Segregation in the classroom: What does it take to be accepted as a friend?

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Abstract   Research on students' social relationships shows their preference to associate with similar peers. This study focused on the similarity in selection criteria used by students to form groups and similarity of characteristics of existing groups in schools. It compared these criteria to those of isolated students. The sample consisted of 124 students aged 14–15. The results revealed that the assessment of peers' social skills was a relevant selection criterion, and that global self-esteem, well-being, and, physical activity were important variables in describing groups. The selection criteria and group characteristics of isolated students did not match those of the groups. The isolated students have more outspoken views on criteria and characteristics compared to the groups' points of view.

Keywords   Social relationships · Secondary education · Group characteristics · Selection criteria · Sociometric analysis

1 Introduction

For the large majority of children, school is an important arena for social interaction and contacts with peers. These interactions can be described as horizontal relationships (Hartup 1989). Horizontal relationships are formed with individuals having the same social power and the ability to easily reverse roles. Next to horizontal relationships, schools also offer opportunities for developing new vertical relationships with,

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for example, teachers and other school staff. Vertical relationships are those in which persons with clearly different knowledge and power participate. By the time they enter school life, children already have practiced vertical relationships with parents, family, and neighbors (Schaffer 1996). School is typically an arena to drastically extend the experience of horizontal relationships, and as children grow older the number of contacts with peers gradually increases. Children of all ages feel most close to their immediate family, but at early adolescence, peers become more important as sources of emotional support (Levitt et al. 1993). At this point, children form peer groups based on having similar attitudes, sharing private feelings and thoughts, and supporting feelings of self-worth (Selman and Selman 1979). These friendships are characterized by an intimacy that does not occur in earlier years, and girls are generally ahead of boys in this development (Schaffer 1996).

Research on students' social relationships clearly shows their preference to associate with similar peers (homophily) (McPherson et al. 2001). This is also known as the similarity hypothesis (Male 2007). The similarity of peer group members has been explained by two processes: influence and selection (Ennett and Bauman 1994). Influence refers to group members being influenced by their peers to show "appropriate" behavior; selection refers to showing "accepted" behavior as a condition to enter peer groups (Ennett and Bauman 1994). Both processes contribute to peer group homogeneity. Selecting on similarity and influencing peer group members seem to make sense because similar peers are more likely to support one's own behavior, attitudes, and beliefs (Lubbers 2004). This may explain why groups hold together or—as Van Vugt and Hart (2004) state—what the "social glue" of the groups is.

Research has shown that these groups in class can be based on different characteristics. Amongst others, demographic variables such as age, gender, religion, and ethnicity are important variables in forming groups (Lee et al. 2007; Rose 2007; Underwood 2007). A study by Pearson and Michell (2000) revealed groups based on smoking behavior and groups based on drug-taking behavior. Paxton et al. (1999) showed that group membership can be based on body image concerns, dietary restraint, and extreme weight-loss behaviors. Farmer et al. (1999) found that problem behavior can be a basis for group membership, and Mariano and Harton (2005) point to inattention/hyperactivity, aggression, depression, and anxiety as group characteristics. Next to attention for the role of demographic variables and deviant/problem behavior in group formation, research into the characteristics of peer groups has also addressed variables like acceptance, educational attainment, values, interests, and/or beliefs. The latter are mentioned in the literature as potentially relevant variables in describing group membership (Male 2007), but these types of characteristics have received relatively little attention (Altermatt and Pomerantz 2003).

The results of successfully developing horizontal relationships are described in terms of acceptance by peers, in having friends, and in participating in peer activities and groups (Cullinan et al. 1992). Some students have difficulties relating to other children, and run the risk of being isolated or even rejected by their peers. Research results are somewhat inconclusive regarding the percentage of students experiencing these difficulties. Stenaasen and Sletta (1996) found that up to 12% of all students lack friends at school, whereas in a large national sample of Norwegian students Skaalvik et al. (2006) found that 1.3% felt they had no friends at school at all. Using sociometric

measures, Frostad and Pijl (2007) suggested that about 8% of all students are socially isolated in regular schools. Data from self-report measures of loneliness shows that between 10 and 12% of 8-to-17-year-olds feel lonely in school (Asher et al. 1990; Skaalvik and Skaalvik 2006; Valås 1999).

