Chapter 5
Explaining Maladaptive Social Behaviour at School

Abstract

The aim of this study was to identify aspects of school environment that can influence maladaptive social behaviour (MSB) of students in an educational context. The sample consisted of 261 boys and 430 girls who followed a study program in secondary vocational education in the Netherlands. The students completed questionnaires to assess the frequency of their MSB, perceptions of school climate, social support and feelings of school identification and alienation. Results showed differences in the explanatory model for boys and girls, suggesting that educational practice and future research should differentiate between the genders with respect to MSB. School Alienation appeared to be the most important predictor for boys’ MSB at school. Perception of a competitive school climate was the best predictor for girls’ MSB at school.

Keywords: maladaptive social behaviour, adolescents, school context, school identification, school alienation
Introduction

The aim of this study is to explore which characteristics of the school environment can influence specific types of undesired behaviour of adolescents at school. Without exception, schools with an adolescent population face order problems. Resisting against rules and regulations is common this developmental phase, although it is essential to notice that not all students oppose to existing rules. It is a fact that, compared to other developmental phases, relative much risk behaviour is shown (Arnett, 1999). Some schools experience severe problems with their student population. In Dutch secondary vocational education both teachers and students report to perceive quite high levels of undesired behaviour (e.g., being threatened, things being stolen, truancy) and some students and teachers even feel unsafe at school (Neuvel, 2004). Several schools took measures to tackle these problems; they implemented compulsory identification, hired security staff, or discussed the implementation of detection gates to withhold students from bringing weapons to school.

So far, maladaptive social behaviour (MSB) at school has not frequently been the focus of research in the social sciences. We define maladaptive social behaviour as behaviour that, according to the majority of the reference group in a certain context is undesirable or inappropriate. It is important to notice that we consider both ‘very undesirable behaviour’ (for example delinquent behaviour) and a ‘little inappropriate behaviour’ (for example impolite behaviour) as MSB. Traditionally, research on MSB is focused on severe problematic behaviour. In a review conducted on empirical research on MSB of adolescents, we concluded that most research is focused on delinquent behaviour and/ or substance use (Koerhuis & Boekaerts, 2006). Less research is available on less severe MSB like oppositional behaviour, truancy or impolite behaviour.

In research on MSB a distinction between different contexts in which MSB occurs is seldom made. Research has shown that general MSB and MSB at school often co-occur (Vettenburg, 1998; Lamborn, Mounts, Steinberger & Dornbusch, 1991; Hundleby, Carpenter, Ross & Mercer, 1981). However, the correlation between these types of MSB is only moderate. For example, Vettenburg (1998) found a correlation of .39 between general delinquent behaviour and delinquent behaviour at school, Lamborn et al. (1991) found a correlation of .49, and Hundleby et al. (1981) found a correlation of .23. Furthermore, several examples of MSB are inherently school specific, for example disruptive behaviour in the classroom, truancy and provoking teachers. Hence, it seems accurate to treat general MSB and MSB at school separately. This view is theoretically supported by recent theories (e.g., Shoda & Mischel, 2000; Boekaerts & Corno, 2005) that take into account situation-specificity. Most researchers acknowledge the influence of both personality and environment on the occurrence of MSB, but relatively new is the growing attention for the interaction process between person and environment.

In line with this perspective, theories of self-regulation give specific attention to interactive processes. In these theories MSB is considered as a reaction to perceived goal frustration (e.g., Boekaerts & Corno, 2005). In previous research Hijzen, Boekaerts & Vedder (2006) reported that students aim to achieve multiple goals. In secondary vocational education, students aim to achieve both school goals and personal goals (e.g., entertainment goals, social support goals, self-determination goals). When significant goals cannot be achieved or are thwarted, frustration may be experienced. If at such a point students do not have access to
adequate self-regulation strategies (e.g., coping or volitional strategies), MSB can be a reaction to this frustration. However, MSB can also be used as a way to achieve personal goals. Students may skip school, disturb the lessons or chat to have fun (entertainment goals), or make fun of teachers and other students to gain popularity. A few studies support this view. For example, Rose, Swenson & Walle (2004) found a positive relationship between aggressive behaviour and popularity of adolescents, and Bru (in press) found that oppositional behaviour in class was predicted by students’ beliefs that going against school norms would increase peer status. In another study (Maggs, Almeida & Galambos, 1995) a similar result was found, namely that MSB was positively related to peer acceptance and involvement. They also found that school misbehaviour was more frequently shown by students who experienced this as fun.

Perceptions of features of the environment are expected to be of essential importance in the self-regulation process. Boekaerts & Corno (2005) concluded in their review that when students perceive that both school- and personal goals are facilitated by the environment (e.g., school context), they view the learning environment as favourable for learning, and little effort is probably needed to stay on task.

