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The effects of cognitive, social, and emotional intelligence on children's sociometric status in a new peer group[1]

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Abstract: Sociometric status is of consequence to the child's development and adjustment, as research shows that people with low status in childhood and adolescence run a greater risk of later maladjustment. On the other hand, popularity is a significant predictor of well-being as well as academic success and effective intra- and interpersonal functioning. Given the importance of sociometric status to a person's psychological and social functioning, researchers have sought to identify its determinants with a view to developing methods of supporting children's development and adjustment. *The objective of the study* was to investigate changes in the sociometric status of children in a new classroom and determine to what extent they are shaped by cognitive, social, and emotional intelligence. *Method:* The study encompassed 136 first graders aged six and seven years (M = 6,87, SD = 0.54). Sociometric status was evaluated three times: at the beginning of the school year, as well as after six and twelve months. In addition, one test of cognitive, social, and emotional intelligence was performed. The data were analyzed using latent growth curve models. *Results:* It was found that the sociometric status of children changed over time. Cognitive intelligence was not found to be a statistically significant predictor of either the initial level or the rate of change of sociometric status (whether in the acceptance or rejection domains). Emotional intelligence was significant only for the initial rejection by their peers. While social intelligence did not statistically significantly predict initial levels of acceptance and rejection, it did have a significant effect on the rate of temporal change in both domains of sociometric status. This means that children with higher SI improved their position in the peer group over time (with increasing acceptance and declining rejection levels). *Conclusions:* The research shows that by developing social intelligence, it is possible to help children with a low sociometric status, who do not cope well in a social group and are often rejected by their peers.
Keywords: sociometric status, cognitive intelligence, social intelligence, emotional intelligence

1. Theoretical introduction

1.1. Sociometric status of children in peer groups

Starting school by children implies not only new academic challenges and responsibilities, but also involves entering an unfamiliar environment and peer group. A formal peer group, such as a classroom, quickly develops an informal structure. Some of the fundamental developmental tasks faced by first graders include socializing with peers, building positive relationships with them and newly met adults (e.g. teachers), and establishing one's status in a peer group. At the beginning of school education, children tend to attach increased attention to their position among peers and, as a result, they become more susceptible to peer influence (see e.g.: Weyns, Colpin, Verschueren, 2021). A child's status in a peer group is usually (if not most) operationalized as sociometric position (Basra, 2016; Bukowski, Castellanos, Persram, 2017; McMullen, Veermans, Laine 2014; Meijs, Cillessen, Scholte, Segers, Spijkerman, 2010), which shows peer acceptance and rejection quantified by the number of positive and negative peer nominations, respectively. Sociometric status is of consequence to the child's development and adjustment, as research shows that people with low

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status in childhood and adolescence run a greater risk of maladjustment and various kinds of difficulties (Almquist, Brännström 2014; Lorijn, Engels, Huisman, Veenstra, 2022; Yang, Chen, Zhang, Ji, Zhang, 2020). This negative effect persists even into adulthood. On the other hand, popularity brings a number of benefits. A high sociometric peer status is a significant predictor of well-being as well as academic success and effective intra- and interpersonal functioning later in life (Lease, Kennedy, Axelrod, 2002; Kiuru i in., 2020; Wentzel, Jablansky, Scalise, 2021).

1.2. Determinants of a child's sociometric peer status

Given the importance of sociometric status to a person's psychological and social functioning, researchers have sought to identify its determinants with a view to developing methods of supporting children's development and adjustment. The predictors of sociometric status described in the literature may be classified into three broad categories: extra-individual characteristics, such as the socioeconomic status of one's family (LaFontana, Cillessen, 2002; Lease, Kennedy, Axelrod, 2002), ascribed characteristics including gender, ethnicity, physical attractiveness and fitness (LaFontana, Cillessen, 2002; Lease, Kennedy, Axelrod, 2002), and psychological and behavioral characteristics. It has been consistently shown that popular children score higher than average on prosocial and helpful behaviors and lower on aggressive and acting-out behaviors, as opposed to rejected children, who score higher on aggressive and acting-out behaviors and lower on prosocial behaviors (see e.g.: Camodeca, Caravita, Coppola, 2015; Garaigordobil, 2017; LaFontana, Cillessen, 2002; Marryat, Thompson, Minnis, Wilson, 2014; Meijs et al., 2010; Newcomb, Bukowski, Pattee, 1993; Rytioja, Lappalainen, Savolainen, 2019). There are also differences in following peer interaction rules, sociability, openness to others (as opposed to withdrawal), capacity for cooperation, friendliness, as well as academic and athletic performance (see e.g.: LaFontana, Cillessen, 2002; Meijs et al., 2010; Newcomb, Bukowski, Pattee, 1993). Most of the factors shaping children's sociometric peer status may be classified as broadly understood social skills and adjustment ability.

