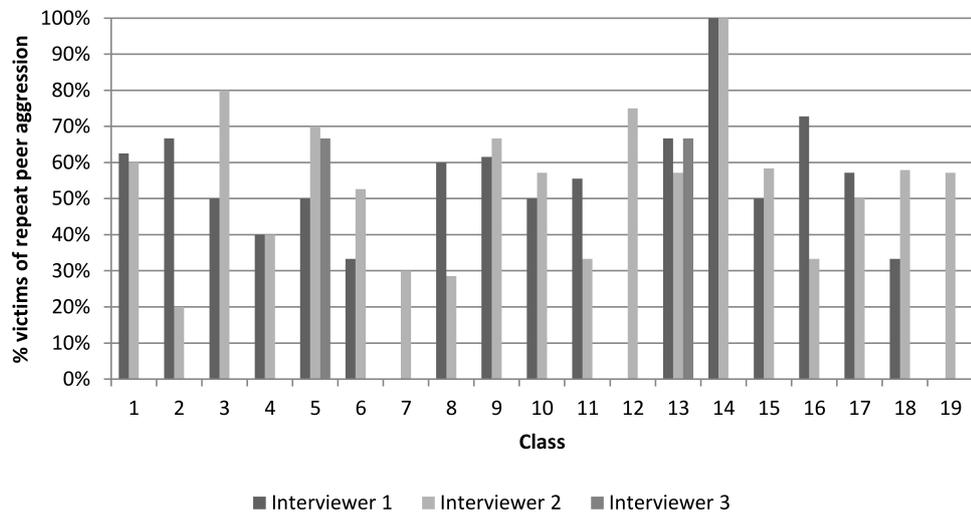
Note: Interviewer 1, 2, and 3 was a different person in each class. Where
     information for interviewer 1 is lacking, the percent repeat victims
     reported by this interviewer was 0%.

high (as for victimization), then one should expect a lower ICC. In this light,
6% seems more substantial.

   While these data suggest that some interviewers elicited more recollec-
tions of victimization than others, the reasons are unclear. To further inves-
tigate this, one should use interviewer characteristics to predict victimiza-
tion. Unfortunately, we did not have such data and could not further pursue
this. Gender was available, but only one of the interviewers was male.

Who answers the question

The question of whether or not a child was victimized cannot always be
answered with a clear 'yes' or 'no'; it often depends on who is asked. This
goes especially for forms of victimization for which the definition is unclear,
such as verbal threats. But even for physical violence it is not always clear
who the victim is, because it is unclear who started a fight, and both actors
may become violent. In this section, we compared the child- and the teacher-
reports of victimization. Although these measures were not the same, one
would expect a reasonable amount of overlap.

   We first assessed the properties of both informants' measures separately.
For the children's items, the consistency increased over time: coefficient al-
pha was .652 at T2, .722 at T4.2, and .768 at T5. The increase between

T2 and T4.2 may be partly due to measurement differences: at T2, the questions were asked face-to-face, with follow-up questions about the last incident. At T4.2 and T5, the questions were asked on paper, and the items appeared in one text block without follow-up questions, thereby perhaps yielding similar answers across the items. The increased consistency is also likely in part due to the children's increasing cognitive capacities. We also

Table 33.2   Correlations between teachers' victimization estimates across time-points

| | Teacher A | | | | Teacher B | | Teacher C |
	T1	T2	T3	T4.1	T4.2	T4.3	T5
T2	.427***						
T3	.325**	.395**					
T4.1	.218**	.195**	.188**				
T4.2	.161**	.183**	.198**	.425**			
T4.3	.168**	.176**	.192**	.331**	.449**		
T5	.092**	.079*	.131**	.212**	.197**	.311**	
ICC	.167	.281	.340	.132	.185	.177	.205
classes	111	132	197	272	263	258	363

