

Social participation and friendship quality of students with special educational needs in regular Greek primary schools.

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Abstract

The study addresses the social participation of integrated students with special educational needs (SEN) in upper primary regular classes in Greece alongside their perceptions of best friend quality. In keeping with previous research, social participation was defined as consisting of four key dimensions, namely the students' acceptance by classmates; their friendships; their social self-perceptions; and their social interactions. Participants were 457 students with a mean age of 11.04 ($sd=.83$), of which 45 were diagnosed as having moderate learning difficulties and 412 were typically developing students. Fieldwork involved implementing a sociometric technique, conducting systematic observations and administering two psychometric instruments: the Self-Description Questionnaire (SDQ) and the Friendship Qualities Scale (FQS). In line with previous studies, students with SEN received fewer nominations of peer acceptance, had fewer friends and had fewer social interactions with classmates than their typically developing peers. The social self-perception and the perceptions of friendship quality of both groups of students did not differ. Contrary to expectations, the students with SEN's social self-concept was not related to their acceptance by peers but it was positively related to the 'companionship' dimension of friendship quality. These results highlight the need to direct the researchers' attention from measuring the social participation of students with SEN within their class network towards examining the quality and durability of their friendships.

Keywords: inclusion; social participation; peer-acceptance; friendship quality

Introduction

The inclusion of students with Special Educational Needs (SEN) in regular schools has been increasingly promoted in many countries on the assumption that inclusive schools are the most effective means for reducing prejudice, and combating discriminatory attitudes. It is hoped that within such a welcoming and supportive context, students with SEN will not only receive education tailored to their individual needs but will also build positive relationships with their typically developing peers in order to become valued members of the school community. However, this process is not without its challenges, as integrated students with SEN are often found to be facing difficulties interacting with other peers and experience marginalisation and loneliness in the classroom (Schwab 2015a).

International sociometric studies have repeatedly reported that integrated students with SEN in regular primary schools are less accepted and more rejected by their classmates without SEN and have fewer stable friendships than their peers (Avramidis et al. 2017). Based on different student groups and using different disability definitions, many studies have concluded that students with moderate or severe learning difficulties run a higher risk of being socially isolated than their typically developing peers in regular education (Koster et al. 2010; Schwab 2015b). Similarly, it is consistently reported that students with behavioural difficulties (Krull, Wilbert, and Henemman 2014) and students with autistic spectrum disorders (Symes and Humphrey 2010) experience more difficulties in building relationships with peers. Strikingly, such negative findings have been reported across different national school systems including the UK (Avramidis 2013), Canada (Kuhne and Wiener 2000), US (Estell et al. 2008), Norway (Pijl, Frostad, and Flem 2008), the Netherlands (Koster et al. 2010), Italy (Nepi et al. 2013) and Germany (Krull, Wilbert, and Hennemann 2014). Therefore, it is unlikely that cultural characteristics or national education systems account for these findings.

Although longitudinal studies are scarce in the field, it is worrying that the poor social acceptance students with SEN enjoy within their class network may deteriorate over the course of a school year. For example, in Kuhne and Wiener's (2000) Canadian study of 9- to 12-year-old students, those children with learning difficulties who were found to possess average social status at the beginning of the school year were more likely than their typically developing peers to change their status to 'neglected' or 'rejected' social status at the end of the year. Similarly, Frederickson and Furnham (2001) investigated the longitudinal stability of sociometric classification in students with moderate learning difficulties (MLD) aged 8 to 10 years in an English county over a 2-year period. They found that students with MLD on both occasions were less likely to be classified as 'popular' and more likely to be classified as 'rejected'. More importantly, their sociometric status had remained fairly stable over the 2-year period.

One explanation for the difficulties students with SEN have in building relationships with typically developing classmates points to insufficient sets of age-group appropriate social skills, which prevents them from successfully interacting and ultimately bonding with peers (Pijl, Frostad, and Flem 2008). Consequently, students with SEN end up occupying a low social position in their class network, which, in turn, can have a negative impact on their social self-concept. However, this conclusion is far from clear-cut; while some research studies have found students with SEN to possess lower social self-concept compared to their typically developing peers (Pijl and Frostad 2010; Schwab 2015b) other studies failed to detect such a difference (Avramidis 2013).

