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## School Satisfaction of Elementary School Children

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MAYKEL VERKUYTEN and JOCHEM THIJS

SCHOOL SATISFACTION OF ELEMENTARY SCHOOL  
CHILDREN: THE ROLE OF PERFORMANCE, PEER  
RELATIONS, ETHNICITY AND GENDER

**ABSTRACT.** The present study examines school satisfaction among 1,090 Dutch and ethnic minority children aged between ten and twelve in relation to their school context. Data were gathered in 51 classes from 26 schools. Individual and classroom variables were examined simultaneously, using multilevel analysis. Controlling statistically for general life satisfaction and teacher likeability, the results show that the effects of educational performance and peer victimization on school satisfaction were mediated by perceived scholastic competence and social self-esteem, respectively. In addition, ethnic minority groups were more satisfied with school than the Dutch pupils, and girls were more satisfied than boys. Multilevel analysis showed that school satisfaction was dependent on the classroom context. The academic and social climate in the class had positive effects on the level of satisfaction with school. The percentage of Dutch pupils, the percentage of girls and the number of pupils had no significant independent effects on school satisfaction.

School satisfaction is a major aspect of children's quality of life. It is important in and of itself and children have a right to feel good about themselves and the institutions in which they function. Schools should be caring and supporting settings that children value and enjoy. Furthermore, the level of school satisfaction is important because it affects psychological well-being, as well as school engagement, absentee rate, drop-out and behavioral problems (e.g. Ainley, 1991; Reyes and Jason, 1993). Hence, it is important to understand how children rate their school and to know which factors are related to the level of school satisfaction.

Although children spend a great deal of their time in school, there is relatively little attention for school satisfaction. Proposals for educational changes and school reform typically focus on academic achievement and devote little attention to evaluative and affective outcomes. In the Netherlands, for example, where the present



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study was conducted, most of the educational discussions focus on cognitive development and its assessment.

School satisfaction is also a rather neglected research topic. Little is known about children's enjoyment and evaluation of school. There is only a small number of studies on school satisfaction (e.g. Baker, 1998; Cock and Halvari, 1999; Huebner and McCullough, 2000; Huebner et al., 2001; Okun et al., 1990). Furthermore, most studies have focused on the presumed consequences of school satisfaction; few, however, have examined possible determinants or predictors. In addition, little theoretical work has been done in this area. Theoretically, different perspectives used for explaining general life satisfaction are possible, such as social comparison theory, goal theories, and stress and coping approaches (see Diener et al., 1999).

The present study uses a social cognitive perspective for examining global school satisfaction among elementary school children (ten to twelve years of age) in the Netherlands. A social cognitive perspective maintains that school satisfaction follows from the cognitive interpretation of the fulfilment of psychological needs that are essential to child development. Competence and relatedness are considered two of the most basic needs to human growth (Connell and Wellborn, 1991; Deci and Ryan, 1991). Hence, it is examined whether educational performance and perceived academic competence as well as peer relations and social self-esteem affect global school satisfaction. Furthermore, possible differences are examined between ethnic majority and minority group children, as well as between boys and girls. Finally, by means of multilevel analysis, school characteristics as well as children's individual characteristics are examined. Multilevel analysis allows to investigate further and more adequately the proposed interrelationship between personal and environmental variables in the determination of school satisfaction (Diener et al., 1999; Huebner and McCullough, 2000; Huebner et al., 2001).

### *Competence and Relatedness*

Social cognitive approaches on motivation and development maintain that people have intrinsic strivings and needs. Furthermore, people's evaluations and behavior would be affected by the extent to which these needs are considered or perceived to be met.

Development and learning are seen as natural processes based on prepotent and natural tendencies that are supported or thwarted by contextual factors (Deci and Ryan, 1991; Ryan, 1995). In developmental and social psychology, two major pursuits are proposed (e.g. Connell and Wellborn, 1991; Franks and Marolla, 1976; Gecas and Schwalbe, 1993). The first concerns the use and elaboration of one's capacities, and the second the need for relatedness or belonging. Related to the former is competence and the sense of mastery or self-efficacy that is derived from the successful use of one's capacities. Related to the latter is the feeling of being socially accepted or not, which leads to positive emotions, such as happiness, or negative emotions, such as loneliness. The present study focuses on educational performance and peer victimization.