School Context

School climate

How students perceive school climate (e.g., characteristics of the social, academic and organizational climate of a school) is of essential importance to goal achievement, and thus on the amount of MSB at school. Perceived school climate provides opportunities to achieve certain goals, but it can also influence students’ goal choice. For example, when students perceive that a lesson is useful and challenging, they will probably persist longer in trying to complete their task, instead of aiming for personal well-being goals (e.g., having fun) by distracting other students. Several studies have shown the relative importance of school characteristics in relationship with MSB at school. These studies showed that features of the perceived school climate contributed more to the explanation of MSB at school than family characteristics (Vettenburg, 1998; Vazsonyi & Pickering, 2003), and individual and peer characteristics (Laufer & Harel, 2003). However, few studies have investigated the relationship between specific school characteristics and specific types of school related MSB. Smyth (1999) found that truancy was lower in schools which enhanced academic progress among pupils. These schools were associated with positive teacher-student relations and a positive academic climate within school. Also, positive perceptions of teacher characteristics, relationship with teachers and students, and clarity of rules, are associated with lower levels of MSB (e.g., McEvoy & Welker, 2000).

Social support

Social support can be considered as a specific type of (school) context variable. We define social support as the amount of support students perceive to receive when facing a specific difficulty. Hence, even more then perception of school
climate, social support refers to specific situations concerning the individual. Just like the perception of school climate, students' perceptions of instructional and emotional support are assumed to facilitate the fulfilment of students' academic and personal goals. From a sociological point of view it was argued that social support increased students' attachment to a person or school, which makes the student more open to adopt the norms of that person or of school (e.g., Hirschi, 1969). From a self-regulation perspective we can add that the increase in openness is due to the enlarged chance that the need for social relatedness will be fulfilled when a student behaves according to the norms. An adequate amount of social support can help students to reach their goals by motivating them to persist, concentrating on their academic goals, and stimulating them to pursue social goals (Wentzel, 1994), thus withholding them from showing MSB. Findings of Vedder, Boekaerts & Seegers (2004) support this. They reported that support from teachers was a significant predictor for student's motivation. Three important agents can be distinguished: parents, teachers, and peers.

The relationship between parental social support and MSB has frequently been assessed. In general, researchers found negative relations between parental support and the amount of MSB (Bru, Murberg & Stephens, 2001; Haynie et al., 2001; Laufer & Harel, 2003). The relationship between peer support and MSB is ambiguous. Peer support can both increase and decrease MSB, depending on the norms of the peer group (Ryan, 2000). As mentioned previously, a few studies found a positive relationship between school misbehaviour and peer involvement (Maggs, et al. (1995) and between MSB and popularity (Rose, et al. (2004). Bru et al. (2001) found a negative relationship between MSB and peer support, and Wentzel (1994) did not find a significant relationship. A positive perception of both social and academic teacher support is associated with lower levels of students' MSB (Wentzel, 1994; Ryan & Patrick, 2001; Bru et al. (2001). In another study, Bru, Stephens, & Torsheim, (2002) found that emotional support from the teacher was more strongly related to students’ MSB (bullying, off task behaviour and opposition toward the teacher) at school than teachers’ academic support.

**School identification and school alienation**

Beside school achievement, students' feelings about school are one of the most frequently assessed school related variables. Several researchers have shown a significant relationship between feelings of school identification and alienation with delinquent behaviour, bullying behaviour and drop-out (e.g., Janosz, LeBlanc, Boulerice, & Tremblay, 2000; Haynie, Nansel, Eitel, Crump, Saylor, Yu & Simons-Morton, 2001; Laufer & Harel, 2003). Several operationalizations for these concepts are used. In this study we define School Identification as the amount that students feel their school/ study program is important to their future. School Alienation is defined as the amount that students want to change their study program. Students who feel their study program is important are expected to regulate their behaviour adequately and conform to the norms and values of this institution, because they realize that in this way their goals (e.g., achieving a diploma) have the best chance to be fulfilled. Students who feel alienated, who want to study something else, may feel frustrated and react with MSB.

In turn, feelings of school identification and alienation are expected to moderate the influence of contextual factors and MSB at school. In some studies
school identification and alienation are used as predictors for outcome variables (e.g., performance, absence, drop-out). Other studies assessed what (school) variables can predict school identification and alienation. For example, De Koning & Boekaerts (2005) reported in their study that students’ feelings of school identification were up to 40% explained by school climate variables (e.g., students’ perception of teacher expectations and course utility). In their study, ten percent of the variance of school alienation was predicted by perception of school characteristics, such as course utility, teacher humour and competitiveness.

More research is available on the relationship between social context variables and students’ feelings about school than on the relationship between academic context variables and feelings about school (Fredericks, Blumenfeld & Paris, 2004). Research has shown a positive relationship between social support and students’ school identification (Steinberg & Avenevoli, 1998; Cotterell; 1996). For example, teacher support was found to be positively related to school identification (Wentzel, 1997; Fredericks, et al. 2002). Furrer & Skinner (2003) found a positive relationship between support of teachers and peers, and students’ feelings about school.

