



ARCHIVIO ISTITUZIONALE DELLA RICERCA

Alma Mater Studiorum Università di Bologna Archivio istituzionale della ricerca

Social status and its link with personality dimensions, trait emotional intelligence, and scholastic achievement in children and early adolescents

This is the final peer-reviewed author's accepted manuscript (postprint) of the following publication:

Published Version:

Social status and its link with personality dimensions, trait emotional intelligence, and scholastic achievement in children and early adolescents / Federica Andrei; Giacomo Mancini; Elvis Mazzoni; Paolo Maria Russo; Bruno Baldaro. - In: LEARNING AND INDIVIDUAL DIFFERENCES. - ISSN 1041-6080. - ELETTRONICO. - 42:(2015), pp. 97-105. [10.1016/j.lindif.2015.07.014]

This version is available at: <https://hdl.handle.net/11585/447166> since: 2022-04-05

Published:

DOI: <http://doi.org/10.1016/j.lindif.2015.07.014>

Terms of use:

Some rights reserved. The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

(Article begins on next page)

This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>).
When citing, please refer to the published version.

This is the final peer-reviewed accepted manuscript of:

Federica Andrei, Giacomo Mancini, Elvis Mazzoni, P.M. Russo, Bruno Baldaro,

Social status and its link with personality dimensions, trait emotional intelligence, and scholastic achievement in children and early adolescents,

Learning and Individual Differences, Volume 42, 2015, Pages 97-105

The final published version is available online at:
<https://doi.org/10.1016/j.lindif.2015.07.014>

Rights / License:

The terms and conditions for the reuse of this version of the manuscript are specified in the publishing policy. For all terms of use and more information see the publisher's website.

This item was downloaded from IRIS Università di Bologna (<https://cris.unibo.it/>)

When citing, please refer to the published version.

Social Status and its Link with Personality Dimensions, Trait Emotional Intelligence and Scholastic
Achievement in Children and Early Adolescents

Federica Andrei^{a,*}

Giacomo Mancini^a,

Elvis Mazzoni^a,

P. M. Russo^b,

Bruno Baldaro^a

^a University of Bologna–Department of Psychology viale Berti Pichat 5, Bologna, 40127, Italy

^b University of Bologna–Department of Specialised, Experimental and Diagnostic Medicine, S.
Orsola-Malpighi Hospital, via Massarenti 1, Bologna, 40138, Italy

Correspondence concerning this paper should be addressed to Federica Andrei, Department of
Psychology, University of Bologna, viale Berti Pichat 5, Bologna, 40127, Italy. Email:

federica.andrei2@unibo.it

Abstract

This study investigated whether: (a) personality dimensions and trait emotional intelligence relate to actual and perceived social status, (b) social status influence scholastic achievement, and (c) if such associations are moderated by gender. A sample of 595 Italian children and early adolescents completed measures for personality variables, non verbal cognitive ability, while end of year grades were obtained from school offices. In a sociometric approach, participants rated the degree of each other acceptance and rejection, as well as their own perception of acceptance and rejection within the classroom context. Results indicate that gender moderates the association of personality traits and trait EI with actual social status for early adolescents, and with perceived social status for children. Overall, personality impacts social status for female only. Gender also moderates the effects of actual social status on scholastic achievement, with adolescent females being more affected by poor acceptance. Implications are discussed.

Keywords: Social status, personality, trait emotional intelligence, academic performance, big five, gender differences, peer relations

1. Introduction

A significant developmental goal is to establish relations with peers and to gain a sense of belonging within the peer group (e.g., Baumeister & Leary, 1995; Rubin, Bukowski, & Parker, 2007). Classrooms are often the context of the first experiences with peer acceptance, rejection and closeness (Rubin et al., 2007), thus representing important settings for children and young adolescents relationships (Bukowski, Hoza, & Boivin, 1993). Not only relationships with schoolmates contribute to cognitive and emotional development (Cillessen & Mayeux, 2004; Gifford-Smith & Bronwell, 2003), but they are also a crucial component of scholastic wellbeing as they provide indication to the extent of children's adjustment to their classroom. There is a wide body of research attesting for the role of social status, an indicator of the degree of acceptance of each child in a specific context, as a protective factor in scholastic adjustment in both childhood and adolescence (Fredricks, Blumenfeld, & Paris, 2004). For instance, high-accepted pupils tend to show a higher degree of engagement in academic tasks (Rubin et al., 2007; Wentzel, 2005), and to be more academically successful (DeRosier, Kupersmidt, & Patterson, 1994; Wentzel, 2003; Wentzel & Watkins, 2002; Fantuzzo, Sekino, & Cohen, 2004) compared to children who are low-accepted by their classmates. Thus, it is not surprising that rejection has been found to have detrimental effects on children and adolescents' emotional wellbeing (Sandstrom & Zakriski, 2004), on their participation in classroom activities (Ladd, Herald-Brown, & Reiser, 2008), and on their mental and social development, putting them at risk for later maladjustment (Gifford-Smith & Brownell, 2003; Oldehinkel et al., 2007; Rubin et al., 2007).

The educational literature also attests for the existence of gender differences in a variety of peer processes, including behaviors and socio-cognitive aspects of relationships styles (Rose & Rudolph, 2006; Rose & Smith, 2009). For instance, findings of a qualitative review on gender differences in peer relations attest that girls tend to have a greater propensity to self-disclosure with peers, longer dyadic interactions, and a greater likelihood of support seeking, emotional expression, and rumination than boys (Rose & Rudolph, 2006). On the other hand, it seems also that boys

present different behavioral and social-cognitive styles in their interaction with peers, and relationship provisions. Additionally, males and females vary in how they perceive peer acceptance, as boys show a greater inaccuracy for perceived acceptance by same-sex peers compared to girls, while girls seem to have a more negatively biased perception of opposite-sex acceptance compared to boys (Smith, Van Gessel, David-Ferdon, & Kistner, 2013). Along this line, given the progressive saliency that peers gain as interaction partners from middle childhood to puberty, differences in social processes across developmental stages have been also demonstrated, with adolescents increasingly relying on peers for social comparison and emotional support (e.g., Hay & Ashman, 2003), andwith both males and females giving higher priority to peer reputation from childhood into adolescence (LaFontana & Cillessen, 2010). In fact, another factor influencing children's wellbeing and behavior is their interpretation of their social status (Bellmore & Cillessen, 2003). Regardless of its accuracy, and whether discrepancies in accuracy reflect inflation or deflation, evidence from several sources supports the idea that children's perception of their social status may have implications over their emotional wellbeing and future adjustment. For instance, low self-perceived social acceptance has been associated with depressive symptoms (McGrath & Repetti, 2002), whereas self-perceived rejection has been related to externalizing behaviors in a different fashion for boys and girls (Guerra, Asher, & DeRosier, 2004).