First, although educational performance is determined by many factors, it is also an important indicator of what students have learned and mastered. For students themselves, their actual performance is a main source of feedback for assessing their knowledge and abilities. Positive achievement experiences are satisfying in themselves and can be expected to contribute to school satisfaction. For example, Cock and Halvari (1999) found a positive association between performance and school satisfaction. Children who do well in school tend to be more satisfied with school. However, high grades alone are not enough for school satisfaction (Epstein and McPartland, 1976). Following motivational and self-concept researchers (e.g. Byrne and Shavelson, 1996; Fleming and Courtney, 1984), it can be argued that this relationship is mediated by the perception of academic competence. Accomplishments are often satisfying because they convince people of their assets and ability to function effectively. Central to this is the perception that one is competent or able, and academic self-efficacy has been found to be related to school satisfaction (Huebner and McCullough, 2000). Thus, the sense of competence may have a mediating role in linking educational performance to school satisfaction. For example, a child is satisfied at school because she considers herself smart, and she considers herself smart because she is good at English and Maths. Good school results can be expected to lead to school satisfaction because they lead to the gratifying feeling of being academically competent. In the present research, therefore, we used a measure

of perceived scholastic competence to test the prediction that a sense of competence mediates the relationship between educational performance and school satisfaction.

Second, schools play a central role in addressing the basic need to experience relatedness or belonging (Baumeister and Leary, 1995). Children who are accepted by their peers, for example, have been found to be more likely to enjoy school and their classes (see Osterman, 2000, for a review). Furthermore, peer status has been found to have more impact than friendship on school perception and self-evaluation. For example, children who are not accepted by peers have been found to express a greater dissatisfaction with the quality of life (Green et al., 1980). In addition, studies by Harter (1999) have shown that (dis)approval from peers, such as classmates, is far more predictive of global self-worth than is (dis)approval from close friends. Moreover, social exclusion has been found to be more strongly related to self-evaluation than is social inclusion (Leary and Baumeister, 2000). Hence, not being accepted or being victimized is more likely to be related to school satisfaction than are friendships. In the present study we focused on peer victimization and its relationship to global school satisfaction. In addition to experiences with peer victimization, children's sense of social acceptance or social self-esteem was measured. Social self-esteem was expected to play a mediating role in linking peer victimization to global school satisfaction. That is, a child is likely to experience low school satisfaction because of low social self-esteem, the low social self-esteem being the result of peer victimization.

To summarize, in the present study the mediating roles of perceived scholastic competence and social self-esteem are examined in linking educational performance and peer victimization to global school satisfaction, respectively. In addition, potential moderators of these relationships will be examined, in particular ethnicity, gender, and characteristics of the school context.

### *Ethnic Differences*

Compared to Dutch children, ethnic minorities have been found to be victimized by peers more often (Verkuyten and Thijs, 2002), and on average children of most minority groups have poorer academic results (Tesser et al., 1999). Hence, there are reasons to expect

that ethnic minority group children are less satisfied with school than majority group ones. On the other hand, there are Dutch studies that found similar levels of perceived scholastic competence and social self-esteem for Dutch and ethnic minority children (see Verkuyten and Thijs, 2000). Furthermore, Dutch studies have shown that for certain children, such as Turkish and Moroccan ones, school presents a liberal and satisfying setting compared to the strict social control of the home (Dagevos and Veenman, 1992; De Vries, 1987). Hence, lower school satisfaction among ethnic minority group children is not self-evident.

In their study of 4,266 student responses, Epstein and McPartland (1976) found no difference in school satisfaction between Whites and African-Americans (see also Huebner et al., 2001). More recently, in a large scale study involving more than 450,000 Whites, African-Americans, Hispanics, Native Americans and Asian Americans students, Okun et al. (1990: p. 425) concluded that 'the ethnic minorities do not differ in school satisfaction and the locus of the minimal ethnic differences in school satisfaction is between the ethnic majority and the ethnic minority groups'. Their results indicate that the majority group was somewhat less satisfied with school than the minorities were.

In the present study, the focus is on possible differences between Dutch children and ethnic minority group children. However, ethnic minorities do not form a homogeneous group. The many visible and cultural differences between ethnic groups may affect the experiences of ethnic minority group children. Verkuyten and Kinket (2000), for instance, found that Dutch children showed certain preferences for contact with contemporaries of different ethnic minority groups. Turkish children were liked least, followed by Moroccans, with the Surinamese being more accepted. This same pattern of preferences has been found among Dutch adolescents and adults (see Hagendoorn, 1995). In agreement with these preferences, it has been found that Turkish children are confronted with peer victimization more often than other minority groups (Verkuyten and Thijs, 2002). Hence, in addition to a comparison between Dutch children and ethnic minority group children, a comparison will be made between the Dutch children and children from different ethnic minority groups, e.g. Turks, Moroccans, and Surinamese.

*Gender Differences*

Okun et al. (1990) found that girls showed more school satisfaction than boys. Other studies have reported similar results (e.g. Epstein, 1981), but in general there is a lack of research evidence. Within schools, gender differences in peer relations have frequently been the object of research. From the results it appears that boys report peer victimization more than girls fairly consistently (e.g. Smith and Shu, 2000; Whitney and Smith, 1993). Boys are more often both the victim as well as the perpetrator of victimization. In addition, there is evidence to suggest that boys are more likely to stress their independence of others, whereas girls are more likely to emphasise their relatedness to others (see Cross and Madson, 1997). Hence, boys may be less satisfied with school than girls because they develop more negative relationships with classmates.