Surprisingly, the literature contains studies that found students with SEN to hold positive perceptions of social self-concept alongside independent evidence of reduced acceptance by peers (Koster 2010; Avramidis 2013) – a trend which has led some authors

to conclude that an appreciable proportion of students with SEN often do not have accurate perceptions of social acceptance. For example, Pijl and Frostad (2010) have argued that students with moderate to severe learning disabilities: "...are less capable of understanding their level of acceptance and the quality of their friendships in the typical peer group. Thus they do not experience negative feelings linked to an eventual isolated position in the group to the same degree and are less likely to develop a low self-concept" (p.94). By contrast, this conclusion does not apply to students with physical or sensory disabilities who tend to be more aware of their isolated position in the group and, therefore, are more likely to develop a negative social self-concept.

An alternative explanation to this paradox (students with SEN being less accepted than their peers but possessing similar perceptions of social self-concept) concerns the quality of the few friendships students with SEN have formed. For example, in Estell et al.'s (2008) 2-year study, students with SEN were found to be less often nominated as being someone's best friend and less often nominated as popular; however, at the same time, they were equally often found to be members of a group within their class and were equally central in these groups. It could, therefore, be suggested that students with SEN might not have many friends but only one or two good ones. However, until now, most studies in the field have focused on measuring the number of friendships students with SEN have within their class network without examining friendship quality. This is certainly a gap in the current knowledgebase given that having high-quality friends might be especially important for students with SEN who experience lower social acceptance and have fewer friends compared to their typically developing peers. Specifically, having one high-quality friend who offers support and affection might not only contribute to the students with SEN's positive social adjustment but also provide protection against victimization (Bossaert et al. 2015).

To sum up, the research literature shows that the inclusion of students with SEN in regular education settings is far from straightforward. Though the aforementioned studies are also pertinent to Greece, there have been no large-scale systematic studies carried out in Greek settings. It is towards presenting the aims of the present study that we turn next.

The study

The literature on the social development of integrated students with SEN contains numerous studies investigating their social position in their class network and their social perceptions. More recently, Koster et al. (2009) advocated the use of the term "social participation" as the most suitable one to capture the fullness of the social aspects of inclusion. Koster et al. defined social participation as a complex concept consisting of four key themes, namely: (1) the presence of positive social contact/interaction between these children and their classmates; (2) acceptance of children with SEN by their classmates; (3) social relationships/friendships between them and their classmates; and (4) the students with SEN's social self-concept.

The present study differs from its predecessors in two respects. First, while most sociometric research in the field has investigated one aspect of social participation, the present study examined all four key themes of social participation proposed by Koster et al. (2009). Second, the present study also examined student perceptions of best friendship quality since it represents a variable that has been overlooked in most research in the field including the Koster et al. (2009) model where only the number of friendships held by students with SEN is examined. By adding the measurement of friendship quality the present study aspired to obtain a fuller picture of the social participation of integrated

students with SEN thus contributing to the existing body of theorizing in the field. The study pursued the following aims:

- To examine the social participation of students with SEN in upper primary regular classes in Greece
- To investigate the perceptions students with SEN hold about the quality of their best friendship
- To examine the relationship between the students with SEN's perceptions of social self-concept and their acceptance by peers and as well as their perceptions of best friend quality.

Based on the preceding review of the relevant literature, we formulated the following research hypotheses:

Hypothesis 1: It is expected that students with SEN will be less accepted, will have fewer friendships, and will have fewer social interactions than their typically developing classmates.

Hypothesis 2: It is expected that students with SEN will express equally positive perceptions of best friendship quality to the ones expressed by their typically developing peers.

Hypothesis 3: It is expected that the students with SEN's social self-concept will not be associated with their acceptance by peers in their class but, instead, will be positively related to their perceptions of best friend quality.