1.3. The effects of cognitive, social, and emotional intelligence on children's sociometric status

Scholars have long studied the effects of intelligence on establishing a child's position in a peer group. The most extensive body of research has been accumulated for general intelligence, also known as cognitive intelligence, defined as the ability to solve intellectual problems, and often measured by means of the intelligence quotient (IQ). Most of these studies indicate a positive correlation of cognitive intelligence with peer acceptance (Czeschlik, Rost, 1995; Dundić, Pleić, 2022; LaFontana, Cillessen, 2002; Newcomb, Bukowski, Pattee, 1993; see also Weyns, Colpin, Verschueren, 2021), and a negative correlation with rejection (Czeschlik, Rost, 1995). However, it should be noted that the observed coefficients are quite low and rarely exceed .35 (Czeschlik, Rost, 1995). The relationship between cognitive intelligence and peer status is usually explained by the fact that IQ may compensate for deficits in social skills while contributing to better academic performance (more efficient learning, higher cognitive competence, better school grades), which is appreciated by peers (see e.g.: Czeschlik, Rost, 1995). This has been corroborated by studies reporting that popular children are more academically able and competent (e.g.: Dundić, Pleić, 2022; LaFontana, Cillessen 2002). However, it has also been argued that intelligence may not only be the *cause* of a higher sociometric status, but also the *consequence* of the quality of a child's peer relationships. Children who are rejected by their peers and excluded from group activities may have inferior opportunities to study and develop their intelligence, which may in turn translate into slower academic progress at school (Czeschlik, Rost, 1995).

Nevertheless, the effects of intelligence on sociometric status may not be reduced exclusively to the cognitive and academic fields. What is also important is the child's functioning in the social and emotional

domains, which are increasingly often operationalized as social intelligence (SI) and emotional intelligence (EI), respectively (see Andrei, Mancini, Mazzoni, Russo, Baldaro, 2015; Mavroveli, Petrides, Rieffe, Bakker, 2007; Meijs et al., 2010). These two types of intelligence are defined in terms of cognitive ability and/or effectiveness of social or emotional functioning (Ford, Tisak, 1983; Knopp. 2019). The latter interpretation goes far beyond the traditional definition of intelligence as an instrumental disposition, stirring considerable controversy among scholars (see Dowswell, Chessor, 2014). Indeed, it would seem that these constructs could be more aptly termed social and emotional competence, respectively (Dowswell, Chessor, 2014; see also zob. też. Webb et al., 2013). On the other hand, defining SI and EI in terms of the ability to process social and emotional information is rather uncontroversial (c.f. Knopp, 2019; Wong, Day, Maxwell, Meara, 1995). In light of previous research, these constructs are qualitatively distinct from general intelligence and from each other (Barnes, Sternberg, 1989; Ford, Tisak, 1983; Mayer, Caruso, Salovey,, 2000; Wong et al., 1995). The cognitive component of SI helps to accurately perceive, understand, and assess social situations (Wong et al., 1995). In turn, EI involves the ability to perceive and express emotion, as well as emotional facilitation of thinking, understanding emotions, and emotion regulation (Mayer, Caruso, Salovey, 2000).

Both SI and EI have been proven to facilitate social skills (see e.g.: Holland, 2021; Hsieh, Wei, Hwa, Shen, Feng, Huang, 2019; Morin, 2020; Sesma Mannes, Scales, 2013). People with higher SI better understand social and interpersonal situations (see e.g.: Conte, Grazzani, Pepe, 2018; Putallaz,1983; Zautra, Zautra, Gallardo, Velasco, 2015), and so they find it easier to choose behaviors consistent with social norms and expectations, as well as appropriate to the circumstances. Therefore, it is only natural that a number of studies have consistently confirmed correlations between the social intelligence of children and their sociometric peer status (Lease, Kennedy, Axelrod, 2002; Meijs et al., 2010). However, it should be stressed that while most studies in this field concern the behavioral rather than cognitive component of SI, the latter also seems to play an important role in shaping peer status. For instance, Putallaz (1983) suggests that peer acceptance largely depends on accurate perceptions of the group's ongoing activity, knowing what is required to be relevant on a statement-by-statement basis, and being able to understand the more general rules, or norms of social interaction. Other findings have demonstrated that rejected children had deficits in social information processing (Moore, Hughes, Robinson, 1992).