Gender

Numerous studies found that in adolescence, boys and girls differ in the amount and type of MSB they show. Especially externalizing behaviour (e.g., delinquent behaviour, aggressive behaviour) is reported more for boys than girls. For example, Bru et al. (2002) found that boys reported more bullying behaviour, off task orientation and opposition toward the teacher than girls. Stevens, Pels, Bengi-Arslan, Verhulst, Volleberth & Crijnen (2003) found that teachers reported more externalizing behaviour for boys than girls, but no differences were found between boys and girls on the frequency of internalizing behaviour. Other studies found that girls showed more internalizing behaviour, like depressive or anxiety (e.g., Nolen-Hoeksema & Girgus, 1994).

Differences between boys and girls (externalizing) MSB seem persistent. Causes for this difference have been sought in biological and environmental characteristics. A conclusive answer is hard to formulate. On the one hand it is possible that girls naturally are less likely to show MSB, because they are be more reluctant to show their frustration this way. On the other hand our society accepts MSB of girls less than of boys, implying that girls have learned to deal with their frustration in a different ways. Because boys and girls differ in the frequency and types of MSB they show, it is important to look more closely at the variables that are associated with MSB in males and females. Gender is often used as a control variable and frequently differences between the genders are computed, but data are seldom analyzed separately for boys and girls and compared with each other.

This study

In summary, we expect that students’ perception of school context (school climate, social support and feelings about school) is important to the amount MSB students report at school. As far as we know, no research is available on the relationship between a wide range of concrete school features and various specific
types of MSB. Hence, we do not know which specific features influence specific
types of undesired behaviour for boys and girls. In this study we argue that it is
essential to study the relationship between a wide range, concrete, context variables
and specific types of MSB. More insight in the complex relationship between
environment and behaviour can be achieved. Furthermore, results will be more
specific and of more use to practice. The purpose of this study is to explore what
aspects of school context can predict boys' MSB and girls' MSB in secondary
vocational education. Furthermore, we want to assess how these relationships are
moderated by students’ feelings of school identification and alienation. Results for
boys and girls will be compared.

Method

Population and Sample

About 60 percent of the children in the Netherlands go to secondary
prevocational education. In four years students can pass their exam which gives
them access to secondary vocational education. Relatively many children from
households with a low to middle social economic status attend this type of education
(Vogels & Bronnemans-Helmers, 2000). In the Netherlands the population of
students in secondary vocational education consists of approximately 470.000
students.

Nine-hundred-twenty-one students from secondary vocational education
reported the frequency of their maladaptive social behaviour and their perception of
school climate. Students from 11 vocational schools spread over the Netherlands
and 8 departments (e.g., ‘technical department’ and ‘health department’) participated. The mean age was 18,5 years (Sd = 1,57), Of the respondents 31 %
was male and 53 % was female, 16 % did not report their gender. Sixty-eight
percent of our sample was of Dutch origin, 16 % had one or more parents that were
born in another country (5,9 % Turkish/ Moroccan, 3,3 % Surinam/ Antillean, 7,1 %
other), and 16 % did not report their ethnic identity. The majority of the students
reported that the educational level of their parents was low (40 %), 15 % was
educated at a medium level, and 10 % at a high level. Sixteen percent of the
respondents did not know the educational level of their parents and 18 % gave no
response.

Instruments

Maladaptive Social Behaviour

In line with the theoretical framework, we developed a new instrument to
measure adolescents’ maladaptive social behaviour in a specific context. Existing
instruments to measure MSB did not suffice our purpose for several reasons: a)
They did not ask for a wide range of MSB (often only severe problematic or
delinquent behaviour was assessed), b) they did not ask for concrete examples of
MSB at school (often general statements were used, for example ‘behaves too
young for his/her age’, ‘brags’ and ‘achieves insufficiently’; CBCL; Achenbach,
1991), c) they did not question the frequency of MSB, d) they were not self-report instruments, or e) they were not suitable for adolescents.

To construct categories of maladaptive social behaviour and statement descriptions typical for these categories observations were done and students and school-staff of vocational education were interviewed about students' maladaptive social behaviour in school. In addition, a review on relevant literature and instruments that measure antisocial behaviour was conducted. In three pilot-studies the internal validity of the Questionnaire for Maladaptive Social Behaviour (QMSB) was optimized. In two later data-waves, confirmatory factor analyses showed adequate fit indices for both boys and girls (NFI ≥ .97, CFI ≥ 1.00) (Koerhuis, De Koning, & Boekaerts, Submitted). Next, the convergent and discriminant validity of the instrument was assessed in three studies. First, data of two waves were compared to assess the stability of the constructs. Secondly, scales of the QMSB were compared with scales of the Youth Self Report (Achenbach, 1991), and thirdly, estimation of teacher on student behaviour was compared with self-report. Satisfactory support for convergent validity was found, but discriminant validity was only partly supported (see Koerhuis & Boekaerts, Submitted).