Research design

The study adopted a multi-method research design combining a classic sociometric technique with systematic observations and self-report psychometric instruments. Specifically, the peer-nomination technique was utilized to assess the social acceptance students with SEN enjoyed and ascertain the number of friendships they had formed; systematic observations were conducted in the playground to assess their social interactions; and two psychometric instruments were employed to assess the students' perceptions of social self-concept and best friendship quality.

Participants

Fieldwork was conducted in 8 primary schools in one region of central Greece. The selection of a suitable sample of schools was informed by the relatively high number of children identified with SEN in the schools' registers. Consequently, purposive sampling was deemed the most promising strategy resulting in the selection of schools which operated "inclusion units". It is important to clarify here that the Greek "inclusion unit" functions as a support room/class and, in this respect, is much closer to the US resource or pull-out programmes, or to what the British describe as part-time withdrawal in a learning support base. According to the Greek legislation, in primary schools operating inclusion units, students accredited with SEN are educated for the most part in the mainstream class alongside their peers and attendance in the inclusion unit is limited to a few hours per week (and no more than 10 hours). Students attending an inclusion unit typically have an official diagnosis issued by an external state-maintained diagnostic centre. Inclusion units are run by special educators, whose role involves assessing students' progress, devising individual educational plans, and delivering tailored individual support.

All students enrolled in Grades 4, 5 and 6 were invited to participate in the study. To achieve a valid sociometric assessment, we ensured that all students took part in the study resulting in a total sample of 457 children drawn from 26 classes. Approximately 10% of these students (N=45) had been identified with SEN at that time, a ratio that reflects the national figure. Following conversations with the teaching staff of the 8 participating schools and examination of student records, we confirmed that none of the remaining 412 students experienced learning difficulties or any other type of disability. The group of students with SEN consisted of 27 boys and 18 girls while the typically developing group consisted of 202 boys and 210 girls. Contrary to previous sociometric studies where students with different types of SEN are grouped together, in this investigation the group of students with SEN could be regarded as a homogeneous one. All 45 students with SEN had been officially diagnosed by a multidisciplinary team as experiencing learning difficulties of a moderate nature and, to a lesser extent, to students with specific learning difficulties (e.g. dyslexia).

Methods

Assessment of peer acceptance and friendships

Although peer rating techniques have been widely utilized to measure the students' social acceptance within the social network of their classroom, they carry a significant weakness since they might reinforce existing prejudices and potentially demarcate some children as different (Avramidis et al. 2017). For this reason, in the present study we assessed peer acceptance through the classic peer nomination technique which required students to nominate those classmates they considered as friends. The nominations were limited to a semi-fixed choice i.e. asking children to give a maximum of five nominations. Former studies (Koster et al. 2010; Avramidis 2013) have indicated that five friends is a stable option, restricting the freedom of choice for respondents minimally. Following Pijl, Frostad, and Flem (2008) and Schwab (2015b) the number of nominations students received from group members (or "in degrees" in social network analysis) was taken as an index for peer acceptance. Moreover, in line with previous sociometric studies, friendship was defined as a reciprocated nomination (Koster et al. 2010). A respondent had a friend if the respondent nominated a peer and that same peer nominated him or her as a friend.

Assessment of contacts/interactions

In this study, we adopted an observation scheme developed by Koster et al. (2010) which provides information about the number of successful interactions students initiate or receive in the playground with their peers and their teachers. Also included in the scheme was a category recording aloneness in the playground as a proxy for loneliness. Consequently, the scheme consisted of 5 discreet categories: (a) target student initiating interaction with peer (b) target student receiving interaction with peer (c) target student initiating interaction with teacher (d) target student receiving interaction with teacher and (e) target student being alone.

Assessment of Social Self-perception

Having considered relevant instruments in the literature, we selected the Self-Description Questionnaire (SDQ I) developed by Marsh as a suitable instrument for measuring different facets of self-concept (Marsh 1990). From this instrument, we only utilized the social self-concept scale, an 8-item, five-point, forced-choice Likert scale. The scale contained statements such as: "I have lots of friends" "I make friends easily",

“I get along with kids easily” etc. To complete this scale, students were asked to indicate the extent of their agreement with each statement by selecting among the following response choices: False (1), Mostly False (2), Sometimes False/Sometimes True (3), Mostly True (4) True (5).