*School Characteristics*

In a study among African-American elementary school children, Baker (1998) demonstrated the importance of characteristics for school satisfaction, such as the classroom social climate and classroom stressors. Others have also stressed the importance of school characteristics for school satisfaction (see Osterman, 2000). It is, however, difficult to draw more general conclusions about school characteristics from research studying a single school or comparing only a few. There are always many possible school characteristics that may explain the differences found. To avoid such problems, a whole array of schools should be studied. Furthermore, individual as well as school characteristics should be taken into account simultaneously (Malin and Linnakylae, 2001). When assessing school differences, individual characteristics should be controlled for. By means of multilevel analysis, the present study examines the importance for global school satisfaction of some compositional measures of school classes and of children's aggregated assessments of the social and academic climate in the classroom. The aggregated measures correspond to the measures of peer victimization and educational performance and allow us to determine whether these classroom-level factors affect children's satisfaction with school.

The ethnic composition or the relative proportions of majority and minority group children in the form is a class-level factor that may affect school satisfaction. For example, the number of Dutch children in form may determine experiences and attitudes (see Fishbein, 1996; Schofield, 1991, for reviews). Rosenberg (1979) argues that the child's social similarity or dissimilarity to those around him or her affects that child's experiences. In an ethnically consonant environment, a child is more protected from negative experiences such as prejudice and discrimination, whereas in a dissonant context, a higher incidence of victimization may occur there may be less social support.

In addition, the total number of children or class size may be important. Among other things, size allows for monitoring and control by the teacher. In addition, the inclusion of size is needed to assess the effects of ethnic compositions of schools and forms adequately. For example, in the Netherlands, classes with a high percentage of ethnic minority children tend to have fewer pupils. As a result, possible effects of proportion may be confounded with size. Controlling statistically for size allows us to test whether the proportion of Dutch students affects school satisfaction.

Methodologically, studies which examine both individual and school variables deal with data that are hierarchically structured. This hierarchical structure should not be disaggregated to the individual level by assigning group-level variables to individual children. Doing so may lead to spuriously significant results because the standard errors, which are based on the higher number of disaggregated cases, are too small. Hence, originally small differences between contexts will become significant because the number of observations have been increased. Furthermore, groups, and in particular forms, are rarely formed randomly; children belonging to the same form will share many experiences. It follows that the assumption of independence of observations is often violated (Kenny and Judd, 1984).

The statistical technique of multilevel modelling allows the simultaneous analysis of individual and classroom level variables without compromising the quality of information at any level (Kenny, 1996). In this research, the samples consisted of forms and children within them: the children are nested within their forms.



Hence, school satisfaction is explained by children's individual characteristics and by properties of the form. A significant effect found at the classroom level indicates that the similarity in school satisfaction between children in the same form is stronger than the similarity in school satisfaction between children in different ones.

To summarize, the following expectations, derived from the above, will be examined. First, educational performance and peer victimization are expected to be related to global school satisfaction. Second, these relations are expected to be mediated by feelings of scholastic competence and social self-esteem, respectively. Third, ethnic group differences will be explored, and girls are expected to show higher school satisfaction than boys. Fourth, school satisfaction is expected to depend on both individual and form characteristics. Finally, the role of composition measures at form level and of aggregated assessments of the social and academic climate will be explored.

When examining these predictions, two other variables were included; general life satisfaction and teacher likeability. As regards the first, using panel-data, Headley and Veenhoven (1989) have shown that appreciation of life-as-a-whole causally affects satisfaction with various aspects of life, such as job or attainments. Hence, differences in school satisfaction might be due to differences in general life satisfaction. Therefore, in examining determinants of school satisfaction, the level of life satisfaction was taken into account. As regards teacher likeability, studies have shown that elementary school children's relationship with their teacher affects their achievements, school satisfaction (Baker, 1999), and also, for example, feelings of belonging to the school community (see Osterman, 2000). Hence, a child's school satisfaction may depend on the degree to which it likes its teacher. Furthermore, the nature of the pupil-teacher relationship has been conceptualised as a dimension of the quality of school life (Epstein and McPartland, 1976). In this study therefore, teacher likeability has been assessed as an additional variable.

## METHOD

*Participants and Forms*

Data were gathered in 26 elementary schools across the Netherlands. The schools that participated form a cross-section of schools from sixteen cities in every part of the country. The questionnaire was administered in 51 forms during school hours. In the introduction the children were asked to participate in a study on school achievements, educational attitudes and school relations, and it was explained that the questionnaire contained questions on these topics. The children completed the questionnaire under supervision and simultaneously within their classrooms. It was decided to administer the questionnaires to entire forms so that the class context would be salient. At each school, the children in the two highest forms participated on a voluntary basis. All children approached were willing to participate. In total there were 1,090 participants between the ages of ten and twelve.