Why about 10% experience these difficulties in interacting with peers is not quite clear. These students seem to lack the "qualifications" for group membership, which may result in the other students flocking together and excluding those without the "proper" set of characteristics. More knowledge about these mechanisms seems imperative in order to develop intervention programs aimed at improving the social position of segregated students.

This study focuses on the selection criteria used by students to form groups, and on the characteristics of existing groups in schools. It further addresses the eventual mismatch between the groups' selection criteria and characteristics, and the characteristics of the isolated students.

2 Method

2.1 Sample

The sample consisted of students of a regular lower secondary school in Trondheim (Norway). This can be described as a convenience sample (McQueen and Knussen 2006). The school was interested in long-term cooperation with the Department of Education of the Norwegian University of Science and Technology in Trondheim, in order to support the social inclusion of all students, and data collection was part of the project. A total of 124 students aged 14–15 participated in the study. The school informed parents prior to the participation of their child in this study according to the rules of the Norwegian Social Sciences Data services.

2.2 Instruments

The friendships of students in the school were described using sociometric techniques based on peer nomination. Students were asked "Which students in class are your best friends?" The nomination procedure was based on free recall from all students in the same grade (and age). The school replaced the traditional classroom grouping with nine groups of about 15 students from the same grade working together in various subgroups for various subjects and activities. Compared to students in traditional classrooms, this broadens the reference group for students to all those in the same grade. Nominations were limited to a semi-fixed choice. Following Pijl et al. (2008), we decided to work with a maximum of five nominations.

Next to the sociometric data, we further collected data about the criteria students apply in selecting friends in class, and the possibly relevant characteristics in forming/maintaining groups. We decided not to focus on criteria based on forms of deviant behavior like drug consumption, smoking, extreme weight loss, behavioral problems, etc., but to focus instead on a more ordinary type of characteristic. The possible list of variables addressing aspects of behavior, attitudes, and beliefs is

almost endless. For practical reasons we needed to limit the number of variables. Since analyzing the research literature did not provide us with much empirical data on relevant variables, an ad hoc selection was made that comprised a wide range of possibly relevant variables. Two types of variables were distinguished: those focusing on students' selection criteria for friendship, and those describing each individual's characteristics.

The variables focusing on selection criteria for friendship comprised peers' looks, school performance, joint interests, performance in sports, care and loyalty, social skills, and popularity. These were elaborated in self-report scales comprising statements like: "It is important for me that my friends are good looking", "I would like to have friends with good school grades", "I want friends who share my interests", "It is important to have friends I can trust" or "It is important to have friends who understand me when I have problems". The scales varied in length from 2 to 11 items. Students were invited to indicate on a six-point scale ranging from "absolutely not true" to "absolutely true" to what degree each of these statements applied to them.

Next to the scales for selection criteria, we collected descriptive data about each of the participating students. These comprised global self-esteem, social self-esteem, self-esteem regarding physical attractiveness, self-esteem regarding physical performance, well-being, physical activity, and physical condition. They were elaborated in scales comprising statements such as "I like myself the way I am", "I have many friends", "I don't like my body", "I am good in sports", "My friends take good care of me," or "I look forward to meeting other students at school." These scales varied in length from 3 to 12 items and invited the students to react to each item on a six-point scale ranging from "absolutely not true" to "absolutely true."

The scale for global self-esteem was originally based on the Self Description Questionnaire developed by Marsh (1990), which has been translated into Norwegian, and tested several times (Skaalvik 1997). The scale consisted of eight statements, each with a six-point scale ranging from "absolutely not true" to "absolutely true."

Although some of the scales described above have been used in earlier research (Vaux et al. 1986), the Norwegian versions can generally be regarded as new scales needing extensive scale analyses. All scales were self-report measures.

2.3 Analyses

The first phase of data analysis focused on the reliability of the scales. This was assessed by means of Cronbach's alpha. A general guideline is that alpha should be at least .90 for decisions about individuals (Nunally 1978), but for research purposes an alpha of $\geq .70$ can be regarded as sufficient (Guilford and Fruchter 1978; Murphy and Davidshofer 2005). Johnson and Christensen (2004, p. 138) suggest taking this rule with a grain of salt and also accept slightly lower alphas.