Assessment of Friendship Quality

Students were asked to nominate their best friend and to indicate whether their friend was a member of their class or someone external. The students' choice was not limited to their school (i.e. it could also include somebody from their neighborhood). With this “best” friend in mind, students were then asked to complete the Friendship Qualities Scale (FQS), a 23-item psychometric instrument designed by Bukowski, Hoza, and Boivin (1994) which contains five separate subscales tapping into five specific dimensions of friendship quality, namely *companionship* (4 items), *conflict* (4 items), *help* (5 items), *security* (5 items) and *closeness* (5 items). Indicative items of the five dimensions are: *“My friend and I spend all our free time together”* (companionship); *“My friend and I can argue a lot”* (conflict); *“My friend would help me if I needed it”* (help); *“If I have a problem at school or at home, I can talk to my friend about it”* (security); and *“Sometimes my friend does things for me or makes me feel special”* (closeness). To complete the FQS, students were asked to indicate the extent of their agreement with each statement by selecting among the following response choices: Strongly disagree (1), Disagree (2), Neither disagree or agree (3), Agree (4), and Strongly Agree (5).

Procedures

Parental consent was obtained from the parents of all participating students prior to commencing fieldwork. Children completed a questionnaire containing the two psychometric instruments during structured lessons. Particular adaptations were made to enable students with reading difficulties to participate; specifically, for some students the questionnaire was administered individually and the various items were read aloud by an adult. Completion of the whole instrument lasted approximately twenty minutes. Also, included in this questionnaire was a section containing the sociometric assessment. To avoid potential ethical problems inherent in sociometric research, extra care was exercised to ensure that students did not share their friendship nominations.

Systematic observations of 22 randomly selected students with SEN's interactions were conducted in subsequent weeks so that the students could not relate the presence of a researcher in the school yard to the content of the questionnaire they had completed. In addition, systematic observations of 22 typically developing students were conducted; these students were of the same gender and were randomly drawn from the same classes as the 22 students with SEN. Both groups were observed for 15 minutes, divided into five-minute periods. In line with Koster et al. (2010), each five-minute period was divided into 30 intervals of 10 seconds each. If an interaction occurred during that period, a tick was noted in the correct category (initiated interaction with classmate; received interaction with classmate; initiated interaction with teacher; received interaction with teacher). If more than one interaction occurred in a period, only the first one was noted. Observers were the first two authors both of whom had received training

using videotaped recordings prior to commencing fieldwork. One third of the observations (15 out of 44) were conducted by both researchers. The agreement between observers was determined by calculating Cohen's kappa coefficient, a robust measure that takes into account the possibility of the agreement occurring by chance. Cohen's kappa coefficients were calculated for two major aspects: "interaction/no interaction between student and classmates", and "interaction/no interaction between student and teacher". Cohen's kappas for these aspects were 0.88 and 0.92, respectively, suggesting very strong agreement.

Data analysis

The number of nominations received (in-degrees) by each student was used as an index of social acceptance. Given that the sizes of the 26 classes varied, we transformed the raw data using the following mathematical formula adopted by Schwab (2015b) which allows relating peer acceptance to the mean peer acceptance of all students in the class:

$$\text{Status of peer acceptance} = 1 + \frac{\text{Number of elections} - \text{mean number of elections of the peers in the class}}{\text{maximum number of elections}}$$

Friendship was defined as a reciprocated choice, implying that two students choose each other as best friends. Given that nominations had been limited to a fixed number of choices (up to 5), we simply calculated the number of reciprocal ties held by each student and proceeded with a statistical comparison between the students with SEN and their peers without any transformation.