assessed to what extent children's victimization rates were clustered within teachers. In Zurich, a child remains with the same teacher for the first three years (T1–T3) and then transfers to a new teacher for another three years (T4.1–T4.3). In secondary school (T5), the overall 'class teacher' was the respondent. Table 33.2 shows the correlations between the time-points. Strikingly, when the teacher was the same, victimization between adjacent time-points correlated at approximately .40. When the teacher changed at T4.1, the correlation dropped to about .20. The drop at T5 was less steep, which is likely due to a relatively high amount of children who repeated a class between T4.1 and T5. There are two potential explanations for these drops. First, a new teacher may have an effect on victimization, whether at the level of entire classes or at the individual level. Hence the drop in correlation would reflect a genuine 'treatment effect' by the teacher. Second, the new teacher may have different answering tendencies and/or may perceive the child differently, thus assigning victimization status differently. Thus, the drop in the correlation would be due to a decline in systematic bias which occurs as long as the same teacher assesses the same child. Although this issue requires more examination, we currently believe that the second explanation is more plausible. The clustering within teachers is confirmed by substantial ICCs (Table 33.2). We next compared the two informants (Table 33.3). For the children, we computed the maximum incidence of vic-

Table 33.3   Child reports of victimization versus teacher reports (only for
         T2 to save space)

| Child report | Teacher report (Applies ...) | | | | | |
	Not at all	Not really	Some-what	Well	A lot	Total
Never	214	43	12	4	0	273
	(78%)	(16%)	(4%)	(1%)	(0%)	(100%)
Once or twice	249	59	14	2	0	324
	(77%)	(18%)	(4%)	(1%)	(0%)	(100%)
At least twice	261	97	23	6	2	389
	(67%)	(25%)	(6%)	(2%)	(1%)	(100%)
At least once a week	124	39	19	7	0	189
	(66%)	(21%)	(10%)	(4%)	(0%)	(100%)
(Almost) every day	64	43	13	3	0	123
	(52%)	(35%)	(11%)	(2%)	(0%)	(100%)
Total	912	281	81	22	2	1298
	(70%)	(22%)	(6%)	(2%)	(0%)	(100%)

timization across the items as an intuitive measure. They reported much
more victimization than the teachers. This is in line with some studies
(Ladd & Kochenderfer-Ladd, 2002; Rønning et al., 2009; Sekol & Farring-
ton, 2011), but not with others (Løhre et al., 2011; Newgent et al., 2009).
There was a high level of agreement in the upper left side of the table: Of
all the children who said that they had never been victimized, 78% was re-
ported by the teacher as non-victims. The percentage of children for whom
victimization 'does not apply at all' dropped as the victimization incidence
according to the children increased. Strikingly, of those children who re-
ported victimization (almost) daily, half (52%) were not considered victims
by the teachers at all. None of them fit the teachers' category 'applies a lot'.

The correlation between the child and teacher increased somewhat over
time (T2: $r = .16, p < .01$; T4.2: $r = .21, p < .01$; T5: $r = .23, p < .01$). It is
unclear what caused this, but combined with the finding that the consistency
of the child-report increased, this may indicate that the quality of the child-
report improved with age. Alternatively, victimization may take on more
obvious or serious forms when children are older, so that the teachers are
more likely to report it.

These modest correlations are in line with other studies (Cornell &
Brockenbrough, 2004; Ladd & Kochenderfer-Ladd, 2002; Løhre et al., 2011;
Peets & Kikas, 2006; Rønning et al., 2009; Rudolph et al., 2011; Wienke
Totura et al., 2009; Zwierzynska et al., 2013). Two studies even reported

no correlation (Monks et al., 2003; Nuijens, 2006). Based on these findings, Cornell & Brockenbrough (2004) warned against the sole reliance on self-report measures. Perry et al. (1988) even called the children who reported much more victimization than their peers and teachers 'paranoid'. However, these conclusions are not justified as a low correlation per se does not tell us 'who is right'. In fact, two studies found that self-reports had the highest validity and reliability (Connell & Farrington, 1997; Sekol & Farrington, 2011).

Table 33.4   Partial correlations of victimization with child problem behavior (robust standard errors)

Time-point	Dependent variable, per informant	Predictors	
		Child-reported victimization	Teacher-reported victimization
	Internalizing problems		
T2	Teacher	.089**	.313**
T4.2	Child	.331**	.070*
	Teacher	-.042	.441**
	Parent	.126**	.112**
T5	Child	.414**	-.060*
	Teacher	.079**	.389**
	Aggression		
T2	Child	.209**	.002
	Teacher	.155**	.424**
	Parent	.063*	-.006
T4.2	Child	.276**	.007
	Teacher	.048	.312**
	Parent	.141**	.086*
T5	Child	.199*	-.001
	Teacher	.018	.257**

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

One reason for the modest overlap may be that the teacher does not know about the victimization. Thus, we investigated whether the overlap increased when we included only those children who said that they reported the last incident to their teacher —this was a follow-up question at T2. The correlation between the informants was similar for those children who told their teacher (35%; $r = .15, p < .01$) and those who did not ($r = .14, p < .01$).