A factor analysis (principle component analysis with oblimin rotation) of all scales regarding the criteria students have for selecting friends (peers' looks, school performance, joint interests, performance in sports, care and loyalty, social skills, and popularity) addressed the amount of overlap/differences between the scales. Further

factor analyses focused on the new scales, addressing students' characteristics in terms of self-esteem (social self-esteem, self-esteem regarding physical attractiveness, self-esteem regarding physical performance, well-being, physical activity, and physical condition). The scale for global self-esteem was regarded as sufficiently tested and was therefore left out of the factor analyses.

The second phase of data analysis focused on participation in in-class groups as an index for social position. Sociometric data were entered in analyses based on the NEGOPY software (Richards 1995). The analyses described the existing students' groups in school. Every individual student was described as either belonging to one of the groups ("member") or as being outside the groups. Some of the latter had one friend and might have some link to a group, while others were completely on their own ("isolated"). A group was defined as a set of at least three individuals who had more links with members of the group than with non-members, were connected by a path to most of the group members, and remained connected when removing up to 10% of the group (Richards 1995).

The third phase of the analysis described each of the groups established in the sociometric network analyses. Each of the existing groups was characterized by the criteria used in selecting friends and by the group member's characteristics (see: Sect. 2.1). According to the assumptions behind homophily, members of a particular group would apply similar sets of selection criteria and show large similarity on certain characteristics. In other words, it was possible that members in one group used performance in sport as a selection criterion, while members of another group focused very much on care and loyalty as a criterion. In some groups, members all had a high global self-esteem, while in others, members showed low social self-esteem. A group where students held similar views on e.g., care and loyalty as a criterion would show a low standard deviation of member's scores on care and loyalty. Groups where members disagreed on the importance of a certain criterion had a high standard deviation and were not very likely to use that particular criterion.

The standard deviations on all of the selection criteria and the members' characteristics were calculated per group. To allow comparison of standard deviations, the scales were standardized for scale length. The 33% lowest standard deviations were taken as an indication for similarity. The choice for exactly 33% was arbitrary, but it gave a useful overview of the selection criteria the various group members agreed on. A relatively high fraction was chosen to minimize the eventual effects of skewed distributions. Similar procedures were followed for student characteristics regarding aspects of self-concept.

A low standard deviation only revealed the criteria that all group members agreed on and the characteristics that held for all members of a particular group. It did not show, for example, if the group members all like or hate sports. In order to describe the direction of the variables applying to the members of the homogeneous groups, the average group scores on each variable were calculated. The low scores (below or equal to the 33rd percentile) and the high scores (equal to or above the 67th percentile) were used to describe the direction of group members' opinions. The average group scores between the 33rd and 67th percentiles were taken as an indication that the groups have similar yet not very strong opinions regarding these variables; therefore, these were not used to describe the groups.

The last step in the analyses described the possible mismatch between the important criteria in each of the networks and the characteristics of the isolated students in a more qualitative analysis.

3 Results

3.1 Psychometric analyses

The first phase of data analysis focused on the factor analysis of all scales regarding the selection criteria (peers' looks, school performance, joint interests, performance in sports, care and loyalty, social skills, and popularity). This resulted in a rearrangement of some of the scales. The reliability of the five partly new scales (peers' looks, school and sports performance, joint interests, social skills, and popularity) was .89, .89, .68, .85 and .77, respectively.

The following factor analysis focused on the scales addressing students' characteristics in terms of self-esteem (social self-esteem, self-esteem regarding physical attractiveness, self-esteem regarding physical performance, well-being, physical activity, and physical condition). The findings were used to rearrange the scales in five scales for social self-esteem, self-esteem regarding physical attractiveness, self-esteem regarding physical fitness (combining items from physical performance and physical condition), well-being, and physical activity. The reliability of the five partly new scales was .90, .86, .89, .77 and .80, respectively. The reliability of the existing scale for global self-esteem was .87. The final set of scales is presented in Table 1.