Further, following Pijl et al. (2008), three indices of social inclusion (being accepted by peers, having a friendship, and belonging to a cohesive subgroup) were used to examine the social participation of students with SEN in their class. Students are categorised as socially included if they are accepted by their peers, have at least one mutual relationship, and belong to a coherent subgroup. Wasserman and Faust (1994, 249) define cohesive subgroups are subsets of actors among whom there are relatively strong, direct, intense, frequent, or positive ties. A typical example of a subgroup in social network analysis is the 'clique' which requires a subset of a minimum of three actors, all of whom are linked to each other by nominating each other. However, because this definition of a clique is too restrictive, in the present study we adopted the "n-clique" type as utilized by Pijl et al. (2008) whereby a cohesive subgroup requires a minimum of three actors, but is also dependent on 'reachability'; that is, the geodesic distance among actors is specified by a cut-off value, which, in the present study was n=2. Accordingly, 2-cliques are sub-graphs in which all members need not be adjacent, but all members are reachable through at most one intermediary. This reflects the study's assumption that an understanding of cohesive subgroups based on indirect connections of relatively short paths better captures the social dynamics of the primary class.

The sociometric data were analysed using the UCINET software (Borgatti, Everett, and Freeman 1999) which enabled us to calculate the in-degrees (nominations) received by each student, their reciprocal choices (friendships) and their participation in

cohesive subgroups. The psychometric and the observational data were analysed using the SPSS Version 21 software (IBM 2012).

Results

Prior to conducting our main analyses we examined the factorial structures of the two psychometric instruments employed. With regard to the social concept scale of the SDQ, we conducted principal component analysis with varimax rotation on the 8 items comprising the scale. This yielded one component with an eigenvalue of 4.78 which accounted for 53.18% of the extracted variance. The internal consistency of the extracted component was satisfactory with a Cronbach alpha of .83. Following this, the 8 items were totaled to create a composite factor named “social self-concept” with a higher score indicating a more positive view of oneself. With regard to the FQS, we also conducted principal components analysis with varimax rotation (on the theoretical assumption that the scale’s components would not be highly correlated) on the 23 items of the scale. As anticipated, five components were extracted with an eigenvalue of more than 1 which accounted for 58.9% of the extracted variance. The internal consistency of the extracted components was satisfactory with Cronbach alphas as follows: $\alpha=.76$ for the Companionship, $\alpha=.77$ for the Conflict, $\alpha=.82$ for the Help, $\alpha=.76$ for the Security and $\alpha=.78$ for the Closeness. Following the establishment of the instrument’s factorial structure, a composite score for each component was calculated with higher scores reflecting more positive perceptions in the dimensions of companionship, help, security, and closeness while the opposite was true in the conflict dimension.

Social participation analyses

As it can be seen in Table 1, students with SEN were found to be less socially accepted and had fewer friendships than their typically developing peers. Likewise, the analysis of the observational data revealed that the students with SEN had fewer interactions with peers than their counterparts without SEN. This finding was true for both the interactions initiated by the students with SEN and for those initiated by their peers (see bottom panel of Table 1). Additionally, the examination of the recorded student-teacher interactions in the playground revealed that the teachers initiated significantly more interactions with the students with SEN than their typically developing peers. Interestingly, there was no difference between the two student groups in terms of the interactions they had initiated with the teachers. Finally, the students with SEN were more often recorded to be alone than their peers without SEN. These negative findings taken collectively confirm the first hypothesis posed in this study. Interestingly, there was no difference between the students with SEN and their peers in terms of their social self-concept as both groups reported remarkably similar positive perceptions.

(Table 1 here)

The students’ social participation was further examined through the application of three indices, namely the peer acceptance, the friendships, and the cohesive subgroups indices. Instead of solely relying on average scores, the application of these indexes