Ethnic background was assessed by means of self-definition and two questions on the ethnic background of the parents. For the present analyses, only those children were included that used the same label to define both themselves and their parents. The sample contained 684 ethnic Dutch participants and 406 ethnic minority participants. The latter group was composed of Turks (N = 114), Moroccans (N = 42), Surinamese (N = 32), Antilleans (N = 24), and children from other backgrounds, such as Cape Verdians, Chinese and Iranians.

The sample consisted of 49 percent girls and 51 percent boys. There was no ethnic difference for gender. There was no information available on parents, socioeconomic background or on the generation to which the ethnic minority participants belonged. However, in the Netherlands, most ethnic minorities have a low socio-economic position, and practically all children are second generation and come from two-parent families (Verkuyten and Thijs, 2000).

*Questionnaire Measures*

The measure of global school satisfaction consisted of two items from the five-item Satisfaction with School subscale of the Quality of School Life (Epstein and McPartland, 1976). Pupils indicated

whether they liked school and whether they liked going to school. Following research on life satisfaction (see Diener, 1984; Veenhoven, 1984) and on children's group evaluations (Yee and Brown, 1992), 1–7 Likert-type scales with seven 'faces' were used as response categories. The faces range from very sad to very happy with the biggest smile indicating the most positive attitude, the one with the straight mouth a neutral position, and the biggest frown the most negative attitude. For the two items, reliability analysis yielded a Cronbach's alpha of 0.69.

Educational performance was assessed by means of self-reported grades. Research has shown a rather strong association between actual and self-reported grades. Goldman, Flake and Matheson (1990), for instance, obtained correlations ranging from 0.70 to 0.88, and Hishinuma et al. (2001) obtained a correlation of 0.76 among an ethnically diverse sample of students (see also Gonzales et al., 1996). In the Netherlands, grading in school ranges from 1 to 10. Using a ten-point scale the students were asked to give a self-rating for their performances in general, and for the subjects of Dutch language and Mathematics. Cronbach's alpha for the three questions was 0.77.

Self-reported peer victimization was assessed with four items on five-point scales (ranging from 'never' to 'always'). The questions focused on the frequency of experiences with name calling and social exclusion. Different studies have found that name calling is the most common form of peer victimization among elementary school children, and that being excluded from social groups is also a common form (e.g. Smith and Shu, 2000; Whitney and Smith, 1993). Children were asked to what extent they were called names and teased in school, and excluded from play. Cronbach's alpha for the four questions was 0.70.

Perceived scholastic competence and social self-esteem were measured using two subscales of Harter's (1985) Self-Perception Profile for Children. Both subscales have five items and a five-point scale ('no, never' to 'yes, very often') was used. Two sample items of the scholastic competence scale are: 'Do you often forget what you learn?', and 'Do you mostly manage to figure out the answers in school?' Two sample items of the social self-esteem scale are: 'Do other children like you when you try to be friendly?', and 'Do you

make friends easily?' For scholastic competence, reliability analysis yielded an alpha of 0.71, and for social self-esteem an alpha of 0.85.

Two other individual level measures used were general life satisfaction and teacher likeability. The first measure consisted of one question (seven 'faces') asking the children how satisfied they were with their life as a whole. Teacher likeability was assessed by asking the children whether they thought their teacher was nice and friendly using a five-point scale ('never' to 'always').

On the level of the classroom, aggregated and composite measures were used. The children were asked questions about the academic and social climate in from and their responses were aggregated to obtain class-level variables. Academic climate was measured with six items (five-point scale). Three sample items are: 'Imagine that the teacher leaves the classroom for a moment. Do the children continue with their work?', 'Suppose that your teacher has asked you to do an in-class assignment. Do you get to work straight-away?', and 'Do you usually pay close attention during lessons?'. Cronbach's alpha for these questions was 0.74.

Social climate was measured with three items (five-point scale). The questions focused on incidences of peer victimization and the teacher's and children's reactions. The three questions were introduced by means of the following: 'Suppose that someone from your form is regularly bullied'. This introduction was followed by, 'Would your teacher say something about this?', 'Would the other children in your form say something?', and 'Would you tell your teacher?' Reliability analysis yielded an alpha of 0.65 with a higher score indicating a more positive social climate.

A composite classroom variable that was looked at was the percentage of Dutch children in class, ranging from 0 to 88% ( $M = 60.0$ ,  $SD = 22.4$ ). The percentage of girls in the class was also considered; it ranged from 22 to 75% ( $M = 49.3$ ,  $SD = 10.5$ ). In addition, the total number of children or class size was added to the analyses ( $M = 22.1$ ,  $SD = 6.3$ ). It was found to correlate significantly with the percentage of Dutch children ( $0.42$ ,  $p < 0.001$ ). Classes with a high percentage of ethnic minority children tended to have fewer pupils. There were no other significant correlations between any of the aggregated and composite class-level variables.