3.2 Social position

Sociometric data were used to identify friendship groups. This was based on analyses using the NEGOPY software (Richards 1995). The analysis described the reciprocal relationships between each of the students in the sample. This results in 12 different groups of students (see the circles in Fig. 1). Groups 1, 4, 5, 7, 10, and 11 were exclusive girls' groups, groups 2, 6, 8, 9, and 12 consisted of only boys, and group 3 comprised both girls and boys. There were a few groups that had some sort of a group structure (e.g., students 124, 131, and 137), but they did not meet the criteria for group membership (see Sects. 2/2.2). Some students had links to one of the groups, but were not part of the group (e.g., student 60 or 84). The students in the upper-left

Table 1 Scales

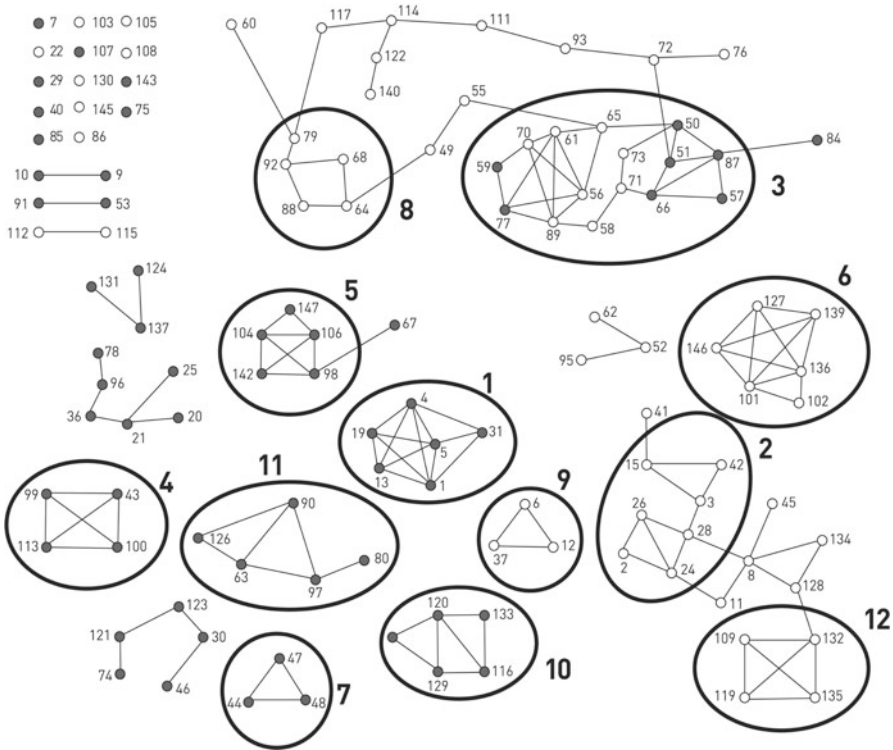| Criteria for friendship	Characteristics
Peers' looks	Global self-esteem
Peers' social skills	Social self-esteem
Peers' school and sports performance	Physical attractiveness self-esteem
Joint interests	Physical fitness self-esteem
Peers' popularity	Well-being
	Physical activity

Fig. 1 The social network. Grey = girls

corner (e.g., students 7 and 103) had no reciprocated links to any of the other students and could be regarded as isolated students. This group comprised 11% of the students in this sample. The remaining 89% were not isolated, which does not automatically imply that they were group members. About 29% of the students did have one or more friends but were not group members, and the remaining 60% was defined as group members.

3.3 Selection criteria and group members' characteristics

The third phase of the analyses addressed the homophily dimensions for each of the 12 groups. Each of the network groups was typified by the criteria for selecting friends (Table 3) and by the groups' characteristics (Table 2). According to the assumptions behind homophily, homogeneous groups were expected to show a low standard deviation on the variables relevant in describing the group.

Table 3 gives an overview of the standard deviations per group and per selection criterion. A quick inspection of the standard deviations per variable showed a range from 0 to 8.7. This suggests that the groups differed in their agreement on what constituted relevant selection criteria for friendship. Members of group 1, for instance, agreed highly (low standard deviation: .5) on the relevance of peers' social skills as a