1.1 Personality and trait emotional self-efficacy

Research has indicated that a taxonomy of five higher-order personality dimensions (i.e., the Big Five: Openness to Experience, Emotional Stability alternatively conceptualized as Neuroticism, Extraversion, Agreeableness and Conscientiousness) can help classify and account for the variation in most of the existing lower-order or narrower traits (e.g., John, Neumann, & Soto, 2008; McCrae & Costa, 1997). Despite few exceptions (e.g., Block, 2010), there is a general growing consensus that the Big Five dimensions account for cross-culturally valid, coherent and stable personality self-perceptions not only in adults, but also in children and early adolescents (Barbaranelli, Caprara, Rabasca, & Pastorelli, 2003; Barbaranelli, Fida, Paciello, Giunta, & Caprara, 2008; Caspi & Shiner,

2006; del Barrio, Carrasco, & Holgado, 2006; Measelle, John, Ablow, Cowan, & Cowan, 2005; Tackett et al., 2012). In addition, research has demonstrated the crucial role of the Big Five over many important outcomes, including scholastic achievement (Poropat, 2009) and the development of social relationships (Asendorpf & Denissen, 2006).

Thus far, the scientific literature provided strong evidence that the behavioral norm into peer groups may be precursors of peer acceptance and rejection (e.g., Chang, 2004; Sentse, Scholte, Salmivalli, & Voeten, 2007). On the contrary, few studies have investigated the relationship between the Big Five dimensions and social status (e.g., Anderson, John, Keltner, & Kring, 2001; Scholte, van Aken, & van Lieshout, 1997; van der Linden, Scholte, Cillessen, Nijenhuis, & Segers, 2010). Among these, those focusing on school-age samples have generally taken into consideration the positive pole of social status, which is represented by indices of acceptance (or likability) and popularity. Such investigations consistently suggest that peer social acceptance positively relates mainly to two dimensions, namely Extraversion and, to a less extent, Agreeableness (Jensen-Campbell, Adams, Perry, Workman, Furdella, & Egan, 2002; Lubbers, van der Werf, Kuyper, & Offringa, 2006; Mervielde & De Fruyt, 2000; van der Linden et al., 2010; Wolters, Knoors, Cillessen, & Verhoeven, 2013). Moreover, research on adolescent's peer-acceptance showed the negative effects of Emotional Instability over actual peer acceptance (Anderson et al., 2001; Mervielde & de Fruyt, 2000; van der Linden et al., 2010). However, potential gender and developmental stage differences have been systematically overlooked in the study of these patterns of associations. Additionally, none of these investigations has taken into account primary-school aged children.

The literature of the last two decades has also increasingly paid attention to the construct of emotional intelligence (EI) as a potential predictor of many crucial health-related phenomena, including a better scholastic adjustment during development (Petrides, Frederickson, & Furnham, 2004; Petrides, Sangareau, Furnham, & Frederickson, 2006; Russo et al., 2012). EI can be broadly defined as a set of abilities and dispositions related to perceiving, understanding, and managing

emotions of self and others (Bar-On & Parker, 2000). The trait-based model of EI (trait EI or trait emotional self-efficacy; Petrides & Furnham, 2000, 2001) is conceptualized as a lower order personality trait covering a set of emotional self-perceptions and dispositions measurable through self-report questionnaires (Petrides, Pita, & Kokkinaki, 2007). For this reason, and considering the degree of overlap between trait EI and higher order personality dimensions, particularly with Neuroticism, one of the main criticisms to the construct pertains its incremental validity beyond higher order personality dimensions, such as the Big Five (e.g., Landy, 2005; Schlegel, Grandjean, & Scherer, 2013; Schulte, Ree, & Carretta, 2004). While such issue has been addressed extensively by studies focusing on adults attesting that trait EI can meaningfully predict affect-related criteria over and above the Big Five (Andrei, Siegling, Aloe, Baldaro & Petrides, under review), the literature provides only preliminary evidence in samples of children (e.g., Mavroveli & Sanchez-Ruiz, 2011; Russo et al., 2012) and adolescents (Andrei, Mancini, Trombini, Baldaro, & Russo, 2014).

Even though the study of trait EI during development is still at its embryonic stage, the educational literature on children and early adolescence shows that higher levels of trait EI predict higher levels of self-reported and peer-reported pro-social behavior (Frederickson, Petrides, & Simmons, 2012; Mavroveli, Petrides, Rieffe, & Bakker, 2007; Petrides et al., 2006), while investigations aimed to explore a direct link between trait EI and academic achievement have provided inconsistent evidence across studies (Mavroveli & Sanchez Ruiz, 2011). Such an inconsistencies may be due for instance to cross-cultural differences in the operationalization of scholastic performance and grading methods, thus requiring additional research into this topic. Moreover, results of a meta-analysis on the relationship of trait EI with academic performance revealed that the significant predictive contribution of trait EI over scholastic achievement is in turn influenced by academic level and age (Perera & DiGiacomo, 2013). The meaningful role of academic level in the prediction of students' achievement by both ability and trait EI has been also supported by recent longitudinal findings (Costa & Faria, 2015). There is also some evidence

attesting that girls show higher overall trait EI levels compared to boys (e.g., Andrei et al., 2014; Mavroveli, Petrides, Sangareau, & Furnham, 2009). However, the EI literature focusing on developmental age has generally overlooked gender differences in investigating the association between trait EI and relevant outcomes (Resurrección, Salguero, & Ruiz-Aranda, 2014), thus requiring further explorations.