The QMSB consists of 49 items pertaining to 5 scales, namely Maladaptive Social Behaviour toward Schoolwork and Rules, Delinquent Behaviour, Unfriendly Behaviour, Withdrawn Behaviour, and Impolite Behaviour. Students were asked to report the frequency of their behaviour at school, during the last three months on a 5-point Likert-scale (i.e. never, not often, sometimes, pretty often, very often). Table 1 shows all measures that are used in this study, including a statement example, the number of items per scale, the mean and standard deviation for boys and girls.

School Identification and School Alienation

A part of the U-gids (e.g. liedema, Meeus, & De Goede, 1996; Meeus, 1996), an instrument to measure students' identity, was adapted to assess to what extent students identify with, or feel alienated from school. Two scales were derived. A scale for School Identification (e.g., how much do students feel their education gives them security for their future) and a scale for School Alienation (to what extent students feel they would rather follow a different study program). Students were asked to state how much they agreed with each statement on a 4-point Likert-scale (i.e. do not agree at all, do not agree, agree, agree very much).

School Context

Two questionnaires were used to measure a wide range of school context characteristics in secondary vocational education. De Koning and Boekaerts (2003) developed a questionnaire to assess students' perception of school climate. Fourteen scales were identified, referring to four domains; 5 scales measured competence supporting features (teacher expectations, course utility, teacher learning support, school material support, school procedural support), 5 scales assessed students' perception of the relationship between students and teachers, and between students (teacher involvement, teacher righteousness, teacher humour, mutual involvement, mutual support), 3 scales assessed students' perception of autonomy at school (students' influence, personal respect,
competitiveness), and 1 scale assessed students’ perception of safety at school. This questionnaire consists of 67 items. Students were asked to report how much they agreed with each statement on a 4-point Likert-scale (i.e. do not agree at all, do not agree, agree, agree very much).

In addition a questionnaire was used to assess students’ perception of received social support. The Questionnaire for Social Support (Boekaerts, 1987; Vedder, Boekaerts, & Seegers, 2005) asks students who gives them support; their teachers, parents, and/or peers, when facing instructional and emotional difficulties at school. They answered on a 4-point Likert-scale (almost never, not often, pretty often, very often). Six scales measure emotional and instructional support for each of the three agents (teachers, parents, peers).

Background Variables

Beside their gender, students were asked to report on their ethnic origin and the educational level of their parents. According to several studies (Vogels & Bronnemans-Helmers, 2000; Bradley & Corwyn, 2002), social economic background is related to frequency of maladaptive behaviour. Parental educational level is regularly used as an indicator of the social economic background. Educational level of parents was asked by offering all possibilities present in the Dutch educational system. Also a category ‘don’t know’ was added. Categories were later transformed in ‘low’, ‘middle’ and ‘high’ educational level.

The relatedness of ethnic origin and maladaptive behaviour remains unclear. Because migrant families live relatively frequently under economic deprived circumstances, it is possible that students from these families report more MSB at school. The extra tensions, caused by problems related to a low SES (e.g., poverty, accommodation problems), as well as the migrant status itself (e.g., cultural differences, discrimination) might trigger MSB more frequent in students from an ethnic minority than in autochthonic students. Students were asked to report the country they were born in as well as their parents’ homeland. Possible answers were ‘Dutch’, ‘Turkish’, ‘Moroccan’, ‘Surinam’, ‘Antillean’, ‘other’ or ‘don’t know’. These options were chosen because the groups mentioned are the largest minorities in the Netherlands. The categories ‘Turkish’ and ‘Moroccan’ as well as the categories ‘Surinam’ and ‘Antillean’ were later merged. Though their nationalities are different, cultural characteristics are comparable (Vedder, Eldering, & Bradley, 1995).

Procedure

The students were informed about the subject of the study and participated voluntarily. Data collection took part half-way during the students’ second year in secondary vocational education. They completed the questionnaires in regular lessons and confidentiality was guaranteed.
Analyses

First we assessed if there were differences in the frequency of MSB between the two genders, ethnic origin, course level and educational level of the students’ parents.

Secondly, we explored which predictors (school context variables, school alienation and school identification), were salient in the explanation of each type of MSB. In addition, we explored which school climate and social support variables were salient determinants for school identification and alienation. Correlations were therefore computed between the school context variables, school alienation, school identification and each type of MSB. The variable with the highest correlation with MSB was used in a regression analyses. The unstandardized residual was saved and again, we examined if one of the other predictors was significantly related to a specific type of MSB. This process was repeated until none of the predictors were significantly related to the unstandardized residual. A Bonferroni correction was conducted and the critical p-value was changed from .05 in .01. Using unstandardized residuals has two major advantages: In this way detection of the most salient determinants is possible, because it is assessed whether or not unique variance of MSB can be explained by a new predictor. Furthermore, suppression effects can not occur. The same procedure was followed to detect salient determinants for school alienation and school identification.