provides a more complete picture of marginalization (see Table 2). With regard to the first index, using “no nominations at all” as a criterion seems a clear indication of non-acceptance in the peer group. Accordingly, the majority of students with SEN (88.9%) could be seen as socially accepted since they had received one nomination and only 11.1% had received no nominations at all. However, as Pijl, Frostad, and Flem (2008) have argued, having only been nominated by one peer does not suggest satisfactory acceptance because these students are quite vulnerable for losing all peer support. Consequently, we proceeded with utilising “less or equal to one nomination” as a criterion for determining social acceptance. Using this as a criterion seriously increases the percentage of students with non- or a low peer acceptance. Accordingly, one third of the participating students with SEN (33.3%) could be regarded as at risk of being excluded compared to only 11.6% of the typically developing group. Chi-squared analysis revealed that this difference was statistically significant ($\chi^2=16.05$, $df=1$, $p<.001$). The application of the second index indicated that the students with SEN were more at risk of not having any reciprocated friendships in their class compared to their typically developing peers (26.7% compared to 7.3%). Again, the application of Pijl et al.’s (2008) stricter criterion of “less or equal to one friendship” doubles the percentages of students being at risk of marginalization since 51.1% of students with SEN had equal to or less than 1 friendship compared to 18.4% for students without SEN. Again, this difference was statistically significant ($\chi^2=25.51$, $df=1$, $p<.001$). Finally, the application of the third index indicated that students with SEN were at a greater risk of social isolation compared to their typically developing peers (28.9% were not part of a cohesive subgroup in their class compared to 9.9%, $\chi^2=13.96$, $df=1$, $p<.001$)

(Table 2 here)

Next, we examined the perceptions students held about the quality of their best friendship. According to our second hypothesis, students with SEN were expected to express similar perceptions of best friendship quality to the ones expressed by their peers without SEN. The statistical analysis performed confirmed this hypothesis since the two groups reported similar positive perceptions in four out of five dimensions (companionship, help, security, and closeness); and, strikingly, students with SEN reported less conflict with their best friend compared to their peers without (see Table 3). Given that this analysis only concerns friendship quality perceptions without confirming these with additional evidence (i.e. observations, interviews with teachers etc), it was deemed necessary to first identify all reciprocal friendships in our dataset and then compare the students with SEN’s’ perceptions with the estimation of their counterparts without SEN who reciprocated (i.e. also nominated them as best friends and rated this friendship). In doing so, we were able to examine their capability of accurately judging the quality of their best friendship. Twenty-four reciprocated best friendships between students with and without SEN were detected in the database with the remaining 21 students with SEN nominating someone external to their class as best friend. The paired-samples t-tests conducted failed to detect significant differences in any of the five friendship quality dimensions suggesting that the judgement of the students with SEN were accurate. However, a word of caution is needed here; the bottom panel of Table 3 shows that, with the exception of the companionship dimension, the mean differences in the remaining four dimensions are larger than the mean differences between the total

group of students with SEN and the group of students without SEN (upper part of Table 3). It could, therefore, be suggested that the statistical analyses performed lacked sufficient power to detect statistical significance. Bearing this in mind, the outcomes of these analyses should be treated cautiously.

(Table 3 here)

Finally, we tested our third hypothesis which concerned the relationship between the students with SEN's social self-concept and their acceptance by peers as well as their perceptions of best friend quality. As anticipated on the basis of previous research findings, the students with SEN's social self-concept was very weakly associated with their acceptance as the low correlation of $r=.13$ in Table 4 indicates. By contrast, the analysis revealed a moderate positive correlation ($r=.41$, $p<.01$) between the social self-concept held by students with SEN and the dimension of "companionship". Although the inferences that can be made from correlational analyses are very limited, this finding is very interesting as it reaffirms the importance of having a good friend with whom students with SEN voluntarily spend their free time together. None of the other friendship quality dimensions (conflict, help, security, and closeness) was significantly related to social self-concept.

(Table 4 here)

Discussion

The current study focused on all four key themes of social participation as theorized by Koster et al. (2009), namely the students' acceptance by classmates; friendships/relationships; social self-perceptions; and contacts/interactions. With regard to three out of four key themes of social participation, the results of this investigation were negative indicating that students with SEN are at a high risk for low social participation. In line with previous research efforts (Koster et al. 2010; Schwab 2015b), students with SEN in this study were less socially accepted and had, on average, fewer friends than their typically developing peers.