1.2 The Present Study

To our knowledge there is no direct evidence linking the personality dimensions of the Big Five to the processes of peer social acceptance and rejection considering simultaneously two perspectives of children's peer experience: classmates' as well as the child's perceptions of their own status. Hence, the present study aims to contribute to the literature on peer-relationships by investigating the Big Five personality dimensions and trait EI as determinant of actual and perceived peer social acceptance and rejection. A second objective is to test the role of such indicators of social status over academic achievement, by taking into account concurrent effects of general cognitive ability, trait EI, and the Big Five dimensions traditionally associated with scholastic performance, viz., Agreeableness, Conscientiousness and Openness (Poropat, 2009). The last goal is to test for the moderating role of gender in the relationship between individual differences predictors (i.e., the Big Five, trait EI, social status) and the specific criterion taken into account by each model. To this end two independent samples of primary and secondary school pupils were selected. In line with the foregoing, it was hypothesized that:

1) Agreeableness and Energy/Extraversion will be the strongest positive determinant of both actual and perceived social acceptance together with trait EI, while Emotional Instability will be the strongest negative predictor. A similar pattern of findings was expected for peer rejection, but with opposite directions;

(2) Trait EI will show incremental predictive validity beyond the Big Five over social status indices and scholastic performance;

(3) Gender will moderate such associations in both age groups (children and early adolescents). It is expected that personality dimensions, including trait EI, will have a substantial effect on social status particularly for females than males in both age-groups.

(4) Regarding scholastic performance, both actual and perceived social status will have substantial effects over and above personality traits and general cognitive ability in predicting academic grades. Particularly, indicators of actual and perceived social acceptance are expected to show a positive influence on academic achievement, vice-versa for actual and perceived social rejection.

2. Method

2.1 Participants

This study involved 578 school-aged children. Specifically, one sample of children ($N = 376$, 195 female, $M_{\text{age}} = 9.39$ years, $SD = .80$, range 8–10 years) and one of early-adolescents ($N = 202$; 107 female, $M_{\text{age}} = 12.05$ years, $SD = .56$, range 11–13 years) were drawn from Italian primary and secondary schools respectively. The ethnic composition of the samples was solely Italian.

2.2 Measures

2.2.1 Actual and perceived social status. Actual and perceived social status were measured using a sociometric approach. Participants were asked to imagine that they were going to go on a school trip, and were required to indicate an unlimited number of classmates on each of four questions asking to nominate: (a) the children they would like to take with them on the trip (peer acceptance); (b) those they would rather not take along (peer rejection); (c) those classmates who would accept them (perceived peer acceptance), and (d) those classmates who would reject them (perceived peer rejection).

2.2.2 Personality traits. The Big Five factors were assessed via the BFQ-C (Barbaranelli et al., 2003). The BFQ-C is a self-report inventory comprising 65 items, 13 items for each of the five dimensions of Energy (which shows resemblance to the dimension of Extraversion), Agreeableness,

Conscientiousness, Emotional Instability and Openness. Ratings of the occurrence of behaviors reported in the items are given on a 5-point scale (from 1 = *almost never* to 5 = *almost always*).

2.2.3 Trait EI. Trait EI was measured through the Italian Trait Emotional Intelligence Questionnaire–Child Form (TEIQue–CF; Russo et al., 2012; Mavroveli, Petrides, Shove, & Whitehead, 2008), a self-report developed after a content analysis of the literature on children’s socio-emotional development. The TEIQue–CF comprises 75 short statements (e.g., ‘It’s easy for me to show how I feel’) rated on a 5-point Likert scale (from ‘completely disagree’ to ‘completely agree’), and it is intended to provide a global trait EI score.

2.2.4 General cognitive ability. Raven’s Progressive Matrices (Belacchi, Scalisi, Cannoni, & Cornoldi, 2008; Raven, Raven, & Court, 2000) provides a measure of pure non-verbal reasoning ability, which is thought to be relatively independent of learning cultural- and educational-specific. In the present study Raven’s Colored Progressive Matrices (CPM) were used. The CPM consists of 36 items presented in three sets of 12 each and provides a global IQ score.

2.2.5 Scholastic performance. First and second term grades in Italian language-literacy and math were obtained from school offices. Because these two subjects reflect pupils’ performance in writing, reading and arithmetic abilities, they were thought to be highly representative of academic achievement. Grades ranged from 4 to 10 (excellent), with sufficiency being 6. Given the high positive correlations between the subjects in both groups ($r = .78$ and $.81$ $p < .001$, for children and early adolescents respectively) a mean score has been retained as indicator of general academic achievement.

2.3 Procedure

The purpose of the study was presented to the school principals and teachers. Informed consent was obtained from parents and all the participants were asked for their personal assent. All measures were administered collectively within classrooms, at a time agreed upon with the institute, by specialized personnel and with respect for the law regarding privacy. At a later time, upon

receiving authorization from the administration of the various institutes, the grades received at the end of the two terms were obtained for each participant.

2.4 Data Analyses

All statistical analyses were performed using PASW (SPSS version 21.0 for Windows). As a preliminary step, differences in study variables across grades and gender were explored through a series of factorial ANOVAs; Pearson's correlation coefficients were also calculated.

2.4.1 Social network analyses. Social Network Analysis (SNA; Scott, 1991) detect sociometric indices representing a primary way of measuring children's social status (Cillesen, 2007; Frederickson & Furnham, 1998; Mavroveli et al., 2009; Zettergren, 2003). By means of SNA it is possible to analyze sociometric data to represent the individual centrality, which in this study refers to children's relevance within their peer group. In other terms, the frequency of nominations received is elaborated taking into account the dimension of each child group or network. According to Wasserman and Faust (1994) such comparisons are not allowed when considering only rough data, viz., the actual number of nominations, as they depend on groups' size: a child having 20 classmates could be nominated at most 20 times, whereas a child with 30 classmates could potentially collect a higher number of nominations. In this case, the difference in received nominations between the two pupils is not due to their personal characteristics but more simply to the different dimensions of the classes. Thus, through the use of SNA it is possible to compare amongst children's social status within the school context.