Another way of interpreting the modest overlap is that both measures tap different aspects of the same phenomenon. We therefore next assessed

to what extent both measures incorporated shared and non-shared information. To this end, we regressed two known correlates of victimization in this dataset, namely internalizing problems and aggression (Appendix 1), on both victimization measures. We only considered contemporaneous measures. The partial correlations between the within-informant measures (child-reported victimization versus child-reported behavior; teacher-reported victimization versus teacher-reported behavior) were stronger than the cross-informant correlations (Table 33.4). This suggests that the relationships were in part due to shared method variance. Sometimes the correlations across the sources were not significant, and in one case even negative. On the other hand, the cross-informant measures were correlated in most cases, and both were correlated with child behavior as measured through a third informant, the parent. Overall, the significant correlations between the informants' victimization measures combined with the significant cross-informant partial correlations with child behavior suggest that the measures contributed both shared and non-shared information about victimization. This may suggest that combining both measures yields a more valid indicator than using only one informant. However, this remains uncertain since problem behavior rates also depend on the informant and a 'gold standard' is absent in our data.

The question remains how the discrepancy between the informants can be explained. We next considered this question. We first standardized each informant's rating by classroom and converted them into a z-score. We then subtracted the teacher's z-score from the child's (De Los Reyes & Kazdin, 2004). Since this measure did not indicate the extent of the disagreement per se, but the direction (i.e., a high score meant that the child perceived higher victimization than the teacher), we also computed a variable that returned the absolute value to measure the extent of the disagreement.

We expected the following factors to predict disagreement. First, we expected that a good relationship between the informants increased the likelihood that they exchange information about victimization and thus decreased disagreement. Second, we expected that child characteristics were related to disagreement. Particularly, when the child is perceived to provoke victimization, for example because (s)he is aggressive or untrustworthy, (s)he is less likely to be perceived as a victim. Teachers may also use gender-based stereotypes, so that girls are more likely to be seen as victims than boys. Victimization among girls is also often more hidden than among boys. Third, characteristics of the informants themselves should predict disagreement. Children with internalizing problems are more likely to selectively recall negative experiences and perceive more victimization than other children (De Los Reyes & Prinstein, 2004). In addition, socially desirable answering tendencies may increase disagreement. We tested our hypotheses with OLS regressions (Table 33.5). Because our predictors were available at T1 and T2, we used T2 discrepancy as our outcome. Equation (1) re-

Table 33.5   Predictions of child-teacher disagreement (unstandardized betas with robust standard errors)

	Child-teacher disagreement	
	Extent of disagreement	Higher child- than teacher-perceived victimization
Relationship characteristics		
Good relationship with teacher	-.004	-.005
Teacher perceives little contact with child	-.039	-.020
Child characteristics/behavior		
Child aggression (T1 teacher-report)	.119*	-.048
Child untrustworthiness	.378**	-.414**
Male	-.145*	.340**
Informant characteristics		
Child social desirability	-.057	.157**
Internalizing problems (T1 child-report)	.047	.672**
R^2	.057	.044
N	816	816

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

gressed the absolute amount of disagreement (irrespective of the direction) on the predictors (described in Appendix 1). In equation (2) we examined the extent to which the direction of the disagreement can be predicted.

Contrary to hypothesized, relationship characteristics did not affect disagreement. As expected, disagreement was higher for aggressive children, but there was no linear direction of the disagreement. Disagreement was also higher for untrustworthy children; surprisingly, these children reported less victimization than their teachers. Perhaps untrustworthy children give teachers the impression that they experience more negative events than they do, or perhaps they did not want to admit victimization in the interview. As expected, disagreement was lower for boys; they reported more victimization than their teachers compared to girls. Also expected, children with socially desirable answers reported higher victimization than the teachers. Finally, children with internalizing problems reported more victimization than their teachers. This is in line with De Los Reyes & Prinstein (2004) and Nuijens (2006), but these studies were cross-sectional and the temporal

ordering was unclear. In fact, discrepancies between the child and others in perceived levels of victimization may lead to emotional difficulties (Nuijens, 2006), because a child may keep the victimization to himself or feel that the victimization is not taken seriously by others.