Table 2 Group members' characteristics

Group[b]	Global self-esteem[a]			Social self-esteem[a]			Physical attractiveness self-esteem[a]			Physical fitness self-esteem[a]			Well being[a]			Physical activity[a]		
	M^c	Sd^c	I	M	Sd	I	M	Sd	I	M	Sd	I	M	Sd	I	M	Sd	I
1 G	21.4	4.3		22.5	2.8		14.2	3.2		24.1	2.8		29.0	1.7	+	7.8	1.7	
2 B	22.4	5.8		22.6	5.1		20.5	7.5		25.9	3.3		27.0	4.4		15.0	9.1	
3	20.0	6.8		19.8	4.1		16.4	7.7		15.7	5.2		25.7	3.0		7.3	1.5	−
4 G	18.4	5.7		19.6	3.5		18.4	4.4		20.0	4.2		21.9	2.9		9.4	1.8	+
5 G	27.5	1.2	+	22.1	1.0		22.9	5.2		16.4	1.6	−	24.4	4.8		6.7	0.7	−
6 B	26.3	4.3		24.2	2.1	+	24.2	3.8		25.9	2.9		28.3	1.0		10.4	5.2	
7 G	26.9	1.1	+	26.2	0.8	+	20.7	2.2		24.8	3.8		27.5	4.3		10.6	5.4	
8 B	27.3	1.9	+	18.2	4.1		24.0	4.2		17.4	4.2		22.2	6.7		7.4	2.7	
9 B	28.6	2.5		24.2	2.4		27.9	2.5		27.5	1.6	+	30.0	0.0	+	12.4	4.3	
10 G	17.7	1.6	−	21.4	1.6		15.0	1.9	−	19.5	2.4		25.0	1.5	−	8.5	1.2	
11 G	22.5	4.3		25.1	3.1		16.6	4.1		21.7	2.6		28.7	1.0	+	8.9	2.1	
12 B	25.0	2.8		19.9	3.9		19.8	1.4		20.6	2.2		27.5	1.0		8.3	1.7	
Grand	22.8	5.6		21.7	3.9		19.3	6.3		20.8	5.4		26.3	3.8		9.19	4.4	
	P67 = 26.4			P67 = 23.9			P67 = 22.9			P67 = 23.7			P67 = 28.7			P67 = 9.2		
	P33 = 20.1			P33 = 20.5			P33 = 16.4			P33 = 18.8			P33 = 26.2			P33 = 7.5		

Shaded values = 33% lowest standard deviations

[a] Scale range 5–30

[b] Group number, group size, G girls, B boys

[c] M Mean, Std standard deviation, I importance

Table 3 Criteria for selecting friends

Group[b]	Peers' looks[a]			Peers' performance[a]			Joint interests[a]			Peers' social skills[a]			Peers' popularity[a]		
	M[c]	Std[c]	I	M	Std	I	M	Std	I	M	Std	I	M	Std	I
1 (6) G	8.9	3.5		9.0	3.6		18.1	7.3		29.5	0.5	+	16.7	3.4	
2 (7) B	12.4	8.7		16.1	6.6		18.3	6.6		27.0	5.9		20.4	6.4	
3 (15) G/B	7.2	2.9		11.3	4.1		16.7	3.9		28.5	1.7		10.0	5.1	
4 (4) G	12.7	5.8		12.1	5.5		15.0	4.4		27.5	2.6		9.4	8.7	
5 (5) G	5.7	1.1	−	8.4	3.2		13.8	5.5		29.4	0.9	+	10.0	4.7	
6 (6) B	7.6	3.9		18.3	3.9		19.8	5.7		25.8	2.8	−	11.7	5.4	
7 (3) G	8.1	2.5		8.6	4.9		22.1	1.9	+	28.0	1.0		13.3	7.6	
8 (5) B	7.3	1.9		9.6	3.0		16.0	4.9		27.4	2.4		10.0	5.0	
9 (3) B	7.2	3.1		12.1	6.2		10.4	6.4		30.0	0.0	+	10.0	6.6	
10 (4) G	8.7	2.4		9.4	2.4		14.3	2.7	−	27.4	2.4		14.0	4.7	
11 (5) G	8.7	2.8		9.5	2.7		15.6	4.8		29.2	0.5	+	15.0	3.5	
12 (4) B	9.4	5.9		11.1	5.0		13.7	5.2		18.5	4.8		15.0	7.4	
Mean:	8.5	4.4		11.6	5.0		16.5	5.3		27.5	3.6		12.8	6.2	
	P67 = 10.0			P67 = 14.3			P67 = 18.7			P67 = 29.0			P67 = 17.5		
	P33 = 5.8			P33 = 8.6			P33 = 14.5			P33 = 27.0			P33 = 10.0		