By enabling greater sensitivity to emotional information from others, more effective expression of one's emotions, as well as a good understanding of emotional states and efficient emotional regulation, EI also improves interpersonal functioning (cf., e.g.: Farina, Belacchi, 2014, 2022; Parker et al., 2021; Wood, 2020). EI has been shown to be associated with general social competence, prosocial and cooperative behaviors, adaptive coping (Mavroveli et al., 2007), and leadership (Garaigordobil, 2020; Mavroveli et al., 2007; Mavroveli, Petrides, Sangareau, Furnham, 2009; McCrimmon, Matchullis, Altomare, 2016). Moreover, students with higher EI are better rated by others. For example in one study, they were described by their teachers and peers as kind, helpful, and less aggressive (Mavroveli et al., 2009). On the other hand, studies show negative correlations between emotional intelligence and maladaptive, hostile and aggressive behaviors towards peers (García-Sancho, Salguero, Fernández-Berrocal, 2016; Qualter, Urquijo, Henzi, Barrett, Humphrey, 2019). An EI component which seems to be of particular significance to interpersonal functioning is emotion regulation (Blair et al., 2015; Camodeca, Coppola, 2019). It has been found that children who cannot regulate their emotions and engage in strong emotional displays, either positive or negative, are more likely to be rejected by peers (Blair et al., 2015), while those with effective emotion regulation exhibit better social skills and are more likely to be accepted by peers (Spinrad et al., 2006). Starting school and entering a new peer group (classroom) bring about new challenges and tasks in which the ability to effectively manage emotions can be critical for long-term success in peer relationships (cf., Blair et al., 2015).

1.4. The present study

Since the first part of this paper cites a number of studies examining the relationship between children's sociometric peer status and various kinds of intelligence, the question arises as to the novel and original contribution of the present research. First of all, the results of previous studies using intelligence as a predictor of children's peer status are not entirely unequivocal. Moreover there are relatively few papers on the relationship between sociometric status and EI and SI. Therefore, it is necessary to further explore this avenue, especially given the impact of sociometric status on the present and future functioning of children. Second, it should be noted that existing papers are mostly focused on only one type of intelligence (*either* cognitive, *or* social, *or* emotional). To the best of the present author's knowledge, no paper to date has dealt with all three types of intelligence. Third, while previous research into the relationship between sociometric status and SI or EI primarily involved their behavioral component, the present study is mainly focused on the cognitive aspect. Fourth, the greatest advantage of the current paper is that it describes a longitudinal study, in contrast to most other reports, which treat sociometric status as a time-fixed, static domain (with measurements conducted only at one point in time). The scarcity of longitudinal studies may result from the belief that sociometric status is relatively constant, which is based on a rather solid empirical foundation, with most authors finding the absence of, or only slight temporal changes in children's sociometric status (see Cillessen, Bukowski, Haselager, 2000; Engels et al., 2019). However, such studies usually concerned fully formed peer groups with a stable informal structure. In contrast, the present paper investigates new classrooms in the process of developing informal structures, and so it may be expected that the sociometric positions of children are still fluid. Moreover, in previous studies the relationship between sociometric status and intelligence was described in a static manner: correlations between the two variables were determined at a single point in time. But in order to accurately determine how intelligence shapes sociometric position, one should take into account group dynamics. Therefore the objective of the current longitudinal study was not only to identify a *relationship* between the two factors, but also to evaluate the effects of the various types of intelligence on *changes* in sociometric status.

The goal of this research was to answer the following questions:

1. Does sociometric status change significantly in the initial stage of peer group functioning?
2. What are the effects of cognitive, social, and emotional intelligence on children's sociometric peer status and on changes in that status over time?

It was hypothesized that:

H1: In the first year of the functioning of a peer group, children's sociometric status changes dynamically. There are significant interpersonal and intrapersonal differences in the initial status of children, as well as in the rate of change over time.

H2: Cognitive, social, and emotional intelligence are significant predictors of both the initial sociometric status of children in a peer group as well as of temporal evolution of that status. The position of children with high intelligence tends to increase over time, and conversely, that of children with low intelligence gradually declines. Since sociometric status consists of two basic domains, peer acceptance and peer rejection, it is expected that the effects of the studied intelligence types will be positive for positive nominations (indicating acceptance) and negative for negative nominations (indicating rejection).