The in-degree centrality index of SNA has been considered as the most effective to represent positive and negative sociometric status. We have indeed to consider that we are dealing with a type of relation that has a direction represented by the nominations made (out-degree) and received (in-degree). Thus, also the degree centrality can be represented by two indices: in-degree centrality, which reflects the relevance of an actor based on the nominations received in either a negative or positive fashion, and the out-degree centrality, which instead refers to the relevance of an actor based on the nominations sent. Since children's social status could be defined as their relevance

based on the nominations received by their referring group (Scott, 1991; Wasserman & Faust, 1994), in this study both actual and perceived sociometric status are represented by the in-degree centrality. This index goes from 0 to 1: the more the value is next to 1 the more the individual is central (i.e. relevant as regards the inquired relations). In addition, on behalf of the literature on gender differences in peer relations (e.g., Leman, Ahmed, & Ozarow, 2005; Rose & Smith, 2009; Rubin et al., 2007), separate sociometric indicators for males and females were calculated by means of NetMiner 3¹. As regards the perceived social status, before calculating the in-degree centrality, we have transposed the data matrix, i.e. the nominations made by a pupil of those classmates who would accepted/rejected him have been transposed as nominations made by the classmates. In other terms, if a pupil A nominates the pupil B and the pupil C as classmates that probably would like to take him with them on the trip (peer acceptance), in the relational data matrix, the two nominations have been transposed as if the pupil B and the pupil C had nominated the pupil A. In this way, the in-degree centrality represents the relevance of the pupil based on the perceived nominations.

2.4.2 Regression models. Due to the different organization of primary and secondary school (e.g. different assessment system), as well as to the different developmental stage of participants (i.e., childhood and early adolescence), regression analyses were run separately for age group (i.e., children and early adolescents). Moderated hierarchical multiple regression analyses (Aiken & West, 1991; Cohen & Cohen, 1983) were employed to predict social status first, and, subsequently, scholastic achievement. Each model comprised individual differences predictors entered in separate steps to assess for their incremental contribution and followed by the interaction terms as the last step. For example, in the analyses examining demographics (participants age and gender), cognitive ability, personality traits, social status (predictors) and scholastic performance (criterion), demographics and cognitive ability were entered at Step 1, personality traits at Step 2, social status at Step 3, and the interaction term was entered at Step 4. Only gender was considered as moderating

¹ Cyram (2009). Netminer 3 3.4.0.d.090924 Seoul: Cyram Co., Ltd.

variable. Accordingly, moderated hierarchical multiple regressions test if a unique contribution in the explanation of variance in the criteria is provided by the interaction terms over and above the main effects of the predictors. All variables were centered in line with procedures recommended by Aiken and West (1991).

3. Results

3.1 Descriptive Statistics and Correlations

Results from factorial ANOVA models investigating gender and age-group differences in study variables are presented in Table 1. Overall age children differ from early adolescents with respect to levels of IQ, the indicators of actual social status and perceived rejection, as well as for the personality dimensions of Energy and Emotional Instability. The interaction term gender \times age-group (children vs. early adolescents) revealed a number of gender differences across the four groups. Particularly, in both cases girls showed significantly higher scores on trait EI than boys. Table 2 presents the correlations between study variables for children and preadolescent respectively. Although the pattern of associations was analogue across the two groups (e.g., in both groups trait EI relates moderately with all the Big Five dimensions; $p < .001$ for all cases), some exceptions can be observed, such as in the case of the relationship among social status indicators and personality variables. For instance, while for children trait EI correlates significantly with both actual social acceptance ($r = .15, p < .01$) and rejection ($r = -.14, p < .01$), for early adolescents these associations did not reach significant levels ($r = .05$ and $-.12$, for actual acceptance and rejection respectively). The same pattern emerged for Emotional Instability, which relates substantially with social acceptance ($r = -.20, p < .01$), rejection ($r = .13, p < .01$) and perceived rejection ($r = .10, p < .05$) in the group of children only (see Table 2).

3.2 Regression Analyses

3.2.1 Prediction of actual social status. In the sample of children, regression analyses showed that the model significantly explained a total of 10% ($F_{(14, 362)} = 2.92, p < .001$) and 14.3% ($F_{(14, 362)} = 2.29, p < .001$) of variance over actual peer social acceptance and rejection respectively.

As displayed in Table 3, Emotional Instability was significant negative predictor of peer social acceptance ($p < .01$) together with Agreeableness ($p < .05$). Regarding social rejection, Agreeableness was the only significant main predictor ($p < .01$). No significant interaction term was observed in both models.

In the sample of early adolescents, the last model accounted for 20.6% ($F_{(14, 187)} = 3.46, p < .001$) of variance with Emotional Instability as the only main significant (negative) predictor of peer social acceptance ($p < .01$). The last step of the regression analysis also showed a significant moderation effect for gender with respect to trait EI and Openness as personality variables. Figure 1 displays these interactive patterns trait EI \times gender and Openness \times gender over peer social acceptance through two illustrations. Simple slopes analysis indicated that the interactions with gender were significant for females, for both trait EI (simple slope = .08, $t = 1.93, p < .05$) and Openness (simple slope = .03, $t = 2.31, p < .05$), but not for males. On the other hand, no significant results was observed for actual social rejection ($F_{(14, 362)} = 2.29, p = \text{n.s.}$).

3.2.2 Prediction of perceived social status. Regression analyses for the sample of children revealed a significant final model for both perceived acceptance ($F_{(14, 362)} = 1.97, p < .05$) and rejection ($F_{(14, 362)} = 3.58, p < .001$), explaining 7.1% and 12.2% of variance respectively. Particularly, while no main effect of personality traits was detected, gender moderated completely the effect of trait EI over perceived social rejection ($p < .01$), and of Emotional Instability over perceived social acceptance ($p < .01$). The examination of simple slopes showed that the interactions with gender were significant for females, for both trait EI (simple slope = -.12, $t = -3.72, p < .001$) and, Emotional Instability (simple slope = -.002, $t = -1.91, p < .05$), although weaker. The interactions were not significant for males. Figure 2 displays these interactive patterns through two illustrations.

In the case of early adolescents, a significant model resulted for perceived social acceptance ($F_{(14, 362)} = 3.23, p < .001$), explaining 19.5% of variance. In this case, Energy ($p < .01$) and Openness ($p < .05$) were the only main contributors, while no significant moderation effect was

observed. No significant model was detected for perceived social rejection ($F_{(14, 362)} = 1.38, p = \text{n.s.}$). Regression coefficients for both children and early adolescents are displayed in Table 4.