Shaded values = 33% lowest standard deviations

[a] Scale range 5–30

[b] Group number, group size, *G* girls, *B* boys

[c] *M* Mean, *Std* standard deviation, *I* importance

selection criterion for friendship (12th column of Table 3), whereas members of group 2 differed much more (sd: 5.9) amongst each other in their evaluation of the relevance of peers' social skills as a selection criterion. Due to the standardization for scale length (see Sect. 2.2) it was also possible to compare the standard deviations over variables. The members of group 9 showed a high level of agreement on the relevance of peers' social skills as a selection criterion, but disagreed considerably on the relevance of the other selection criteria.

In order to make these differences between groups and variables more visible, the 33% lowest standard deviations were highlighted in Tables 3 and 2. This gave a useful overview of the selection criteria which the various group members agreed on (Table 3), and the shared characteristics of each of the groups (Table 2).

Highlighting the lowest third of standard deviations in Table 3 immediately showed that six groups agreed highly on peers' looks as a criterion. A low standard deviation signals agreement but does not reveal if the group members regard that particular criterion as very important or as totally unimportant. The groups were therefore characterized by their low (below the 33rd percentile), average, or high (above the 67th percentile) mean scores.

This showed that none of these six groups regarded peers' looks as an important selection criterion (no high group averages). Five groups had no clear statement on peers' looks as a friendship criterion (all average group scores) and, finally, the members of group 5 stated that peers' looks were an absolutely unimportant criterion (low group average). Ten groups pointed at peers' social skills as a selection criterion, but only four of these stated that this was a very important selection criterion (groups 1, 5, 9, and 11).

Table 4 Group descriptions

Group	Sex	Homogeneous group criteria and characteristics				
1	G	Social skills+	Well-being+			
2	B					
3	G/B	Phys activ−				
4	G	Phys activ+				
5	G	Peers' looks−	Social skills+	Global SE+	Phys fitness−	Phys activ−
6	B	Social skills−	Soc SE+			
7	G	Joint interests+	Glob SE+	Social SE+		
8	B	Global SE+				
9	B	Social skills+	Phys fitness+	Well-being+		
10	G	Joint interests−	Global SE−	Phys attract−	Well-being−	
11	G	Social skills+	Well-being+			
12	B					

The large majority of the groups had different opinions on the other criteria, namely peers' academic and sports performance, joint interests and popularity. It is further noteworthy that groups 2 and 12 did not agree on any of the selection criteria described here.

The results thus indicate that peers' social skills were the most important selection criterion.

Table 2 presents the averages and standard deviations of the group members' characteristics. Low standard deviations were taken as an index of homogeneity between group members. Groups 5, 7, 8, and 10 had low standard deviations on global self-esteem, and were therefore regarded as homogeneous on global self-esteem (third column in Table 2). This did not reveal, however, if their global self-esteem was low or high, hence the groups were characterized by their low (below the 33rd percentile), average, or high (above the 67th percentile) mean scores.

In groups 5, 7, and 8, all members had a high global self-esteem, while in group 10 all members had a low global self-esteem (fourth column of Table 2). Overall, the table shows that global self-esteem, well-being, and physical activity were important variables in characterizing homogeneous groups.

The overall picture is that 10 of the 12 groups can be characterized in different terms on the criteria and characteristics. The members of groups 2 and 12 did not agree on any relevant selection criterion or on any of the (low or high scoring) characteristics. A horizontal analysis per group of the either low or high average selection criteria and the low or high average characteristics yielded nearly individual group descriptions (see Table 4). Group 1 could be described as a group agreeing on social skills as a very relevant criterion and experiencing a high level of well-being. Group 11 had a similar profile. Group 3 is a mixed-gender group, with members describing themselves as not very physically active and without any other common criterion or characteristic. Analyses of the selection criteria used by the other groups and the characteristics that hold for those groups showed that each group had a unique set of selection criteria and characteristics. Social skills were, relatively, the most-often used selection criterion, and well-being and global self-esteem were the most-often used characteristics, but the differences between the groups are large.