Finally, the detected salient determinants were used in a structural equation model to investigate the fit of the model. We use SEM to investigate the complete model with several paths. In this way we can assess if detected salient determinants are still significant when they are situated in a model with other salient determinants. Analyses were conducted separately for boys and girls.

Results

Descriptive results

When controlled for the influence of gender, no significant differences were found in the amount of students’ self-reported MSB, School Identification and School Alienation between the course levels, educational level of parents, and ethnic origin. In line with other research, boys reported significantly more MSB than girls for all types of MSB. Table 1 shows the t-statistics and p-values to indicate the difference between boys and girls for all assessed variables. Boys and girls also differed in their feelings of school identification and school alienation. Girls reported to identify more with school, and think less than boys about changing their study program (School Alienation). Boys and girls did not differ in their perception of most aspects of school climate, but gender differences were found for the perceived influence at school and perceptions of competitiveness. Boys judged that they had more influence and they also perceived more competitiveness at school. Girls reported more emotional and instructional support from their parents, and they also reported to get more emotional support from their peers at school than boys.
Table 1: Number of items, Cronbach's alpha, mean, standard deviation, t-statistics and p-value on each variable for boys and girls.

<table>
<thead>
<tr>
<th>Category</th>
<th>Statement Examples</th>
<th>Boys (n=282)</th>
<th>Girls (n=426)</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maladaptive social behaviour</td>
<td>How often have you done this at school lately?</td>
<td>11 (.92, 2.42)</td>
<td>.40, 2.10</td>
<td>.63</td>
<td>6.57</td>
</tr>
<tr>
<td>Rules</td>
<td>Making up excuses why you did not finish your homework in time.</td>
<td>15 (.97, 1.52)</td>
<td>.86, 1.15</td>
<td>.46</td>
<td>6.89</td>
</tr>
<tr>
<td>Delinquent Behaviour</td>
<td>Using drugs at school</td>
<td>9 (.92, 1.96)</td>
<td>.87, 1.43</td>
<td>.58</td>
<td>9.26</td>
</tr>
<tr>
<td>Withdrawn Behaviour</td>
<td>Isolating yourself from other students</td>
<td>9 (.91, 2.11)</td>
<td>.81, 1.88</td>
<td>.63</td>
<td>4.33</td>
</tr>
<tr>
<td>Impolite Behaviour</td>
<td>Not thanking a teacher when he/she does something for you</td>
<td>5 (.93, 1.91)</td>
<td>.93, 1.50</td>
<td>.67</td>
<td>6.71</td>
</tr>
<tr>
<td>School identification alienation</td>
<td>School gives me security in life</td>
<td>5 (.91, 2.76)</td>
<td>.56, 2.85</td>
<td>.47</td>
<td>-2.35</td>
</tr>
<tr>
<td>School climate</td>
<td>In our school........</td>
<td>2 (.90, 2.54)</td>
<td>.82, 2.29</td>
<td>.83</td>
<td>4.02</td>
</tr>
<tr>
<td>Teacher expectations</td>
<td>Teachers believe in your capacities</td>
<td>6 (.92, 2.83)</td>
<td>.52, 2.86</td>
<td>.45</td>
<td>-.87</td>
</tr>
<tr>
<td>Course utility</td>
<td>You get a good education</td>
<td>4 (.85, 2.74)</td>
<td>.53, 2.76</td>
<td>.51</td>
<td>-.63</td>
</tr>
<tr>
<td>Teacher learning support</td>
<td>Teachers explain things in several ways</td>
<td>4 (.86, 2.76)</td>
<td>.53, 2.76</td>
<td>.51</td>
<td>-.17</td>
</tr>
<tr>
<td>School material support</td>
<td>Are enough educational tools</td>
<td>3 (.79, 2.80)</td>
<td>.59, 2.75</td>
<td>.54</td>
<td>1.14</td>
</tr>
<tr>
<td>School procedural support</td>
<td>It is clear how to slow down the course</td>
<td>3 (.80, 2.73)</td>
<td>.54, 2.65</td>
<td>.53</td>
<td>1.95</td>
</tr>
<tr>
<td>Teacher involvement</td>
<td>Teachers and students trust each other</td>
<td>5 (.87, 2.75)</td>
<td>.51, 2.76</td>
<td>.48</td>
<td>-.31</td>
</tr>
<tr>
<td>Teacher righteousness</td>
<td>Teachers keep their promises</td>
<td>5 (.85, 2.76)</td>
<td>.50, 2.78</td>
<td>.46</td>
<td>-.53</td>
</tr>
<tr>
<td>Teacher humour</td>
<td>Teachers have humour</td>
<td>5 (.86, 2.53)</td>
<td>.63, 2.48</td>
<td>.53</td>
<td>1.13</td>
</tr>
<tr>
<td>Mutual involvement</td>
<td>Students treat each other with respect</td>
<td>5 (.86, 2.86)</td>
<td>.42, 2.83</td>
<td>.42</td>
<td>.96</td>
</tr>
<tr>
<td>Mutual support</td>
<td>Students help each other with their study</td>
<td>4 (.83, 2.80)</td>
<td>.51, 2.75</td>
<td>.47</td>
<td>1.58</td>
</tr>
<tr>
<td>Student influence</td>
<td>Students and teachers decide together what should be done</td>
<td>8 (.90, 2.57)</td>
<td>.55, 2.46</td>
<td>.56</td>
<td>2.94</td>
</tr>
<tr>
<td>Personal respect</td>
<td>You can be yourself</td>
<td>5 (.91, 2.95)</td>
<td>.46, 2.93</td>
<td>.48</td>
<td>.628</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>You gain more respect when you dare a lot</td>
<td>4 (.89, 2.57)</td>
<td>.56, 2.36</td>
<td>.56</td>
<td>5.06</td>
</tr>
<tr>
<td>Safety</td>
<td>Students are not threatened</td>
<td>6 (.86, 2.73)</td>
<td>.56, 2.78</td>
<td>.55</td>
<td>-1.16</td>
</tr>
<tr>
<td>Social support</td>
<td>How much would you like to receive support from...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional supp. of teachers</td>
<td>A teacher when there is something you don't understand</td>
<td>5 (.81, 2.69)</td>
<td>.61, 2.70</td>
<td>.60</td>
<td>-2.52</td>
</tr>
<tr>
<td>Instructional supp. of peers</td>
<td>A peer when there is something you don't understand</td>
<td>5 (.84, 2.81)</td>
<td>.61, 2.87</td>
<td>.59</td>
<td>-1.36</td>
</tr>
<tr>
<td>Instructional supp. parents</td>
<td>A parent when there is something you don't understand</td>
<td>5 (.77, 2.42)</td>
<td>.75, 2.59</td>
<td>.73</td>
<td>-2.95</td>
</tr>
<tr>
<td>Emotional supp. of teachers</td>
<td>A teacher when you are sad</td>
<td>5 (.82, 2.15)</td>
<td>.71, 2.09</td>
<td>.67</td>
<td>1.01</td>
</tr>
<tr>
<td>Emotional supp. of peers</td>
<td>A peer when you are sad</td>
<td>5 (.86, 2.50)</td>
<td>.71, 2.70</td>
<td>.68</td>
<td>-3.63</td>
</tr>
<tr>
<td>Emotional supp. of parents</td>
<td>A parent when you are sad</td>
<td>5 (.82, 2.83)</td>
<td>.76, 3.13</td>
<td>.70</td>
<td>-5.40</td>
</tr>
</tbody>
</table>
Salient determinants