*Analysis*

The results will be discussed in two parts. For descriptive purposes, the mean scores on the different individual level measures and their Pearson Produkt-Moment correlation will be discussed first. Furthermore, it will be examined whether there are ethnic and gender differences for these measures.

In order to examine classroom effects, we used M1wiN version 1.00 (Rasbach et al., 1998) to conduct multilevel regression analyses. Multilevel analysis allows for the simultaneous modeling of a hierarchical system of individual-level and group-level variables. Differences between children are level one of the analysis, and differences between classes level two. Information on the level of the school was not available. The dependent variable consisted of global school satisfaction. As predictors on the level of the children, ethnicity (majority and minorities) and gender were used as dummy variables, and the other measures as continuous variables. The aggregated scores for academic and social climate, the percentage of Dutch children, the percentage of girls, and class size were used as class level predictors.

In performing these analyses the following procedure was used. First of all, the question was considered whether school satisfaction can be explained by individual variables and/or characteristics of the form context. In doing so, an 'intercept-only model' was examined in which only a random intercept was fitted, without explanatory variables. This model partitions the total variance in within-group and between-group variance, allowing for differences between pupils as well as between classes to be determined. This analysis is very similar to a one-way ANOVA with random effects in which group is the independent variable (Bryk and Raudenbush, 1992). Second, we investigated which variables on the form level contributed significantly to the prediction of school satisfaction, in addition to ethnicity, gender and general life satisfaction. Subsequently, peer victimization, educational performance and teacher likeability were included in the equation. In order to examine mediation effects, the measures for perceived scholastic competence and social self-esteem were included in the final model.

TABLE I

Pearson produkt-moment correlations between the different measures: mean scores and standard deviations

	1	2	3	4	5	M	SD
1. General life satisfaction	—					6.19	1.16
2. Teacher likeability	0.14***	—				4.12	0.95
3. Peer victimization	-0.19***	-0.02	—	—	—	2.15	0.78
4. Educational performance	0.12***	0.01	-0.11***	—	—	6.82	1.61
5. Scholastic competence	0.17***	0.03	-0.15***	0.61***	—	3.53	0.61
6. Social self-esteem	0.27***	0.11***	-0.42***	0.22***	0.26***	3.95	0.72

\*\*\*  $p < 0.000$ .

## RESULTS

### *Intercorrelations and Mean Scores of Predictors*

Table I shows the Pearson Product Moment correlations between the different measures at the individual level in addition to the mean scores and standard deviations. General life satisfaction turned out to be correlated significantly with all other measures; however, the correlations were not very strong. Teacher likeability was only related to social self-esteem. Educational performance and peer victimization showed a small negative correlation. In addition, scholastic competence and social self-esteem were positively related. However, the two measures were relatively independent as they shared less than 7% of their variance. This result is in agreement with the idea that both scales measure domain-specific self-evaluations (Harter, 1985). Also in agreement with this idea is the finding that scholastic competence is related strongly and positively to educational performance but less so to peer victimization, whereas social self-esteem is related strongly and negatively to peer victimization but less so to educational performance.

To examine means, analyses of variance (ANOVAs) were performed with ethnic group (majority-minority) and gender as

factors. There were two ethnic group differences, for peer victimization,  $F(1, 1088) = 3.72, p < 0.05$ , and for perceived scholastic competence,  $F(1, 1088) = 4.65, p < 0.05$ . Minority group children turned out to be victimized more often than Dutch ones and they also had a lower sense of scholastic competence. However, the former effect was qualified by a significant interaction effect between ethnic group and gender,  $F(1, 1088) = 11.14, p < 0.000$ . Boys from ethnic minority groups reported a higher level of peer victimization than Dutch boys ( $M = 2.35$ , and  $M = 2.08$ , respectively), whereas Dutch girls reported more victimization than girls from ethnic minority groups ( $M = 2.17$ , and  $M = 2.06$ , respectively).

There were also two main effects for gender. In both majority and minority groups, boys had a greater sense of scholastic competence than girls,  $F(1, 1088) = 15.20, p < 0.000$ , and boys also reported better educational performance,  $F(1, 1088) = 17.67, p < 0.000$ .

### *Global School Satisfaction*

Global school satisfaction was assessed using a 7-point scale with 4 as the neutral position. The mean score for global school satisfaction was 5.65 ( $SD = 1.13$ ) which corresponds with a rather favorable attitude. This level of satisfaction is similar to that of other studies (e.g. Huebner & McCullough, 2000; Okun et al., 1988).

To examine whether the between-class variance is significant and thus whether characteristics of the form context determine global school satisfaction, an intercept-only model was examined, excluding explanatory variables. Model 0 in Table II shows the result.