2. Method

2.1. Study group

The initial study group encompassed 146 children, but several of them changed schools during the study or resigned from participation in the research, and so the final population consisted of 136 first graders

from 7 different elementary classrooms ((M = 6,87, SD = 0.54), of whom 58% were girls, and 42% boys. Very few children (dyads or triads) knew each other previously from day care or neighborhood; the vast majority met for the first time in the classroom. Participation in the research was completely voluntary. Prior to the study, informed consent was obtained from the teachers, parents, and the children themselves, and only classrooms with a 90% rate of consent or more were included in this study. This was done to ensure that sociometric estimates were based on a sufficient number of informants. The classrooms contained from 18 to 20 children, with the number of non-participants being 0 to 2 per classroom.

2.2. Procedure

Tests were conducted three times. The first measurement (M1) was done approx. three weeks into the school year. The participants completed the sociometric test and intelligence tests during two individual meetings lasting approx. 45–60 min (depending on how fast the child worked). The second measurement (M2) took place 6 months after the first one (±7 days) – these were 15 min individual meetings with children, who were administered a sociometric test. The third measurement (M3), similar to the second one, was done after another 6 months, approx. 3 weeks into the second school year (grade two).

2.3. Tools

Sociometric test. The sociometric test for first graders was constructed pursuant to Moreno's classical criteria. The children made positive and negative nominations among their classmates answering two questions: 1) "Which classmate would you like to go to the movies with?" and 2) "If you could invite all of your classmates to the movies, but you did not have tickets for three of them, who would you leave behind?" In both cases, children were asked to name three classmates, but could nominate more if they insisted.

DMI-2. Cognitive intelligence was measured using Assessment of Intellectual Potential-2 (DMI-2) developed by Matczak (2001). The test measures the intellectual potential of children based on performance of concrete operations. It consists of 76 tasks involving verbal, pictorial, and numerical material in which children are required to complete classes, series, and analogies by selecting an appropriate element from a set of five options. The tool is characterized by high internal consistency (with Cronbach's alpha ranging from 0.86 to 0.91, depending on age group), as well as by good theoretical and diagnostic validity.

CSCS. Social intelligence was measured using the Children's Social Comprehension Scale (CSCS) by Knopp (2019). It is a performance test designed to evaluate the cognitive component of SI, that is, the ability to understand and interpret human behavior in social situations, as well as knowledge of social norms, their underlying principles, consequences of violating them, etc. (c.f., Wong, et al., 1995). The test consists of 10 tasks, each of which contains a picture representing a social situation and a short story describing it (see Appendix 1). The subjects are requested to identify the worst thing in a given situation by selecting one of four options. All sets of answers are constructed according to the same pattern: one answer concerns the negative consequences of the protagonist's behavior to his or her interaction partner (which is considered correct and scored), another one concerns social conventions and savoir-vivre principles, the third one concerns the negative consequences for the protagonist himself or herself, and the fourth one concerns elements of secondary importance, irrelevant from the point of view of social interactions. In a group of first graders, the reliability coefficient $\lambda 6$ was 0.66. The test is characterized by good factor validity as estimated by confirmatory factor analysis ($\chi 2 = 42.28$, $p = 0.185$; CFI = 0.97; RMSEA = 0.038). The validity of the tool is also corroborated by positive correlations of its scores with other measures of social intelligence (stronger) and intellectual potential (weaker), as well as with indicators of social functioning. The scores increase with age.

"Behavior" subtest. Emotional intelligence was evaluated by the "Behavior" subtest from the Emo-Tests battery by Knopp (paper in progress). The test is

designed to measure knowledge about ways to regulate emotions and the ability to apply that knowledge in managing strong negative emotions evoked by various interpersonal situations. Such an ability is considered to be one of the critical components of emotional intelligence (Mayer et. al., 2000). The test consists of 14 tasks containing short stories describing situations which produce strong negative emotions in the protagonist. The participant responds to the question "What should the protagonist do to feel better?" by choosing from among four options. One option always gives an active, adaptive way of self-reliant coping (scored two points), another option offers an active way of coping but soliciting the help of others (one point), the third option describes a passive coping strategy (zero points), and the fourth one concerns maladaptive, aggressive coping (zero points). In a group of first graders, the reliability coefficient λ6 was 0.82. The test is characterized by good factor validity, with confirmatory factor analysis revealing a one-factor solution ($\chi 2 = 115.57$; $p = 0.206$; CFI = 0.99; RMSEA = 0.028). The validity of the tool is also corroborated by positive correlations with other emotional intelligence measures, as well as indicators of social functioning. The scores also increase with age.