3.2.3 Prediction of scholastic performance. Statistical coefficients for both children and early adolescents are displayed in Table 5. The model explained a significant 30.6% of the variance in children's scholastic performance ($F_{(10, 363)} = 15.62, p < .001$). Beyond non verbal cognitive ability and age ($p < .001$ for both) at Step 1, significant main effects were detected for Openness ($p < .001$) at Step 2, and for both social status indicators at Step 3 ($p < .001$ and $p < .05$ for social acceptance and rejection respectively). Gender did not yield a significant effect as moderator.

The analysis performed in the early adolescents sample revealed that the model accounted for a significant 45.7% of the variance in academic performance ($F_{(10, 190)} = 15.85, p < .001$). Main effects were observed for gender ($p < .05$), cognitive ability ($p < .001$), Openness ($p < .001$) and peer social acceptance ($p < .05$). The interaction term social acceptance \times gender also provided a significant contribution to the model ($p < .05$), which is displayed in Figure 3. Simple slopes analysis revealed that such interaction was significant for female group only (simple slope = .58, $t = 4.64, p < .001$).

Analyses were rerun for each sample with the indicators of perceived social status as individual predictors at Step 3 and their interaction with gender at Step 4. Neither main or interaction effects for perceived social status significantly predicted scholastic achievement in both children and early adolescents.

4. Discussion

The present study primarily sought to investigate personality traits as determinants of perceived and actual sociometric status, and whether such patterns were moderated by gender in both children and early adolescents. This study also investigated whether personality and social status variables impact pupils' academic achievement. As expected, and in line with existing literature (e.g., Wentzel, Barry, & Caldwell, 2004), the present study confirmed that personality dimensions and children's experiences with peers have a substantial influence on their scholastic adjustment.

Regarding higher order personality traits, this study found empirical evidence that a small part of the variance of social status indicators can be accounted for by personality dimensions, thus providing partial support to our first hypothesis. Particularly, consistent with prior research on adolescent's peer-acceptance (Anderson et al., 2001; Mervielde & de Fruyt, 2000; van der Linden et al., 2010), the negative effects of Emotional Instability emerged over actual peer acceptance, but not over rejection, in both age groups. Because children high in Emotional Instability are characterized as being more tensed and anxious, such results point out once again that high level of this personality dimension can be considered a risk factor for school maladjustment. Additionally, Agreeableness resulted meaningful predictor of actual social status indicators, but in the primary-school aged group only. This evidence in children is not surprising as the literature attests that individuals rating themselves as more agreeable increase their chances of being selected as a friend (Selfhout, Burk, Branje, Denissen, Van Aken, & Meeus, 2010). At the same time, such results were not replicated in the early-adolescent group. Remarkably, for early adolescents the results showed that gender completely moderate the effects of Openness and trait EI over actual acceptance. Particularly, it seems that for girls such personality traits enhance being selected by peers. If on the one hand these findings may reflect developmental differences between the two groups, on the other they may be sample-specific.

Differently from our expectations, findings from the current study also suggest a different contribution of personality traits for perceived social status. On the one hand, Energy and Openness seem to positively influence the perception of social acceptance in the early adolescent group. On the other, no individual personality dimension showed a meaningful contribution for primary school children, as the effects of Emotional Instability and trait EI were completely moderated by gender. Specifically, young girls' greater emotion-related self-perceptions, represented by both Emotional Instability and trait EI, predicted better self-reported social status. However, as far as we know this is the first investigation exploring the role of personality over perceived peer social acceptance and rejection, thus requiring for additional research into this topic.

However, contrary to the anticipated incremental effects, trait EI did not contribute meaningfully to explain the variation of both social status indicators and academic performance, after controlling for other predictors including the Big Five, thus not providing support to our third hypothesis. Our findings differ from previous studies attesting for a substantial effect of trait EI over children's peer relations at school (Mavroveli, Petrides, Rieffe, & Bakker, 2007; Mavroveli et al., 2009; Petrides et al., 2006), and scholastic achievement (Perera & DiGiacomo, 2013). Such discordance may be due by the inclusion of the Big Five in our regression models. The issue of the overlap between trait EI and higher order personality constructs has been studied less extensively in children than in samples of adults, and, more specifically, it was consistently overlooked by previous research on both social variables and academic performance (e.g., Agnoli et al., 2012; Costa & Faria, 2015; Jordan, McRorie, & Ewing, 2010; Mavroveli et al., 2009; Mavroveli & Sánchez-Ruiz, 2011; Petrides et al., 2006). At the same time, given the moderate magnitude of correlation coefficients, the results of our analyses are in line with trait EI theory (Petrides et al., 2007) as they did not suggest for a complete overlap between the construct and higher order dimensions. In fact, our findings suggest that the two significant contributions of trait EI were completely moderated by gender. As a consequence it can be hypothesized that during development the levels of trait EI have a specific relevance for females, but in a different fashion for primary and secondary school girls. However, in order to draw more stringent conclusions, further studies are needed to consolidate these results.

Moreover, current findings partly support our last hypothesis as academic achievement was influenced by actual, but not from perceived, social status indicators after controlling for other important predictors, like non-verbal cognitive ability. While to our knowledge this is the first investigation exploring the role of children's perceptions of their social status, results on actual social status are in accordance with the already existing literature (Greenman, Schneider, & Tomada, 2009). These findings provide additional evidence that, besides other important risk factors such as low cognitive ability, a more positive status within the peer-group promote a better

scholastic adjustment in terms of academic performance, over and above the effects of variables traditionally relevant for such outcome. Nevertheless, we found differences between the two age-groups: while low peer acceptance and high rejection are uniquely associated with weaker academic performance for primary school children, being accepted by peers seems to have a stronger positive effect on scholastic achievement in girls than in boys from secondary school. Such findings may result from both overall and gender specific differences in social processes from middle childhood (Rose & Rudolph, 2006). However, future studies need to investigate this venue more extensively.