3.4 Characteristics of the isolated students

Table 5 presents the data on each of the relevant variables for every individual out of the 14 isolated students. The raw data in the table have been transformed into three categories: scores below or equal to the 33rd percentile (light grey), scores between the 33rd and 67th percentile (blank), and scores equal to or above the 67th percentile (dark grey), using the percentiles and corresponding raw scores presented in Tables 3 and 2. As a whole, Table 5 shows that the group of isolated students had significantly stronger opinions compared to the 12 groups (Chi^2 = 10.03, $df = 2$, $p < .01$). One would expect a distribution with about a third of scores being low, a third neutral, and a third high, but the total number of neutral scores is lower and the total number of high scores is larger for both selection criteria and group members' characteristics. Student 29 even regarded all criteria and characteristics as totally unimportant, while student 22 defined almost all as very relevant.

Comparing the characteristics for group 1, for example (peers' social skills as a criterion of high importance and well-being; see Table 4), with each of the isolated students, showed that three of the isolated students hold similar views on the importance of social skills, and that two of these students (22 and 143) matched the group's feelings regarding well-being. But both students also held strong views on e.g., the importance of peers' looks or performance. These views were not shared by the members of group 1, resulting in a mismatch between these two students and group 1. Groups 2 and 12 yielded a completely opposite picture. Since the members of both groups had not defined any of the criteria or characteristics as typical for the group, all isolated students could, in theory, have been members of this group. However, all of the isolated students had strong opinions regarding various criteria and characteristics, which resulted in a mismatch between students and group members. Group 3 was a large group consisting of both boys and girls. The group could be described as

Table 5 Friendship criteria and characteristics of the isolated students

Id		Peers' looks	Peers' performance	Joint interests	Peers' social skills	Peers' popularity	Global self-esteem	Social self-esteem	Physical attractiveness	Physical fitness	Well-being	Physical activity
7	G	9.2	13.6	21.2	29.0	17.5	23.6	24.5	20.0	25.0	28.8	7.0
22	B	19.2	19.3	25.0	30.0	30.0	22.9	30.0	25.8	30.0	30.0	16.0
29	G	5.0	6.4	12.5	27.0	5.0	5.0	13.5	5.0	10.0	22.5	5.8
40	G	9.2	6.4	20.0	28.0	12.5	23.3	21.0	13.3	15.0	26.3	7.5
75	G	8.3	16.4	17.5	26.0	12.5	22.1	18.5	20.8	17.5	23.8	14.2
85	G	5.8	5.0	6.3	24.0	15.0	21.4	17.5	17.5	10.8	30.0	8.3
86	B	10.8	22.9	16.3	25.0	25.0	25.7	22.0	27.5	30.0	26.3	10.0
103	B	10.0	5.7	18.8	22.0	12.5	18.6	18.0	26.0	27.5	23.8	8.3
105	B	22.5	21.4	17.5	25.0	27.5	27.1	30.0	21.7	30.0	30.0	10.0
107	G	11.7	12.1	18.8	23.0	22.5	14.3	14.5	10.8	17.5	16.3	5.8
108	B	5.0	7.1	6.25	30.0	17.5	29.2	.	30.0	24.2	23.8	9.2
130	B	7.5	17.9	17.5	29.0	5.0	25.0	24.0	25.8	25.8	27.5	15.0
143	G	12.5	18.6	26.3	30.0	20.0	10.7	21.5	7.5	28.3	30.0	15.0
145	B	.	.	.	.	.	.	.	13.3	25.0	28.8	9.2

    = low score (≤ P33)
    = high score (≥ P67)

physically less active, and did not opt for any of the selection criteria or other group characteristics. There were a number of isolated students also regarding themselves as less physically active, but each of them had other views on the relevance of various criteria and characteristics, again resulting in a mismatch between students and group members.

This type of analysis had been conducted for each of the groups, revealing that the choices made by some of the groups (e.g., group 7) did not match with any of the isolated students. In most cases, however, group selection criteria and characteristics did at first glance match with individual isolated students (e.g., group 6 and student 105, or group 9 and student 22), but these students had so many other strong opinions about various criteria and characteristics that the absence of group membership seemed understandable.

The overall picture of the comparison of group selection criteria and group characteristics with the individual isolated students' profiles showed that the isolated students have stronger views on criteria and characteristics than the groups' points of view.