3. Results

All analyses were performed using IBM AMOS version 22. The hypotheses were verified using a latent growth curve model (LGC; Byrne, 2010). The unique advantage of a LGC is that it enables the description of changes not only at the group level, but also at the intraindividual level (Cieciuch, Davidov, Algesheimer, 2016; Zając-Lamparska, Warchol, Deja, 2018), as it contains both a "between-person" component showing differences between the participants and a "within-person" component revealing the changes that have occurred in individuals (the latter being the main focus of the current study). The group effect is evaluated by estimating the mean, while the individual effect is assessed by estimating covariance.

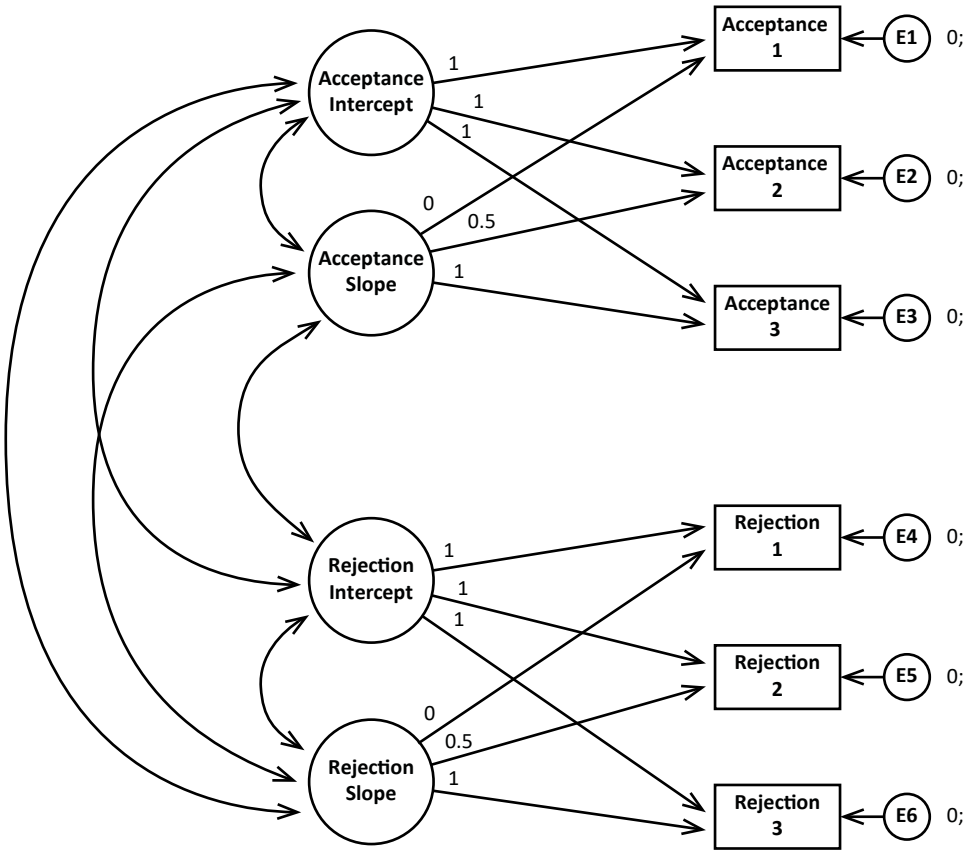
In the applied LGC model, the observed variables were scores from three sociometric status measurements (positive nominations as indicators of acceptance and negative nominations as indicators of rejection), and the latent variables were the *Acceptance Intercept* and *Rejection Intercept* (the mean initial levels of acceptance and rejection) as well as the *Acceptance Slope* and *Rejection Slope* (changes in acceptance and rejection). LGC is treated as a factor model with all loadings being known (see Byrne, 2010), and so a specific configuration of conditions and limitations is imposed on those factor loadings, as marked in the figure. The LGC model, given in Figure 1, was found to fit the data very well ($\chi 2 = 6.044$; $p = .535$; CFI = 1.00; RMSEA = .000; RMSEA 90% CI .000–.096), but a detailed analysis of estimates related to these factor covariances showed only four to be statistically significant. Therefore, the model was modified by removing statistically non-significant covariances: those between the Acceptance Intercept and Rejection Slope and between the Acceptance Slope and Rejection Intercept. The modified model is shown in Figure 1.