Overall, the results of the present study highlight the role of individual differences in children's scholastic wellbeing and underline the necessity to consider both gender as well as developmental stage peculiarities while conducting research on school-aged populations. This indications may be taken into account by professionals interested into preparing programs for emotional and social support in the scholastic context.

4.1 Limitations and Future Directions

Methodological limitations of this study comprise its cross-sectional design and correlational nature, which did not allow for causal inferences. Not only peer-relationship processes are subjected to transformations, but also personality traits, including trait EI, change and increase in their stability throughout development (Caspi & Shiner, 2006; Keefer, Holden, & Parker, 2013; Lamb, Chuang, Wessels, Broberg, & Hwang, 2002). Thus, by means of longitudinal design, future research should ideally follow the developmental path from childhood to adolescence, in order to further understand and expand the dynamic of associations found in the present study. Therefore, future studies on the role of personality traits over social status could benefit from taking gender into account. Overall, these findings also underline the importance of distinguishing between actual and perceived acceptance and rejection in future social status research as both constructs were linked to a different profile of traits.

Another issue that needs attention pertains the fact that self-reported social status may not be a perfect indicator of children's peer acceptance and rejection, as can be seen by perceived rejection

ratings in the early adolescents sample of the present study. Indeed, it is unclear whether the children's reported ratings of perceived social status processes are representative of how they truly see themselves, how they would like to be viewed (e.g., representational bias), or what they think is expected of them (e.g., modesty effects among girls; self-promotion among boys). Thus, it would be important to expand this findings by collecting data from other source of information (i.e., data triangulation). Collecting data on children social status and personality variables from other sources, such as parents and teachers, may help to provide a more complete picture of the relationships between children's dispositions and processes of peer relationships.

References

- Agnoli S., Mancini G., Pozzoli T., Baldaro B., Russo P.M., & Surcinelli P. (2012). The interaction between emotional intelligence and cognitive ability in predicting scholastic performance in school-aged children. *Personality and Individual Differences, 53*, 660–665.
- Andrei, F., Mancini, G., Trombini, E., Baldaro, B., & Russo, P. M. (2014). Testing the incremental validity of trait emotional intelligence: Evidence from an Italian sample of adolescents. *Personality and Individual Differences, 64*, 24-29. doi: j.paid.2014.02.007
- Andrei, F., Siegling, A. B., Aloe, A., Baldaro, B., & Petrides, K. V. *The Incremental Validity of the Trait Emotional Intelligence Questionnaire (TEIQue): A Systematic Review of Evidence and Meta-analysis.* (manuscript submitted for publication).
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.
- Anderson, C., John, O. P., Keltner, D., & Kring, A. M. (2001). Who attains social status? Effects of personality and attractiveness in social groups. *Journal of Personality and Social Psychology, 81*, 116–132.
- Andrei, F., Mancini, G., Trombini, E., Baldaro, B., & Russo, P. M. (2014). Testing the incremental validity of Trait Emotional Intelligence: Evidence from an Italian sample of adolescents. *Personality and Individual Differences, 64*, 24-29.
- Asendorpf, J., & Denissen, J. J. (2006). Predictive validity of personality types versus personality dimensions from early childhood to adulthood: Implications for the distinction between core and surface traits. *Merrill-Palmer Quarterly, 52*(3), 486-513.
- Barbaranelli, C., Caprara, G. V., Rabasca, A., & Pastorelli, C. (2003). A questionnaire for measuring the Big Five in late childhood. *Personality and Individual Differences, 34*(4), 645-664.

- Barbaranelli, C., Fida, R., Paciello, M., Giunta, L. D., & Caprara, G. V. (2008). Assessing personality in early adolescence through self-report and other-ratings a multitrait-multimethod analysis of the BFQ-C. *Personality and Individual Differences, 44*(4), 876-886.
- Barrett, L. F., Lane, R. D., Sechrest, L., & Schwartz, G. E. (2000). Sex differences in emotional awareness. *Personality and Social Psychological Bulletin, 26*(9), 1027-1035. doi: 10.1177/01461672002611001.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497.
- Belacchi, C., Scalisi, T. G., Cannoni, E., & Cornoldi, C. (2008). *Matrici Progressive di Raven. Manuale d'uso e Standardizzazione Italiana*. Firenze: Organizzazioni Speciali.
- Bellmore, A.D., & Cillessen, A. H. N. (2003). Children's meta-perceptions and meta-accuracy of acceptance and rejection by same-sex and other-sex peers. *Personal Relationships, 10*, 217–233.
- Bierman, K. L. (2003). *Peer rejection: Developmental processes and intervention strategies*. New York: The Guilford Press.
- Blackhart, G. C., Nelson, B. C., Knowles, M. L., & Baumeister, R. F. (2009). Rejection elicits emotional reactions but neither causes immediate distress nor lowers self-esteem: A meta-analytic review of 192 studies on social exclusion. *Personality and Social Psychology Review, 13*(4), 269-309.
- Block, J. (2010). The five-factor framing of personality and beyond: Some ruminations. *Psychological Inquiry, 21*(1), 2-25.
- Buhs, E. S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology, 98*, 1–13.

- Bukowski, W. M., Hoza, B., & Boivin, M. (1993). Popularity, friendship, and emotional adjustment during early adolescence. *New Direction for Child Development, 60*, 23-37.
doi:10.1002/cd.23219936004
- Caspi, A., & Shiner, R. L. (2006). Personality development. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional and personality development*. (6th ed., Vol. 3, pp. 300-353). Hoboken, NJ: Wiley.
- Chang, L. (2004). The role of class norms in contextualizing the relations of children's social behaviors to peer acceptance. *Developmental Psychology, 40*, 691–702. doi: 10.1037/0012-1649.40.5.691
- Cillessen, A. H. N. (2007). New perspectives on social networks in the study of peer relations. In *Development: No. 118. Social network analysis and children's peer relationships*, (pp. 91-100). San Francisco, CA: Jossey-Bass.
- Cillessen, A.H.N., & Mayeux, L. (2004). Sociometric status and peer group behavior: Previous findings and current directions. In J. Kupersmidt & K. Dodge (Eds.), *Children's peer relations: From development to intervention* (pp. 3-20). Washington DC: American Psychological Association.
- Costa, A., & Faria, L. (2015). The impact of Emotional Intelligence on academic achievement: A longitudinal study in Portuguese secondary school. *Learning and Individual Differences, 37*, 38-47.
- del Barrio, V., Carrasco, M. Á., & Holgado, F. P. (2006). Factor structure invariance in the Children's Big Five Questionnaire. *European Journal of Psychological Assessment, 22*(3), 158.
- DeRosier, M. E., Kupersmidt, J. B., & Patterson, C. J. (1994). Children's academic and behavioural adjustment as a function of the chronicity and proximity of peer rejection. *Child Development, 65*, 1799–1813.