4 Discussion

This study focused on the selection criteria used by students to form groups and on the characteristics of peer groups. The reason to work with these two sets of variables was that the similarity of peer group members is based on selection and influence. Selection has to do with the criteria to enter peer groups, and influence refers to group members learning to show "group-appropriate" behavior.

Studies of peer relations can assess characteristics at the level of the individual or the group (Bukowski and Saldarriaga Mesa 2007). This study measured variables at the level of the individual and used them to characterize peer groups. If the members of a particular group agreed amongst each other on e.g., their level of physical activity (resulting in a low in-group standard deviation) and regarded their physical activity level as high or low (resulting in a high/low mean score), then level of physical activity seemed a proper variable to characterize this particular group.

The results revealed that peers' social skills were a selection criterion used in many groups, implying that students without the proper social skills are not accepted easily in those groups. This finding is in line with the conclusions of several other studies pointing at insufficient sets of social skills as an explanation for the difficulties pupils can have in building relationships with peers (Soresi and Nota 2000; de Monchy et al. 2004; Frostad and Pijl 2007). Insufficient sets of social skills can cause difficulty in establishing social relations with peers, and, vice versa, lack of social relations can cause an underdeveloped set of social skills. For individual students, this can end up in a downward spiral leading to greater isolation. Intervention should not focus on repairing this, but on preventing these downward spirals from occurring in the first place. Social skills training can be one strategy to support isolated students in obtaining a satisfactory social position within the peer group. The training should start early in pupils' school careers and may need to be continued for several years to ensure that students maintain appropriate sets of social skills for the various age groups.

The data regarding the groups' characteristics show that global self-esteem, well-being, and physical activity were the most important of the variables describing the groups. These characteristics are important in order to maintain group membership. The fact that global self-esteem, well-being, and physical activity seem useful characteristics in describing groups does not preclude other as yet unknown variables from having been potentially useful too. The fact that groups 2 and 12 could not be characterized with the set of variables used in this study strongly supports the notion that more variables are at stake here. Further research is needed to build a more complete picture of the variables important in forming and maintaining groups.

The interpretation of the data is also hampered by the fact that the groups' scores on some of the variables show a skewed distribution, for example on the scale of well-being. This can result in ceiling (or floor) effects, and thus lower standard deviations. If that holds for the data presented here, part of the group descriptions could be regarded as an artifact of the scales' inability to differentiate between respondents. Inspection of the data presented in Tables 3 and 2 does not reveal a consistent pattern of high/low scores with many low standard deviations, but there is some risk of overstating the importance of the scales.

An important motivation for this study was to look into the social relationships of isolated students. Some students have difficulties relating to their peers and run the risk of being isolated or rejected. Why these students experience these difficulties in interacting with peers is not always clear, but lack of appropriate social skills seems an important explanation for their problems in participating in peer groups.

The study addressed in a more qualitative way the match between the selection criteria and characteristics of each of the groups and those of the isolated students. Looking at the criteria and characteristics of some of the groups, it is difficult to understand why at least some of the isolated students do not apply for group membership. These groups are typified by only a few variables, and some of the isolated students match these variables perfectly. The obvious explanation for these students not applying for group membership is that more as yet unknown variables are, most likely, playing a role here. A second explanation is that the isolated students as a group have more outspoken opinions than the groups, hindering a possible membership in one of the groups. A complication here is that this is based on comparing group averages with individual scores. One of the members of a certain group may have a low social self-esteem, while the group's statistics suggest that members of this group all (low standard deviation) have an high social self-esteem. Or stated otherwise: the variation within the groups could in some cases coincide with the more extreme opinions of the isolated students.

In conclusion, this study shows that peers' social skills are an important selection criterion and that global self-esteem, well-being, and physical activity are the most often mentioned group characteristics. The first one—social skills—is important to enter a group, the other three are relevant in maintaining group membership. Although some groups use identical combinations of selection criteria and characteristics, the overall picture shows groups with highly individual combinations of criteria and characteristics. Students not belonging to one of these groups generally have different sets of criteria and characteristics, resulting in a mismatch with the groups' criteria and characteristics. These students further seem to have more outspoken views regarding

the criteria they would like to apply, and their personal characteristics, which could function as a contra-indication for group membership.

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