With regard to the theme of contacts/interactions, the students with SEN were more often recorded to be alone and had fewer interactions with their peers than their counterparts without SEN. Alarming, this lack of interaction between students with SEN and their peers was not only due to significant fewer attempts from the students with SEN but also from their peers. This is particularly worrisome because the lack of social interaction cannot solely be attributed to the limited social skills possessed by students with SEN but possibly to the negative attitudes held by the typically developing students. Additionally, teachers were recorded to initiate interactions more often with students with SEN than with typically developing students. One plausible explanation for this finding, but by no means exclusive, relates to the over-protective stances the observed teachers might have adopted while on duty in the playground leading them to engage with students with SEN more frequently than with other students. Such practices might have inadvertently deprived students with SEN from opportunities to socially

interact with peers. Indeed, the literature contains examples of teachers unintentionally depriving students with SEN of valuable social experiences through their teaching strategies and wider pedagogical practices; for example, in a case study of an inclusive school by Avramidis, Bayliss, and Burden (2002), a girl with spina bifida was observed to be spending all her lunch breaks at the staff room alongside teachers and teaching assistants. This arrangement was described by the staff interviewed as necessary in order to protect the girl from having an accident in the playground or getting verbally abused by other students. This interaction with adults, however valuable, was at the expense of social interaction with peers in the playground.

It is worth noting here that we cannot make any firm judgments about the quality of the teacher-student interactions observed in the present study since we did not record the nature of such interactions (positive or negative); it is therefore likely that some of these interactions might have had a positive impact on the students with SEN's relations with fellow students. However, looking at our observational evidence as a whole, we could still argue that the observed students with SEN ought to interact more often with their peers than with their teachers. In this respect, teachers should endeavor to keep their interaction with students with SEN to a minimum while at the same time attempt to construct some group activities that facilitate social interaction among students and ultimately the development of friendships.

With regard to the key theme of social self-perception, the students with SEN reported more favourable perceptions than their actual relationships could justify, a finding that also emerged in other studies (Koster et al. 2010; Avramidis 2013). Some explanations for this paradox could be put forward here; either these students with SEN experience social obliviousness as some authors have implied in the past (e.g. Pijl and Frostad 2010), or they had developed the ability to focus on the positive aspects of their peer relationships and not the negative ones (Bear et al. [1993] cited in Avramidis 2013). The evidence reported in the current study lends support to the second explanation since the students with SEN reported very positive perceptions of best friendship quality. Specifically, in this study the levels of all self-reported dimensions of friendship (companionship, help, security, closeness, and conflict) of students with SEN did not differ from the equivalent quality dimensions of typically developing students. This finding is in agreement with previous research on the friendship quality of students with visual impairments who were found to have similar levels of friendship quality compared to signed students (Lifshitz, Hen, and Weisse 2007); and, also in agreement with a recent study which reported no differences between the friendship quality of students with autistic spectrum disorders, students with motor/sensory disabilities, and their typically developing peers (Bossaert et al. 2015). More importantly, in the present study perceptions of shared friendship quality did not differ among students with SEN and their typically developing friends. Although this came from the examination of only 24 pairs of reciprocated friendships and should be treated with caution, this finding is very important since it indicates that the participating students with SEN who were experiencing moderate learning difficulties showed a satisfactory level of interpersonal awareness.

To sum up, this study has reported some important findings which contribute to our understanding of the social participation and overall social functioning of children with SEN in regular primary schools. On the one hand, it is certainly worrisome that the students with SEN are less accepted, have fewer friends and have fewer social interactions than their typically developing peers. On the other hand, most of them had managed to form one or two friendships and, on average, they felt positive about themselves and held positive perceptions about their best friend. It is therefore quite likely that the satisfaction derived, for example, from having just one close friend may counterbalance being disliked or ignored by most other classmates.

Some limitations of this study should be mentioned. First, the study focused solely on students with moderate learning difficulties and, therefore, no firm conclusions can be drawn about the social participation of students with other types of SEN. Further research including larger samples of students with different types of SEN is recommended. Second, the study was conducted in primary schools and, therefore, its outcomes cannot be generalised in secondary settings where peer relations become more complex, romantic relationships begin to occur and mixed-sex cliques are more common (Bossaert et al. 2015). Consequently, incorporating data from secondary education settings would have certainly strengthened the present study's outcomes. Third, the present study assessed the quality of the students' self-rated best friendship with individuals that were not necessarily members of their class. In so doing, examination of 'reciprocity' and shared perceptions of friendship was not possible for the whole sample. Fourth, the research design employed has only provided a "snapshot" of the social participation of students with and without SEN in Greece; monitoring a particular cohort of students over a longer period of time through the employment of a longitudinal research design would have certainly resulted in a richer understanding of the complexities surrounding social participation.