Analyses were conducted separately for boys and girls. Delinquent Behaviour was analyzed as a dichotomous variable, because its distribution was extremely skewed. Table 2 shows the significant correlations (\(p < .01\)) between the salient predictors and each type of MSB, School Alienation and School Identification. In the sample of boys School Alienation was the most important determinant of MSB toward Schoolwork and Rules, Delinquent Behaviour, Unfriendly Behaviour and Impolite Behaviour. The perception of Personal Respect was highest related to Withdrawn Behaviour. This predictor was also significantly related to Impolite Behaviour. For Delinquent Behaviour, Unfriendly Behaviour and Withdrawn Behaviour a teacher related variable was important, respectively Teacher Involvement, Teacher Learning Support and Teacher Humour. It is important to notice that Teacher Humour was positively related to Withdrawn Behaviour, indicating that students who perceive their teacher to make more fun in class show more Withdrawn Behaviour. Finally School Identification predicted MSB toward Schoolwork and Rules.

Table 2: Correlations between salient determinants for each type of MSB, school identification and school alienation for boys and girls.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Boys</th>
<th></th>
<th>Girls</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predictor</td>
<td>r</td>
<td>Predictor</td>
<td>r</td>
</tr>
<tr>
<td>Msb toward schoolwork</td>
<td>School alienation</td>
<td>.291</td>
<td>Competitiveness</td>
<td>.193</td>
</tr>
<tr>
<td>Res_1</td>
<td>School identification</td>
<td>-.218</td>
<td>Teacher humour</td>
<td>-.210</td>
</tr>
<tr>
<td>Res_2</td>
<td></td>
<td></td>
<td>Safety</td>
<td>-.131</td>
</tr>
<tr>
<td>Delinquent Behaviour</td>
<td>School alienation</td>
<td>.210</td>
<td>School alienation</td>
<td>.260</td>
</tr>
<tr>
<td>Res_1</td>
<td>Teacher involvement</td>
<td>-.171</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfriendly Behaviour</td>
<td>School alienation</td>
<td>.221</td>
<td>Competitiveness</td>
<td>.206</td>
</tr>
<tr>
<td>Res_1</td>
<td>Teacher leaning support</td>
<td>-.236</td>
<td>Teacher learning support</td>
<td>-.149</td>
</tr>
<tr>
<td></td>
<td>School alienation</td>
<td>.253</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawn Behaviour</td>
<td>Teacher humour</td>
<td>.166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Res_1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impolite Behaviour</td>
<td>School alienation</td>
<td>.291</td>
<td>School alienation</td>
<td>.167</td>
</tr>
<tr>
<td>Res_1</td>
<td>Personal respect</td>
<td>-.238</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School identification</td>
<td>Teacher expectations</td>
<td>.636</td>
<td>Course utility</td>
<td>.513</td>
</tr>
<tr>
<td>Res_1</td>
<td>Course utility</td>
<td>.259</td>
<td>Teacher expectations</td>
<td>.264</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Emotional support</td>
<td>.158</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>parents</td>
<td></td>
</tr>
<tr>
<td>School alienation</td>
<td>Mutual support</td>
<td>.167</td>
<td>Competitiveness</td>
<td>.360</td>
</tr>
</tbody>
</table>