Table 33.6   Predictions of T3 internalizing problems by disagreement about victimization (unstandardized betas with robust standard errors)

	T3 Child-reported internalizing problems		T3 teacher-reported internalizing problems	
	Model 1	Model 2	Model 3	Model 4
Extent of disagreement	.016*		.105**	
Higher child- than teacher-perceived victimization		.015**		-.059**
T1 internalizing problems	.435**	.429**	.483**	.487**
R^2	.179	.182	.264	.260
N	1,272	1,272	1,230	1,230

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

In a final step, we investigated this latter issue. In two OLS regressions, we regressed T3 internalizing problems on the extent and direction of disagreement at T2 (Table 33.6). Controlled for T1 internalizing problems, the extent of disagreement was related to later internalizing problems. When the child perceived higher victimization, child-reported internalizing problems were higher; when the teacher perceived higher victimization, teacher-reported internalizing problems were higher. This suggests that the results were in part due to shared method variance.

How often the question is asked

In longitudinal studies, a certain amount of respondents usually drops out over time. This drop-out is often selective, with victims more likely to leave than non-victims. When this happens, the study's prevalence estimates of victimization are biased, because the sample no longer represents the population. In this section, we investigated the extent of selective non-participation over time. For the child measure of victimization, 1,002 children had complete data across all three time-points where victimization was measured; for the teacher measure, 698 children had complete data across seven time-

Table 33.7 Odds ratios for selective non-participation

| Dependent variable	Predictor	
	T2 Child measure	T1 Teacher measure
Participated at	victimization	victimization
T1 but not T2		1.133
T1 but not T3		1.200
T1 but not T4.1		1.207
T1 but not T4.2	1.056*	1.055
T1 but not T4.3		1.028
T1 but not T5	1.010	1.086
All time-points	0.970	0.926

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

points. Thus, there was a substantial amount of non-participation over time. In order to investigate whether this was problematic (i.e., selective), we assessed whether non-participation at T2 through T5 (T1 through T5 for the teachers) was related to victimization at T2 (T1 for the teachers). Dichotomous variables indicating whether or not respondents participated at a time-point were regressed on victimization in a series of ten bivariate logistic regressions, with one for each time-point (Table 33.7). Most odds ratios were non-significant, showing that there was no indication that non-participation was selective regarding victimization. The one significant measure had a weak odds ratio: Those who did not participate at T4.2 reported slightly higher victimization rates at T2 than those who participated.

For visualization, we calculated the mean level of victimization for (1) the entire sample and (2) the children who always participated. Since the scales of the child measure differed between the time-points, we used the percentage of repeat victims for the Y-axis. The scale for the teacher measure ranged from 0 to 4. The two curves were nearly identical (Figure 33.2).

Where the question is asked

In this final and shortest analysis, we looked at the direct context of the data collection. Specifically, we considered whether the survey took place at school or at home. This information was available for T4.2. Incidents of peer victimization may be more salient when the survey takes place in a peer context; thus, the reported level of victimization may be higher at school. This was indeed the case (Table 33.8); however, the difference was non-significant. Controlling for T2 victimization did not change the results.

Figure 33.2   Mean level of victimization
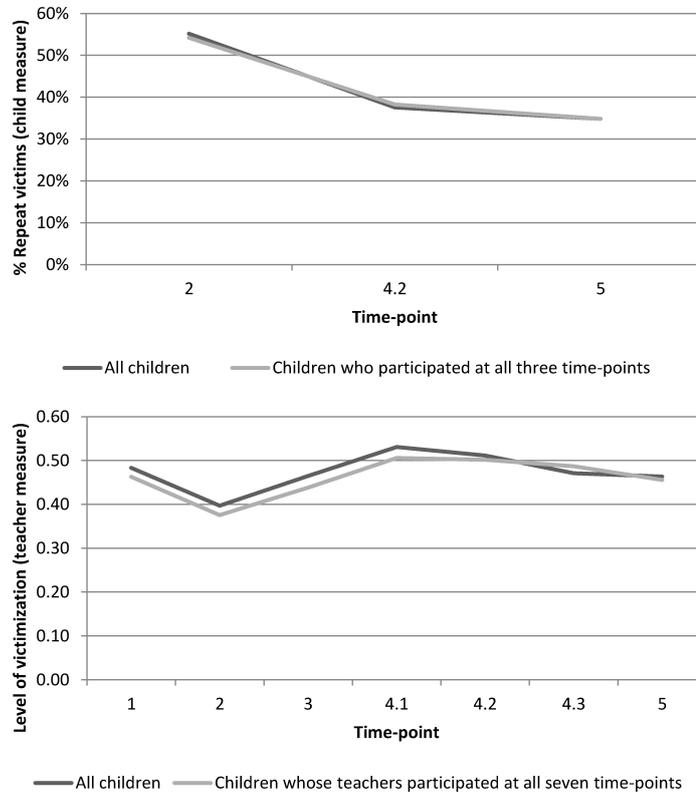
Conclusion