- Ellemers, N., & Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology, 29*, 371-389.
- Erikson, E. H., & Erikson, J. M. (1997). *The Life Cycle Completed*. New York: Norton.
- Fantuzzo, J., Sekino, Y., & Cohen, H. L. (2004). An examination of the contributions of interactive peer play to salient classroom competences for urban Head Start children. *Psychology in the Schools, 41*, 323-336.
- Flook, L., Repetti, R. L., & Ullman, J. B. (2005). Classroom social experiences as predictors of academic performance. *Developmental Psychology, 41*(2), 319–327. doi: 10.1037/0012-1649.41.2.319.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109.
- Frederickson, N. L., & Furnham, A. F. (1998). Sociometric classification methods in school peer groups: A comparative investigation. *Journal of Child Psychology and Psychiatry, 39*, 921-934.
- Frederickson, N., Petrides, K.V. & Simmonds, E. (2012). Trait emotional intelligence as a predictor of socioemotional outcomes in early adolescence. *Personality and Individual Differences, 52*, 323–328.
- Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*, 235–284.
- Greenman, P.S., Schneider, B.H., Tomada, G. (2009). Stability and change in patterns of peer rejection. Implications for children's academic performance over time. *School Psychology International, 30* (2), 163-183. doi: 10.1177/0143034309104151
- Guerra, V. S., Asher, S. R., & DeRosier, M. E. (2004). Effect of children's perceived rejection on physical aggression. *Journal of Abnormal Child Psychology, 32*(5), 551-563.

- Hay, I., & Ashman, A. F. (2003). The development of adolescents' emotional stability and general self-concept: The interplay of parents, peers, and gender. *International Journal of Disability, Development, and Education*, 50, 77–91.
- Jensen-Campbell, L. A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J. Q., & Egan, S. K. (2002). Agreeableness, extraversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality*, 36, 224-251. doi:210.1006/jrpe.2002.2348
- Jordan, J. A., McRorie, M., & Ewing, C. (2010). Gender differences in the role of emotional intelligence during the primary–secondary school transition. *Emotional and Behavioural Difficulties*, 15(1), 37-47.
- Keefer, K. V., Holden, R. R., & Parker, J. D. (2013). Longitudinal assessment of trait emotional intelligence: Measurement invariance and construct continuity from late childhood to adolescence. *Psychological Assessment*, 25(4), 1255-1272.
- Ladd, G. W., Herald-Brown, S. L., & Reiser, M. (2008). Does chronic classroom peer rejection predict the development of children's classroom participation during the grade school years? *Child Development*, 79, 1001-1015.
- LaFontana, K. M., & Cillessen, A. H. (2010). Developmental changes in the priority of perceived status in childhood and adolescence. *Social Development*, 19(1), 130-147.
- Lamb, M. E., Chuang, S. S., Wessels, H., Broberg, A. G., & Hwang, C. P. (2002). Emergence and construct validation of the big five factors in early childhood: A longitudinal analysis of their ontogeny in Sweden. *Child Development*, 73(5), 1517-1524.
- Landy, F. J. (2005). Some historical and scientific issues related to research on emotional intelligence. *Journal of Organizational Behavior*, 26, 411-424. doi: dx.doi.org/10.1002/job.317
- Leman, P. J., Ahmed, S., & Ozarow, L. (2005). Gender, gender relations, and the social dynamics of children's conversations. *Developmental Psychology*, 41, 64–74.

- Lubbers, M. J., van der Werf, M. P. C., Kuyper, H., & Offringa, G. J. (2006). Predicting peer acceptance in Dutch youth: A multilevel analysis. *Journal of Early Adolescence, 26*, 4-35.
doi:10.1177/0272431605282747
- Mavroveli, S., Petrides, K. V., Rieffe, C., & Bakker, F. (2007). Trait emotional intelligence, psychological well-being and peer-rated social competence in adolescence. *British Journal of Developmental Psychology, 25*(2), 263-275.
- Mavroveli, S., Petrides, K. V., Sangareau, Y., & Furnham, A. (2009). Exploring the relationships between trait emotional intelligence and objective socio-emotional outcomes in childhood. *British Journal of Educational Psychology, 79*(2), 259-272.
- Mavroveli, S., Petrides, K. V., Shove, C., & Whitehead, A. (2008). Investigation of the construct of trait emotional intelligence in children. *European Child & Adolescent Psychiatry, 17*(8), 516-526.
- McCrae, R. R., & Costa Jr, P. T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*(5), 509.
- McGrath, E. P., & Repetti, R. L. (2002). A longitudinal study of children's depressive symptoms, self-perceptions, and cognitive distortions about the self. *Journal of Abnormal Psychology, 111*(1), 77-87.
- Measelle, J. R., John, O. P., Ablow, J. C., Cowan, P. A., & Cowan, C. P. (2005). Can children provide coherent, stable, and valid self-reports on the big five dimensions? A longitudinal study from ages 5 to 7. *Journal of Personality and Social Psychology, 89*(1), 90.
- Mervielde, I., & De Fruyt, F. (2000). The Big Five personality factors as a model for the structure of children's peer nominations. *European Journal of Personality, 14*, 91-106.
- Mavroveli, S., & Sanchez-Ruiz, M. J. (2011). Trait emotional intelligence influences on academic achievement and school behaviour. *British Journal of Educational Psychology, 81*, 112-134.
doi: 10.1348/2044-8279.002009.