The final model (see Figure 1) exhibited the following fit characteristics: $\chi 2 = 7.041$; $p = .633$; CFI = 1.00; RMSEA = .000; RMSEA 90%, CI .000–.080. Taking into consideration the fact that the standard acceptance criteria for such models are CFI > 0.90 and RMSEA < 0.08 (Cieciuch, Davidov, Algesheimer, 2016; Zając-Lamparska, Warchol, Deja, 2018), the presented model was found to have an excellent fit to the data, enabling further change analysis.

Subsequently, it was checked whether children differed in terms of their sociometric status at M1 and whether intrapersonal changes in this respect occurred over time. Due to the relatively short period of time (1 year), linear changes were analyzed.

It should be noted that in contrast to typical LGC analyses, expecting a uniform direction of change among participants, the present study did not focus on changes at group level. In this case, sociometric status was expected to increase in some children and decline in others. Therefore, the main area of interest was temporal individual change (from a "within-person" perspective).

To begin with, interpersonal differences in initial sociometric status were identified in the first measurement, as reflected by significant variance of the latent variables Acceptance Intercept (2.848;



Notes: Latent variables are given in ovals, and observed variables in rectangles; E – measurement error.

Figure 1. LGC model with three sociometric status measurements.

p<.001) and Rejection Intercept (6.348; p<.001) in the LGC model. This means that at M1 the participants significantly differed between each other in both domains of sociometric status.

In the next step, interpersonal differences in sociometric status change were analyzed to determine whether or not changes occurred in all participants in the same way. Again, it was found that participants differed significantly in terms of temporal evolution of their sociometric status, as reflected by significant variance of the latent variables Acceptance Slope (6.596; p<.001) and Rejection Slope (4.990; p<.01).

Having proven interindividual changes in sociometric status, the next step was to establish whether and to what extent this heterogeneity is explained by the analyzed types of intelligence. Therefore, it was necessary to address two issues: 1) Does sociometric status differ between participants who exhibited different intelligence levels in the initial measurement? and 2) Is the rate of change determined by intelligence? Consequently, three types of intelligence (cognitive, social, and emotional) were introduced to the model as hypothetical predictors of individual and group change in sociometric status, thus forming *a conditioned latent growth curve* (CLGC; Byrne, 2010; Zając-Lamparska, Warchol, Deja, 2018), as shown in Figure 2 (some numbers are not shown for the sake of clarity).

A covariance was found between SI and EI, which is not surprising in light of previous empirical research, which showed that while these two constructs are distinct, they are nevertheless positively correlated with one another (Mayer, Caruso, Salovey, 2016). In turn, cognitive intelligence was not correlated with either of them. The fit indicators for the CLGC model presented in Figure 3 were as follows: $\chi 2 = 26.497$;