In this paper, we considered how several methodological issues affect victimization reporting. We found that, first, 6% of the variation in child-reported victimization rates was due to the interviewers. This suggests that, despite extensive interviewer training and the use of computer-assisted interviewing techniques, there persist differences in interviewers' output. Second, agreement between the children and the teachers was low. This is in line with low cross-informant agreement on other measures such as aggression, conduct disorder, or depressive symptoms at this age. In particular, the less an experience or behavior can be openly observed the less the accounts by different observers coincide. Third, there was little selective non-participation regarding victimization. Fourth, it did not matter whether the survey took place at school or at home. The latter two findings provide confidence in the quality of the measures, but the first two yield further questions. Which interviewer characteristics influence victimization reporting? And how should the inter-informant discrepancy be interpreted? Are both informants impor-

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Table 33.8   Level of victimization by survey context

	Level of victimization	95% Confidence Interval
School ($N = 990$)	3.15	$2.96 - 3.35$
Home ($N = 156$)	2.92	$2.40 - 3.43$

tant, or can we rely on only one? Although the current data were helpful in identifying these issues, they cannot be used to answer these further questions. In-depth interviews that go to the bottom of what different respondents consider to be victimization and why (not) may shed more light on this. Such research should be able to get closer to answering the ultimate methodological question, namely how to obtain valid and reliable estimates of peer victimization

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Appendix 1: Variables

Internalizing problems and *aggression* were assessed by the children, the teachers, and the parents (Tremblay et al., 1991, *Social Behavior Question-naire*). Parents and teachers answered on a 5-point scale. The children were shown drawings and asked whether they sometimes do what is shown (yes/no); from T4.2 onwards, they answered on a 5-point scale. The internalizing problems scale (anxiety and depression) consisted of 7–9 items per informant; the aggression scale of 11–12 items. Internal consistencies ranged from .62 to .84 for the children, .90 to .94 for the teachers, and .71 to .81 for the parents.

Good relationship with teacher was measured at T2 through the parents ("How well does [child] get along with his/her teacher?" and "The teacher cares about [child] as much as possible"). Answers on a 10-point scale ranged from 'not so well'/'fully untrue' to 'extremely well'/'fully true' and were averaged. *Teacher perceives little contact with child* was measured through the teachers with one item on a 5-point Likert scale. *Child untrustworthiness* was measured in a sociometric instrument where each classmate rated the other's promise-keeping trustworthiness on a 5-point scale. *Male* was coded 1 for boys and 0 for girls. *Child social desirability* was measured through 8 items ($\alpha = .743$).

Table 33.9   Variables: mimimum, maximum, mean, standard deviation

	Min.	Max.	Mean	S.D.
Internalizing problems				
Children (T1–T5)	.00	4.00	.76	.70
Teachers (T1–T5)	.00	4.00	.85	.75
Parents (T4.2)	.00	3.33	.90	.53
Aggression				
Children (T1–T5)	.00	3.89	.35	.47
Teachers (T1–T5)	.00	4.00	.52	.65
Parents (T2–T4.2)	.00	2.58	.59	.43
Good relationship with teacher (T2)	.00	9.00	7.11	1.70
Teacher perceives little contact with child (T2)	.00	4.00	3.22	.83
Child untrustworthiness (T2)	.97	2.98	1.71	.38
Male	.00	1.00	.52	.50
Child social desirability (T2)	1.00	3.00	2.11	.59