Boys’ feelings of School Identification were most strongly correlated to Teacher Expectations and Course Utility. When students perceive their teachers believe in their capacities and they perceive their course to be very important, students feel more their education is important to their future. School Alienation was positively related to Mutual Support. This means that students who perceive a lot of support from their fellow students, feel more they want to change their study program.
Figure 1: Model for Boys (dashed lines indicate negative paths).

Teacher expectation
Course utility
Mutual support
Teacher involv.
Teacher learning s
Teacher humor
Personal respect
School Identification
School Alienation
MSB toward School
Delinquent Behaviour
Unfriendly Behaviour
Withdrawn Behaviour
Impolite Behaviour

.46
.30
.16
-.16
-.17
.11
-.21
-.14
.53
.30
-.20
.30
.23
.23
.24
.30
.97
.92
.90
.90
.93
.87
Figure 2: Model for Girls (dashed lines indicate negative path, round dotted lines indicate non significant paths).
In the sample of girls fewer variables seem salient determinant for their MSB at school. School Alienation was the most salient determinant for Delinquent Behaviour and Impolite Behaviour. Perception of Competitiveness at school was significant related to MSB toward Schoolwork and Rules, and Unfriendly Behaviour. Perceptions of Teacher Humour and Safety were also significantly related to MSB toward Schoolwork and Rules. Perception of Teacher Learning Support was negatively related to Unfriendly Behaviour and perception of Mutual Support was negatively related to Withdrawn Behaviour.

Feelings of School Alienation were significantly related to the girls’ perception of Competitiveness. Like in the sample of boys girls’ feelings of School Identification were most strongly related to their perception of Course Utility and Teacher Expectation. In addition girls’ perception of Emotional Support from their Parents was significantly correlated to School Identification. Finally, it is surprising that this variable was the only salient social support variable.

**Testing the Models**

The detected salient predictors for maladaptive social behaviour, school identification and school alienation suggested the following models (Figure 1 for boys and Figure 2 for girls). These models were tested in LISREL 8.7 (Jöreskog, 2004).

The initial models for both boys and girls showed a rather good fit (boys: $\chi^2 = 51.65; df = 46; p = .262; \text{RMSEA} = .022$, girls: $\chi^2 = 102.44; df = 55; p = .0001; \text{RMSEA} = .045$). In the model for boys no modification were suggested and all drawn paths were significant. Explained variance for the different types of MSB varied between 13% for MSB toward Schoolwork and Rules to 7% for Delinquent Behaviour. Forty-seven percent of the variance in School Identification could be explained by Teacher Expectation and Course Utility. On the other hand, only 3% of the variance in School Alienation could be explained, and this by an unexpected relationship; it suggests that more Mutual Support would lead to more School Alienation. This implies that students who perceive students help each other at school a lot, feel more they want change their study program.

In the model for girls some modifications were suggested. Therefore we ‘trimmed’ the models, by deleting insignificant paths and/or adding significant paths, one by one. For girls three paths were not significant in the initial model: The paths from Safety to MSB toward Schoolwork and Rules, the path from Teacher Learning Support to Unfriendly Behaviour and the path from Mutual Support to Withdrawn Behaviour. No additional paths were suggested. This model had slightly less good fit indices than the initial model ($\chi^2 = 111.80; df = 58; p = .00002; \text{RMSEA} = .048$). Only small amounts of variance of MSB could be explained and Withdrawn Behaviour could not be predicted at all. Girls’ maladaptive school behaviour does not seem to depend substantially on their perception of the assessed contextual characteristics, nor on their feelings of school identification or alienation.
Conclusion

We need to start with a limitation of this study. Our sample was suffering from relative high rates of missing data (for example on gender). Due to this we had to exclude several students from our data analysis. This may have caused a biased sample. Results from this study should therefore not be generalized without caution.