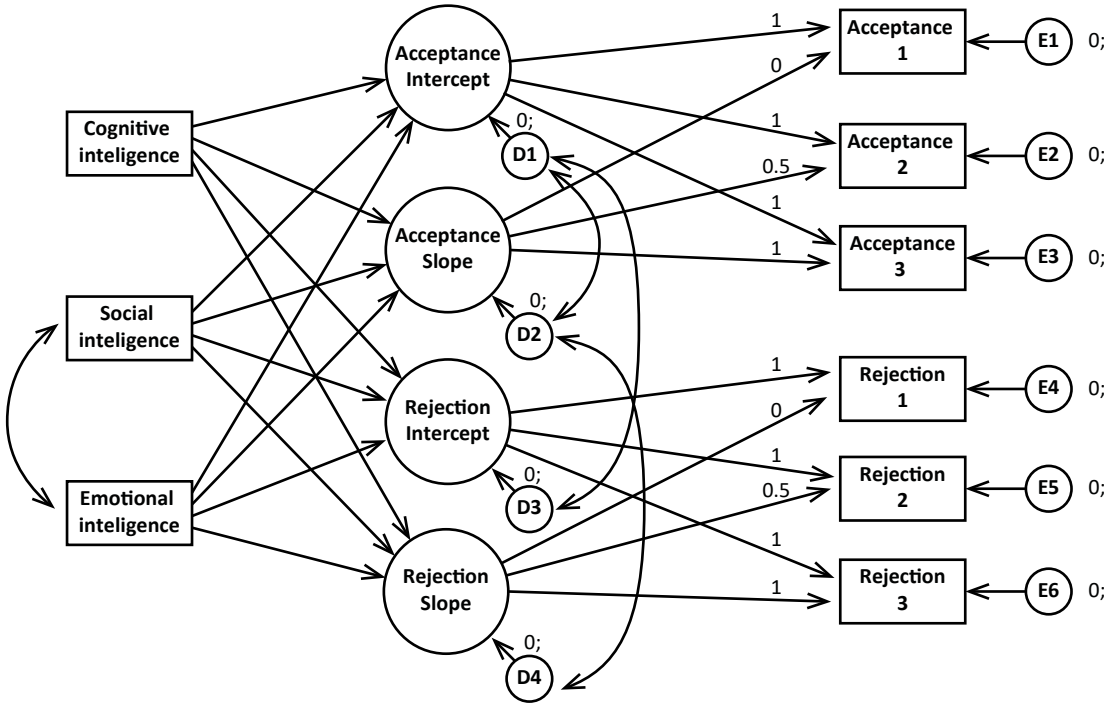


Figure 2. CLGC model with effects of cognitive, social, and emotional intelligence on sociometric status.

p = .066; CFI = .984; RMSEA = .064; RMSEA 90% CI .000 – .109. According to the aforementioned criteria for model acceptability (Cieciuch, Davidov, Algesheimer, 2016; Zając-Lamparska, Warchol, Deja, 2018), the model in question exhibited a satisfactory fit to data, enabling further analysis. Standardized regression coefficients are given in Table 1.

Cognitive intelligence was not found to be a statistically significant predictor of either the initial level or the rate of change of sociometric status (whether in the acceptance or rejection domains). Emotional intelligence was significant only for the Rejection Intercept (negative correlation), which means that children with lower EI at M1 were more likely to be rejected by their peers.

While social intelligence did not statistically significantly predict initial levels of acceptance and rejection, it did have a significant effect on the rate of temporal change in both domains of sociometric status. This means that children with higher SI improved their position in the peer group over time (with increasing acceptance and declining rejection levels).

Discussion

While there exists a long tradition of research on children's peer status, many issues still remain open. A considerable body of data has been accumulated concerning the individual characteristics which determine whether or not a child is liked by his or her peers. However, no study to date has encompassed all three types of intelligence discussed here. Moreover, little is known about the formation of children's sociometric status in new peer groups and about the contribution of the various types of intelligence to this process.

The present findings lead to the following conclusions: first, in a new peer group, such as a first-grade classroom, sociometric status is dynamic and changes quite rapidly over the short period in which an informal group structure develops; second, the process of establishing peer status differs between children; and third, the various types of intelligence have different effects on this change.

Table 1. Standardized regression coefficients for cognitive, social, and emotional intelligence as predictors of sociometric status

	Cognitive Intelligence		Social Intelligence		Emotional Intelligence	
	Estimate	*p*	Estimate	*p*	Estimate	*p*
Acceptance Intercept	-.002	.890	.049	.481	-.009	.721
Acceptance Slope	-.008	.655	.544	<.001	.057	.096
Rejection Intercept	.007	.749	-.035	.723	-.084	.029
Rejection Slope	.025	.169	-.830	<.001	.020	.548

The observed significant changes in children's position in the informal structure of a classroom diverge from the results of previous studies suggesting relative permanence of one's sociometric status. This divergence is even more pronounced if one takes into account the fact that the presented study encompassed a rather short period of time, which means that the changes were quite dynamic. On the other hand, the obtained results corroborate Hypothesis 1, according to which the informal structure of new groups is fluid and unstable, and so the positions of its participants are not settled. It should be noted that the present study involved young schoolchildren (six- and seven-year-olds), while empirical data indicate that peer status stability is positively correlated with age (cf., Cillessen, Bukowski & Haselager, 2000). Thus, given the age of the participants and the specific period in the functioning of the peer groups, the obtained results no longer seem very surprising.

In the present study, it was also found that changes in sociometric status are specific to individual children and are significantly affected by certain abilities. The observation that such changes are not influenced by cognitive intelligence is inconsistent with the majority of previous findings (see, e.g., Czeschlik, Rost, 1995; LaFontana, Cillessen, 2002; Newcomb, Bukowski, Haselager, 1993). However, it should be noted that the other studies were not longitudinal, and so in most of them both cognitive intelligence and sociometric status were measured only once. As a consequence, the reported results concern a general relationship between the studied variables rather than the contribution of cognitive intelligence to temporal change in sociometric status. Second, previous research did not measure all three types of intelligence at the same time, not enabling a distinction between cognitive and other intelligence types. Finally, while the effect of cognitive intelligence on sociometric position has been mostly viewed in terms of facilitation of academic achievement (cf., Czeschlik, Rost, 1995), according to some authors the effect of the latter on peer status depends on the norms of the group. Academic achievement leads to higher status only if it is prioritized in the classroom, but where other skills are prioritized, it may not lead to high social status (Meijs et al., 2010). It may be the case that in the studied children the purely cognitive domain and academic achievement did not serve as significant criteria of peer evaluation and liking. It should also be noted that the studied children were at the very beginning of school education with the first measurement being conducted only three weeks into the school year. Therefore, it is likely that the effect of cognitive intelligence on academic achievement was not yet revealed.