Recognising these limitations, however, the study has contributed to the current debate in the field since it has highlighted the importance of friendship quality, a variable that is usually overlooked in relevant sociometric research. In so doing, the study aspires to divert the researchers' attention from the measurement of social participation to the examination of the reported relationships' quality and the exploration of how these can be strengthened. What pedagogical strategies are most effective in strengthening student relationships is as yet a largely open question.

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Table 1. Peer-acceptance, friendships, social self-concept and interactions of students with and without SEN

	SEN (N=45)		Non-SEN (N=412)		
	M	SD	M	SD	t-test
Peer-acceptance	.80	.21	1.02	.26	6.34***
Number of reciprocal friendships	1.73	1.48	3.07	1.50	5.71*
Social self-concept	3.77	.84	3.82	.72	.41

	SEN (N=22)		Non-SEN (N=22)		
Contacts/interactions	M	SD	M	SD	t-test
Peer interaction initiated by target pupil	24.50	13.78	42.45	8.62	5.17***
Peer interaction initiated by peer	21.36	11.86	33.45	5.26	4.37***
Teacher interaction initiated by target pupil	1.55	2.76	.50	1.14	-1.64
Teacher interaction initiated by teacher	2.41	4.75	.09	.42	-2.28***
Pupil being alone	40.18	21.17	13.50	7.65	-5.56***

*p< .05, ***= p< .001

Note: Students were observed during free time for 3 five-minute periods. Every period was divided into 30 intervals of 10 seconds each. Consequently, observation scores could range from 0 to 90.

Table 2. Peer-acceptance, number of friendships and participation in cohesive subgroups for students with and without SEN

Peer-acceptance				
Group	N	Nominations	No nominations at all	≤ 1 nomination
SEN	45	40 (88.9%)	5 (11.1%)	15 (33.3%)
Non-SEN	412	397 (96.4%)	15 (3.6%)	48 (11.6%)

Number of friendships				
		Friends	No friends at all	≤ 1 friend
SEN	45	33 (73.3%)	12 (26.7%)	23 (51.1%)
Non-SEN	412	382 (92.7%)	30 (7.3%)	76 (18.4%)

Participation in cohesive subgroups				
		Member of subgroup	Not member of subgroup	
SEN	45	32 (71.1%)	13 (28.9%)	
Non-SEN	412	371 (90.1%)	41 (9.9%)	

Table 3. Mean scores on the FQS subscales for students with and without SEN

	SEN (N=45)		Non-SEN (N=412)		
Friendship quality	M	SD	M	SD	t-test
Companionship	4.06	.69	3.98	.63	-.73
Conflict	3.51	.87	3.81	.85	2.19*
Help	4.22	.84	4.25	.74	.30
Security	3.98	.87	4.01	.75	.90
Closeness	4.23	.71	4.35	.60	1.05
Shared Friendship quality	SEN (N=24)		Non-SEN (N=24)		t-test
Companionship	4.05	.65	3.98	.77	-.37
Conflict	3.38	.85	3.79	.89	1.69
Help	3.96	.97	4.29	.74	1.44
Security	3.75	.88	4.20	.59	2.14
Closeness	3.98	.73	4.25	.57	1.56

*p< .05

Table 4. Correlations between self-concept and peer-acceptance and dimensions of friendship quality for students with SEN

Variables	Social	Peer	Companionship	Conflict	Help	Security	Closeness
	Self-concept Acceptance						
Social Self-Concept	-						
Peer acceptance	.13	-					
Companionship	.41**	.12	-				
Conflict	-.04	-.09	.12	-			
Help	.16	.13	.53**	.32*	-		
Security	.13	-.01	.44**	.31*	.61**	-	
Closeness	.07	.00	.44**	.17	.64**	.52*	-

*p< .05, **p< .001