In general, it was not easy to explain different types of maladaptive social behaviour of students in secondary vocational education by their perception of school climate, social support and feeling of school identification and alienation. The models that were found for boys and girls differed substantially, indicating that it was indeed justified to analyze the data for these groups separately. Girls reported less MSB and different factors appeared to be of influence than in the male sample. More variance in boys’ MSB could be explained by the model. This finding is supported by other studies (e.g., Laufer & Harel, 2003; Storvoll & Wichstrom, 2002). They found that there is a stronger influence of school related context variables on boys’ MSB than on girls’ MSB. Garnefski & Okma (1996) also reported that school problems were better predictors for boys’ delinquent and aggressive behaviour, while for girls problems at home were better predictors. As mentioned previously, girls report less MSB than boys in the first place. Hence, in the sample of girls less variance can be explained, which could be a cause of the less strong relationships we found in this study. The lower acceptance of girls’ MSB than boys’ MSB in our society might be a reason for girls to cope with their frustration in a different way than boys; for example by talking to their friends or parents about it. Furthermore, they might be able to achieve their personal well-being goals in other ways than using MSB, for example being good looking to achieve popularity, or using very subtle ways of MSB (for example, ‘I don’t like short hair’, when a girl with short hair is walking by) to enhance their own wellbeing.

For both genders, the perception of the course utility, teacher expectations enhanced their feeling of school identification (feeling that their education gives security for the future). Contrary to findings of other researchers and our own expectation that school identification would be an important predictor of MSB at school, we found this was only the case for boys’ MSB toward Schoolwork and Rules. In summary, although school identification could be predicted by school context variables quite well, it was not of major importance in predicting MSB. By contrast, in the sample of boys only 3% of the variance of School Alienation could be explained by school context variables, but it had relatively strong predictive power on MSB. Apparently, boys’ feelings of school alienation are not dependent on their perception of school context. Possibly, students’ feelings that they would rather be doing something else - be at another study program or school (as is our definition of School Alienation) - are so important, that they do not care about school characteristics anymore. Irrespective of school characteristics, they may react to their frustration with several types of MSB. School Alienation predicted all five types of MSB. This could indicate that for boys feelings of school alienation are related to an overall construct of MSB. It is therefore important that future research assesses what causes boys’ feelings
of school alienation. It seems important that teachers pay close attention to boys' motivation for school, their specific interests and ambitions for their future career.

A contextual factor that proved to be relatively important was boys' perceptions of Personal Respect. For boys, perceiving that you can be yourself at school was associated with less Withdrawn and Impolite Behaviour. For girls this variable did not play a significant role. For girls, the perception of competitiveness at school was an important predictor. Perceiving that the reward structure at school depended on 'being the best' led to more MSB toward Schoolwork and Rules, Unfriendly Behaviour, and feelings of School Alienation. Furthermore, School Alienation moderated the relationship between Competitiveness and Delinquent Behaviour and Impolite Behaviour. The importance of Competitiveness is in line with self-determination theory (e.g., Deci & Ryan, 1985). This theory states that external motivation is promoted by comparing students and rewarding 'the best'. It is further argued that schools should be mastery oriented to promote intrinsic motivation. In mastery oriented classrooms, students are given rewards when they achieved good insight in the course content, this stimulates their intrinsic interest in the task, stimulates their persistence in investing energy in the task, thus withholding them from trying to achieve well being goals by MSB. For the boys in our sample Competitiveness was not an important predictor, although boys perceived more competitiveness at school than girls. Boys might be less sensitive to, or more challenged by “being the best”.

It is remarkable that both in the sample of boys and girls school climate variables appeared important from the ‘competence domain’ (Course Utility, Teacher Expectations, Teacher Learning Support), the ‘relationship domain’ (Teacher Humour, Teacher Involvement, Mutual Support) and the ‘autonomy domain’ (e.g., Personal Respect, Competitiveness) in predicting feelings about school or MSB. The ‘competence’ variables seem especially important for feelings of School Identification, the variables from the ‘relationship’ and ‘autonomy’ domain frequently have a direct effect on one or more types of MSB. This finding supports our expectation that it is interesting and useful to use a wide range of specific context variables in relationship with specific types of MSB.

Compared to the perception of school climate, the perception of social support made hardly any contribution in the explanation of MSB, School Identification and School Alienation. Some social support variables were significantly correlated to MSB, School Identification or School Alienation, but their possible explanatory power was taken by school climate variables. School climate variables are formulated in a more concrete way, referring to specific supportive actions of teachers, instead of the general formulation of receiving support in the Social Support Questionnaire. This could be reason that social support did not make a significant contribution in our study.

It should be noticed that overall, students seemed rather positive about school and social support they received. It would be interesting to analyze the data in a more person oriented way to assess if students with different perceptions of school climate exposed different levels or types of MSB. In addition, it would be interesting to investigate if schools differ in the amount of MSB that is reported by boys and girls and in their perception of school and
social context. It is possible that students attending different schools perceive specific contextual features at their school differently (as very positive or very negative), and that these perceptions have a unique relation with the types of MSB that they display.
References


Boekaerts, M. (1987). *De social support vragenlijst [The social support questionnaire]*. Nijmegen: Department of Educational Psychology.