Emotional intelligence defined in terms of the capacity for emotion regulation was not found a significant predictor of sociometric status, either. While low EI was associated with peer rejection in the initial measurement, its influence disappeared over time, without a significant predictive effect on sociometric status change. Although the obtained results are not consistent either with the adopted hypothesis or with previous reports indicating that EI plays a substantial role in interpersonal relations (c.f. Andrei et al., 2015), this may be logically explained. First, the present study focused on only one of the four major elements of EI proposed in Salovey and Mayer's ability model, that is, emotion regulation (Mayer, Caruso, Salovey,

2016), in contrast to many previous studies, which operationalized multiple EI elements. Second, it should be noted that emotion regulation was defined herein as effectiveness of emotion information processing, or knowledge about how to manage emotions and the ability to deploy that knowledge in concrete emotion-provoking situations. Therefore, the current study operationalized the *ability to regulate emotions* rather than actual emotional functioning and *regulation in real-life situations*. This is an important distinction. The cognitive component of emotional intelligence, just as in other types of intelligence, is essentially an instrumental disposition, which is to say that one may have it, but not necessarily use it in interpersonal relations. The present study characterized children in terms of the degree of emotional intelligence (emotion regulation ability) possessed by them rather than applied in relations with their peers, as opposed to most other studies, which dealt with EI defined in behavioral terms (emotional competence). Obviously, the cognitive component of EI is indispensable for successful solving of emotion-related tasks. Knowledge about how to manage emotions and the ability to use this knowledge in situations generating emotional arousal is the foundation and prerequisite for effective emotion regulation, but not a sufficient condition per se. Therefore, EI was beneficial for the children at the very beginning of group formation and protected them from peer rejection. However, short-, and especially long-term, performance in peer groups is affected by a number of other factors, such as individual motivation, personality traits, situational determinants, etc. This may explain why EI was not found to exert a significant effect on change in peer status.

The type of intelligence which had the strongest effect on the sociometric position of children was SI. While it did not affect the initial peer status, higher SI led to its gradual improvement over time (increasing peer acceptance and decreasing rejection). This is hardly surprising, as SI is defined herein as the ability to understand and correctly assess social situations, which undoubtedly facilitates effective interpersonal functioning. It seems likely that accurate perception and comprehension of other people's behaviors, social norms, as well as social situations and their dynamics, allows the child to act appropriately, according to the expectations and requirements of his or her interaction partners. Due to this, the child may initiate interactions and bond with his or her peers more easily.

Finally, it should be mentioned that the present study, just as any other, has a number of limitations. Future research could control for the effects of individual characteristics not included herein, and especially temperament and personality traits. Second, while social intelligence and emotional intelligence are very complex, multidimensional constructs, the present study measured only selected components thereof (this especially pertains to EI), which constrains the generalizability of the conclusions. With respect to these issues, in the future it would be interesting to further examine different subdomains of social and emotional intelligence as they might be differentially related to children's social status. The main limitation of the presented study is the fact that it treats the various types of intelligence as time-fixed predictors, being evaluated only once, in the initial measurement. In future research, they could be interpreted as time-varying factors and measured at several time points.

Nevertheless, despite the aforementioned limitations, the present findings are an interesting contribution to knowledge about the shaping of sociometric peer status and the intraindividual characteristics that affect it. Taking into account the short- and long-term consequences of children's peer position for their functioning, an understanding of the predictors of this position and its temporal evolution is not only of theoretical, but also practical, importance as it allows to design effective and targeted psychoeducational and psycho-corrective instruments. A prompt intervention when an informal structure of the peer group is still being formed, prior to the solidification of children's peer positions, seems to be rational and potentially most successful. The present study showed that efficient processing of social information, that is the cognitive component of social intelligence, has a significant effect on the shaping of peer status. By developing social intelligence, we can help children who do not cope well in a peer group and are often rejected by it. Shaping social intelligence through purposeful educational influences can be beneficial for various spheres of child development and the entirety of its social relations.

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