- Mavroveli, S., Petrides, K. V., Rieffe, C., & Bakker, F. (2007). Trait emotional intelligence, psychological well-being, and peer-rated social competence in adolescence. *British Journal of Developmental Psychology, 25*, 263–275.
- Mavroveli, S., Petrides, K. V., Sangareau, Y., & Furnham A. (2009). Exploring the relationship between trait emotional intelligence and objective socio-emotional outcomes in childhood. *British Journal of Educational Psychology, 79*, 259-272. doi: 10.1348/000709908X368848.
- Mavroveli, S., Petrides, K. V., Shove, C., & Whitehead, A. (2008). Validation of the construct of trait emotional intelligence in children. *European Child & Adolescent Psychiatry, 17*, 516-526.
- Mavroveli, S., & Sanchez-Ruiz, M. J. (2011). Trait emotional intelligence influences on academic achievement and school behaviour. *British Journal of Educational Psychology, 81*, 112-134. doi: dx.doi.org/10.1348/2044-8279.002009
- McDougall, P., Hymel, S., Vaillancourt, T., & Mercer, L. (2001). The consequences of childhood rejection. In M. R. Leary (Ed.), *Interpersonal rejection*. (pp. 213-247). New York, NY: Oxford University Press.
- Perera, H. N., & DiGiacomo, M. (2013). The relationship of trait emotional intelligence with academic performance: A meta-analytic review. *Learning and Individual Differences, 28*, 20-33.
- Petrides, K. V., & Furnham, A. (2000). Gender Differences in Measured and Self-Estimated Trait Emotional Intelligence. *Sex Roles, 42* (5-6) 449-461. doi:10.1023/A:1007006523133
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*, 425-448.
- Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and Individual Differences, 36*, 277-293. doi:10.1016/S0191-8869(03)00084-9

- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology, 98*, 273-289.
- Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait emotional intelligence and children's peer relations at school. *School Development, 15*, 537-547.
- Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*(2), 322-338.
- Raven, J., Raven, J. C., & Court, J. H. (2000). *Manual for Raven's progressive matrices and vocabulary scales*. Oxford, UK: Oxford Psychologists Press.
- Resurrección, D. M., Salguero, J. M., & Ruiz-Aranda, D. (2014). Emotional intelligence and psychological maladjustment in adolescence: A systematic review. *Journal of Adolescence, 37*(4), 461-472.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological bulletin, 132*(1), 98.
- Rose, A. J., & Smith, R. L. (2009). Sex differences in peer relationships. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 379-393). New York: The Guilford Press.
- Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2007). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology* (6th ed., Vol.3, pp. 571-645). Hoboken, NJ: Wiley.
- Rudolph, K. D., & Conley, C. S. (2005). Socioemotional costs and benefits of social-evaluative concerns: Do girls care too much? *Journal of Personality, 73*, 115-137.
- Russo, P. M., Mancini, G., Trombini, E., Baldaro, B., Mavroveli, S., & Petrides, K. V. (2012). Trait Emotional Intelligence and the Big Five: a study on Italian children and preadolescents. *Journal of Psychoeducational Assessment, 30* (3), 274-283.
- doi:10.1177/0734282911426412

- Schlegel, K., Grandjean, D., & Scherer, K. R. (2013). Constructs of social and emotional effectiveness: Different labels, same content?. *Journal of Research in Personality, 47*(4), 249-253.
- Scholte, R. H. J., van Aken, M. A. G., & van Lieshout, C. F. M. (1997). Adolescent personality factors in self-ratings and peer nominations and their prediction of peer acceptance and peer rejection. *Journal of Personality Assessment, 69*, 534–554.
- Schulte, M. J., Ree, M. J., & Carretta, T. R. (2004). Emotional intelligence: Not much more than g and personality. *Personality and Individual Differences, 37*, 1059-1068. doi: 10.1016/j.paid.2003.11.014
- Scott, J. (1991). *Social Network Analysis*. London: Sage.
- Selfhout, M., Burk, W., Branje, S., Denissen, J., Van Aken, M., & Meeus, W. (2010). Emerging late adolescent friendship networks and Big Five personality traits: A social network approach. *Journal of Personality, 78*(2), 509-538.
- Sentse, M., Scholte, R., Salmivalli, C., & Voeten, M. (2007). Person–group dissimilarity on involvement in bullying and its relation with social status. *Journal of Abnormal Child Psychology, 35*, 1009–1019. doi:10.1007/s10802-007-9150-3.
- Smith, S. D., Van Gessel, C. A., David-Ferdon, C., & Kistner, J. A. (2013). Sex differences in children's discrepant perceptions of peer acceptance. *Journal of Applied Developmental Psychology, 34*(2), 101-107.
- Tackett, J. L., Slobodskaya, H. R., Mar, R. A., Deal, J., Halverson, C. F., Baker, S. R., ... & Besevegis, E. (2012). The hierarchical structure of childhood personality in five countries: Continuity from early childhood to early adolescence. *Journal of Personality, 80*(4), 847-879.

van der Linden, D., Scholte, R. H., Cillessen, A. H., Nijenhuis, J. T., & Segers, E. (2010).

Classroom ratings of likeability and popularity are related to the Big Five and the general factor of personality. *Journal of Research in Personality*, 44(5), 669-672.

Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. New York: Cambridge University Press.

Wentzel, K. R. (2003). Sociometric status and adjustment in middle school: A longitudinal study. *Journal of Early Adolescence*, 23, 5–28.

Wentzel, K. R. (2005). Peer relationships, motivation, and academic performance at school. In A. Elliot & C. Dweck (Eds.), *Handbook of Competence and Motivation* (pp. 279–296). New York: Guilford.

Wentzel, K. R., Barry, C. M., & Caldwell, K. A. (2004). Friendships in Middle School: Influences on Motivation and School Adjustment. *Journal of Educational Psychology*, 96(2), 195–203.

Wentzel, K. R., & Watkins, D. E. (2002). Peer relationships and collaborative learning as contexts for academic enablers. *School Psychology Review*, 31, 366–377.

Wolters, N., Knoors, H., Cillessen, A. H., & Verhoeven, L. (2013). Behavioral, personality, and communicative predictors of acceptance and popularity in early adolescence. *The Journal of Early Adolescence*. doi: 10.1177/0272431613510403.

Zettergren, P. (2003). School adjustment in adolescence for previously rejected, average and popular children. *British Journal of Educational Psychology*, 73, 207–221.