The class-level variance turns out to be significant for school satisfaction. In some classes children are more satisfied with school than in others. The intraclass correlation (the class-level variance divided by the total variance) reveals that 7.1 percent of the variance in school satisfaction is explained by the grouping structure. This means that the variance in school satisfaction is explained not only by individual factors but also by characteristics of the context. However, the within-class variance is larger than the between-class variance. It follows that individual factors explain more variance in school satisfaction than do form features.

TABLE II

Results of multilevel regression models for school satisfaction among ethnic minority and majority children: standardized beta's

	Model 0	Model 1	Model 2	Model 3
<i>Individual variables</i>				
Ethnic minorities		0.17***	0.18***	0.15***
Girls		0.09***	0.09***	0.10***
General life satisfaction		0.38***	0.30***	0.26***
Peer victimization			-0.13***	-0.07**
Teacher likeability			0.33***	0.32***
Educational performance			0.15***	0.01
Scholastic competence				0.13***
Social self-esteem				0.16***
<i>Classroom variables</i>				
Social climate		0.07**	0.02	0.02
Academic climate		0.09**	0.08**	0.06*
Percentage Dutch pupils		0.04	0.04	0.02
Percentage girls		0.05	0.05	0.04
Class size		0.01	0.01	0.02
<i>Variance</i>				
Pupils	1.176	0.975	0.834	0.799
Classes	0.090	0.051	0.023	0.018
Loglike	2927.72	2736.49	2573.68	2529.16

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

In Model 1 we examined the extent to which ethnic group, gender and general life satisfaction as well as the class-level measures predict school satisfaction. The results show that the effect for general life satisfaction is significant. In addition, there is a significant effect for ethnic group and gender. Ethnic minority children ( $M = 5.87$ ,  $SD = 1.01$ ) experience greater school satisfaction than Dutch children ( $M = 5.57$ ,  $SD = 1.15$ ), and, as expected, girls ( $M = 5.76$ ,  $SD = 1.07$ ) are more satisfied with school than boys, ( $M =$



5.55,  $SD = 1.16$ ). There was no significant interaction effect between ethnic group and gender.

In Model 1, the three composite class-level measures made no significant contribution to the prediction of school satisfaction. Hence, the percentage of Dutch pupils in the class, the percentage of girls and the number of children were shown not to have an independent effect on school satisfaction. However, the two aggregated measures did. A more positive social and academic climate were both related to greater school satisfaction.

In Model 2, the scores for teacher likeability, peer victimization and educational performance were included. All three have an independent effect on school satisfaction. Teacher likeability and educational performance turn out to be positively related to school satisfaction, with an increased level of peer victimization being related to lower school satisfaction. The effects for the other individual level characteristics remain significant, including for the form's academic climate. The measure for social climate, however, is no longer a significant predictor. This suggests that the relationship between social climate and school satisfaction is forged by peer victimization and teacher likeability. School satisfaction is greater in classes where teachers react to incidences of peer victimization, because this reaction results in less peer victimization and a more positive attitude towards the teacher.

In Model 3, perceived scholastic competence and social self-esteem are included as additional predictors. Both affect school satisfaction. The effects for ethnic group, gender, general life satisfaction and academic climate remain significant. However, the effect for educational performance is no longer significant and the effect for peer victimization is reduced. These results suggest that perceived scholastic competence mediates the relationship between educational performance and school satisfaction, and that social self-esteem mediates the relationship between peer victimization and school satisfaction. Multiple regression analyses were performed to examine these results in more detail.

### *Mediation Analyses*

When assessing the mediation hypotheses, three preconditions must be met. The predictor variable (educational performance or peer

victimization) must be related to the predicted variable (school satisfaction), the predicted variable must be related to the proposed mediating variable (scholastic competence or social self-esteem), and the proposed mediating variable must be related to the predictor variable (Baron and Kenny, 1986). The critical test for mediation is that the relationship between the predictor variable and the predicted variable must be substantially reduced, preferably to a non-significant level, when the mediator variable is controlled. The mediator variable, of course, should remain significantly related to the predicted variable, controlling for the predictor variable.

To test the first part of the mediational hypothesis for scholastic competence, school satisfaction was regressed on educational performance. Results suggest a reliable and positive correlation,  $Beta = 0.14$ ,  $t = 4.58$ ,  $p < 0.001$ . For the second part, educational performance predicted perceived scholastic competence,  $Beta = 0.61$ ,  $t = 14.51$ ,  $p < 0.0001$ . In the final analysis, when school satisfaction was simultaneously regressed on both educational performance and perceived scholastic competence, only scholastic competence remained a reliable predictor,  $Beta = 0.24$ ,  $t = 5.92$ ,  $p < 0.001$ . For educational performance,  $Beta = 0.03$ ,  $t = 0.73$ ,  $p > 0.10$ .

The same set of analyses was conducted in order to examine social self-esteem as a mediator between peer victimization and school satisfaction. To begin with, school satisfaction was regressed on peer victimization, showing there is a significant and negative correlation,  $Beta = -0.21$ ,  $t = 7.07$ ,  $p < 0.001$ . Next, peer victimization turned out to predict social self-esteem,  $Beta = -0.42$ ,  $t = 15.36$ ,  $p < 0.001$ . Finally, school satisfaction was simultaneously regressed on peer victimization and social self-esteem. It turned out that social self-esteem was a significant and reliable predictor,  $Beta = 0.27$ ,  $t = 8.62$ ,  $p < 0.001$ , whereas the effect of peer victimization was substantially and significantly reduced,  $Beta = -0.09$ ,  $t = 3.0$ ,  $p < 0.01$ . The difference between the two associations for peer victimization and school satisfaction was significant ( $z$ -value = 2.81,  $p < 0.01$ ).

These results show that there is clear support for the hypotheses that perceived scholastic competence mediates the relationship between educational performance and school satisfaction, and that

social self-esteem mediates between peer victimization and school satisfaction.

### *Dutch and Ethnic Minority Participants*

In the previous analysis, the difference between majority (Dutch) and minority group children was examined. It goes without saying that the latter group is not a homogeneous category but includes children of many different ethnic backgrounds. Therefore we also performed an analyses of variance with ethnic group (Dutch, Turkish, Moroccan, Surinamese, Antillean, and miscellaneous) as a factor. There was a significant effect,  $F(5, 1088) = 3.51, p < 0.01$ . A post hoc test of difference of means showed that there were no significant differences between the ethnic minority groups. However, the Dutch children ( $M = 5.57$ ) had a significant lower score than the Turkish children ( $M = 5.95$ ), and they also scored lower than the Moroccan ( $M = 5.71$ ), Antilleans ( $M = 5.72$ ), the miscellaneous group ( $M = 5.73$ ), and the Surinamese, ( $M = 6.02$ ).

In addition, we performed multilevel analyses on a sample of Dutch children and on the Turkish children being the numerically largest ethnic minority group. This analysis yielded the same results as those for the whole sample (in Table III). Furthermore, additional analyses for assessing the mediation hypotheses yielded similar results.

## DISCUSSION

In agreement with previous studies (e.g. Baker, 1998; Cock and Halvari, 1999; Huebner and McCullough, 2000; Huebner et al., 2001) the findings of this study demonstrate the importance of self-perceptions and contextual conditions for school satisfaction. However, in the present study we have tried to go beyond existing research in two important ways. Theoretically, a social cognitive perspective on motivation and life satisfaction was used. Methodologically, by using multilevel modeling both individual and school variables were examined simultaneously.

Social cognitive models (see Diener et al., 1999; Osterman, 2000) as well as hierarchical models of the self (Byrne and Shavelson,

TABLE III

Results of multilevel regression models for school satisfaction among Turkish and Dutch children: standardized beta's

	Model 0	Model 1	Model 2	Model 3
<i>Individual variables</i>				
Turks		0.16***	0.18***	0.14***
Girls		0.10***	0.10***	0.11***
General life satisfaction		0.40***	0.31***	0.27***
Peer victimization			-0.13***	-0.07**
Teacher likeability			0.31***	0.30***
Educational performance			0.12***	0.02
Scholastic competence				0.17***
Social self-esteem				0.15***
<i>Classroom variables</i>				
Social climate		0.13***	0.05	0.05
Academic climate		0.11**	0.10**	0.07*
Percentage Dutch pupils		0.02	0.01	0.01
Percentage girls		0.05	0.05	0.05
Class size		0.02	0.01	0.01
<i>Variance</i>				
Pupils	1.187	0.971	0.839	0.801
Classes	0.099	0.049	0.023	0.018
Loglike	2551.91	2332.50	2239.22	2197.82

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

1996; Fleming and Courtney, 1984) propose that children's experience of successfully exercising their capacities will influence their sense of competence or self-efficacy, and that experiences of social acceptance will influence the evaluation of the social self. These self-perceptions, in turn, will affect school satisfaction. To examine these ideas we focused on educational performance and perceived scholastic competence, as well as on peer victimization and social self-esteem. Perceived scholastic compet-

ence was expected to mediate the relationship between educational performance and school satisfaction, whereas social self-esteem was expected to mediate the relationship between peer victimization and satisfaction with school. The results clearly confirm these expectations. Hence, the present results show that the mediating role of self-perceptions should be considered when examining the association between educational and social outcomes on the one hand and school satisfaction on the other. Children who perform better educationally are more satisfied with school because better performances lead to a stronger sense of scholastic competence and efficacy. In turn, children who are more victimized by peers experience less school satisfaction because their social self-esteem is affected negatively.

The idea that classroom characteristics affect satisfaction with school is a common one. However, very few studies have actually examined this idea by studying a whole array of schools and by taking individual and classroom characteristics into account simultaneously (Malin and Linnakylae, 2001). With regard to the form characteristics two conclusions can be drawn related, first, to the questions *whether* there are context effects on school satisfaction, and, second, *which* aspects of the context affect school satisfaction.

The first conclusion is that school satisfaction is not only determined by individual characteristics, but also independently by class settings and structures. This means that children from the same form are more similar to each other in respect of their satisfaction with school than they are to children from different forms. However, the results indicate that a small proportion of the total variance (7.1 percent) is explained by the class to which children belong. This smallness of the proportion of variance explained by the grouping structure is a common finding. The larger context of family and neighborhood may be one reason for this relatively low impact of the classroom context (Sorenson and Morgan, 2000). For example, the importance attached to school by parents and peers and the effect of non-school experiences and relationships (Huebner et al., 2001), may diminish the effect of form variation on school satisfaction. In addition, there are possible statistical reasons for the small proportion of explained variance. Statistically, when many schools are looked at, the error variance that is due to differ-

ences between schools may mask school effects. In addition, it is generally quite difficult to develop reliable measures for contextual variables, particularly when these variables refer to normative issues such as the academic and social climate. Thus, it is likely that the effect of the class is underestimated (Hox, 1994; Kreft, 1987).

Our second conclusion concerns the two contextual variables that were found to influence school satisfaction. The results showed an independent and direct effect of the form's academic climate. In classes with a more positive academic climate, children indicated greater satisfaction with school. In general, children like learning and consider learning gratifying (e.g. Woods, 1990). Hence, a class with a good academic climate may lead to greater school satisfaction because it offers better possibilities for learning and developing one's capacities and interests.

The results also indicated a positive effect of the form's social climate operationalized by the extent to which teachers' react to incidences of bullying. School satisfaction was greater in classes where bullying was addressed by the teacher. However, after controlling statistically for peer victimization and likeability of the teacher, the social climate in the class turned out not to have a significant effect. This suggests that the teacher's reactions to negative incidences lowers the frequency of peer victimization and improves the children's attitude towards their teacher. Experiences with victimization and the nature of the pupil-teacher relationship are both important determinants of school satisfaction.

None of the different composition measures used had significant effects. School satisfaction and the percentage of Dutch children in class, the percentage of girls, and the number of pupils, turned out to be unrelated. Hence, numerical aspects of the class situation apparently were less relevant to school satisfaction than content aspects such as the academic and social climate. This difference in numerical and content aspects is a common finding in studies on school effects (Sorensen and Morgan, 2000). The finding that global school satisfaction is not affected by, for example, the percentage of Dutch pupils does not, however, exclude the possibility that other outcomes may be affected (Verkuyten and Thijs, 2000).

In addition to these conclusions about the school context, two individual-level findings should be discussed. Ethnic and gender

differences in school satisfaction were found after controlling statistically for class characteristics, general life satisfaction, teacher likeability, peer victimization and self-perception. Dutch children had a lower score for school satisfaction than ethnic minority group children, and a separate analysis showed that there were no differences between ethnic minority groups. In agreement with the large scale study of Okun et al. (1990), these results show that the distinction between the ethnic majority and the minority groups is the main locus of the ethnic difference in school satisfaction. Furthermore, this difference in school satisfaction is not explained by ethnic differences in peer victimization, educational performance or self-perceptions. Future studies should examine the reasons why ethnic minority groups tend to be more satisfied with school. One possibility might be that there is a more positive attitude towards education among these groups (e.g. Mickelson, 1990). Another might be that school may present a rather liberal setting for ethnic minority youth compared to the strong social control at home (e.g. Dagevos and Veenman, 1992).

In agreement with other findings (Epstein, 1981; Okun, 1990), girls were found to be more satisfied with school than boys. In general, girls tend to emphasise their relatedness to others, whereas boys are more likely to stress their independence (Cross and Madson, 1997). Hence, for girls, school may offer many possibilities to develop close relationships with other children. In contrast, boys may be more concerned about differences in status and prestige in school. Future studies could examine these and other explanations for gender differences in school satisfaction.

In order to evaluate the present results, three restrictions of our research need to be considered. The first one is that no conclusions can be drawn regarding the causal relationships involved. We have attempted to identify determinants or predictors of school satisfaction, but school satisfaction may well, for example, affect educational performance. Second, the focus of this research was on global school satisfaction. School satisfaction, however, may be a multidimensional construct and its various components may be related differently to various determinants and consequences (e.g. Epstein and McPartland, 1976). Finally, only elementary school children living in the Netherlands participated in this study. There-

fore, it will be down to future studies to establish whether the present findings may be generalized to other age groups and countries.

Despite these qualifications and limitations, it is our opinion that the present research makes a contribution to the literature on school satisfaction. Children spend a great deal of their time in school, which makes it important to understand if and when children enjoy going to school and evaluate school favorably. When addressing this question, it is important to examine school satisfaction in relation to self-perception and form characteristics by means of multilevel modelling. In this way, reliable and systematic information about the determinants and processes of school satisfaction can be collected.

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