

Citation	Majorano, M., Brondino, M., Morelli, M., & Maes, M. (2017). Quality of relationship with parents and emotional autonomy as predictors of self concept and loneliness in adolescents with learning disabilities: The moderating role of the relationship with teachers. <i>Journal of Child and Family Studies</i> , 26, 690-700. doi:10.1007/s10826-016-0591-6
Archived version	Author manuscript: the content is identical to the content of the published paper, but without the final typesetting by the publisher
Published version	doi:10.1007/s10826-016-0591-6
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(article begins on next page)

Abstract

The present study aims to investigate the impact of family-level variables (emotional autonomy and the quality of the parents-adolescent relationship) on socioemotional adjustment (loneliness and self-esteem) in adolescents with learning disabilities (LDs) and the role of the quality of the teacher-adolescent relationship in moderating the effects of these impacts. The participants are 293 typically developing adolescents (TD group) and 50 adolescents with learning disabilities (LD group), aged between 13 and 20. The following measures were administered: the Emotional Autonomy Scale (EAS), the Loneliness and Aloneness Scale for Children and Adolescents (LACA), the Assessment of Interpersonal Relations (AIR), and the Multidimensional Self Concept Scale (MSCS). The data showed that adolescents with LDs display significantly higher levels of peer-related loneliness, and lower levels of self-concept and perceived quality of relationships with parents and teachers. No significant differences emerged between the groups in emotional autonomy and in parent-related loneliness. Path analysis indicated that, in adolescents with LDs, emotional autonomy was more closely related to self-concept than in typically developing adolescents. A positive teacher-adolescent relationship could have a moderating effect on the relationships between the dimension considered only in the LD group. The findings have important implications for the implementation of intervention programs focused on social and emotional competences in young people with LDs.

Keywords: Parents-adolescent relationship; Loneliness; Self-concept; Learning disabilities; Teacher

Quality of Relationship with Parents and Emotional Autonomy as Predictors of Self Concept and Loneliness in Adolescents with Learning Disabilities: The Moderating Role of the Relationship with Teachers

Adolescence is a critical period for the construction of an autonomous sense of self through the separation/individuation process (Blos 1979). Individuals are involved in the redefinition of their family and social relationships, moving away from their dependence on parents and spending time and energy in the construction of autonomous relationships with peers (Koepeke and Denissen 2012;

Lackaye and Margalit 2006; Palmonari 2001). Some studies have found that the negative experiences associated with adolescence (e.g., feeling uncomfortable with yourself, confusion, depression, impulsiveness, and loneliness) are fundamental to the construction of identity (Musetti et al. 2012).

Individuals could travel different developmental trajectories of loneliness, and it might thus be better to consider it as a multidimensional experience. In this regard, the hybrid multidimensional model developed by Goossens and colleagues (e.g., Goossens et al. 2009; Maes et al. 2015) has distinguished two different kinds of loneliness: parent-related and peer-related loneliness. Many studies have tried to assess the outcomes associated with these two dimensions in adolescence and have shown that high levels of loneliness are usually related to psychological maladjustment (Majorano et al. 2015; Qualter et al. 2013; Schinka et al. 2013).

The adolescent's transition towards an autonomous sense of self can be even more difficult for individuals with learning disabilities (LDs). Adolescents with LDs display substantially lower achievements in reading, writing, and/or mathematics than expected for their chronological age, school grade and cognitive development. Several studies have shown that LDs vary greatly in severity (Goldberg et al. 2003; Meltzer 2004). Furthermore, LDs can manifest themselves in association with other neurological and psychological conditions, although they are not the primary cause (Hammill 1990). Because of their specific difficulties, adolescents with LDs have to invest more energy in the tasks required of them at school, often still obtaining less good results than their typically developing peers. Although some recent studies (Hale et al. 2010; Meltzer 2004; Schultz et al. 2012) have emphasised that learning disabilities are associated with widely varying patterns of individual strengths and weaknesses, with a lower performance in some areas but a higher performance in others (e.g., music, arts, and sports), their individual characteristics (e.g., information-processing difficulties, impulsivity) could have a negative effect not only on their academic skills but also on their social and personal perceptions and representations (Forgan and Vaughn 2000; Maughan et al. 2003).

For example, many studies have shown that there is a strong association between LDs and psycho-social problems, including negative self-image, low self-esteem, lack of social skills, stress, anxiety, negative behaviour and emotions, and loneliness (Shany et al. 2012). Firstly, for many adolescents with LDs, difficulties experienced at school lead to lower self-esteem (Cosden et al. 1999; De Beni and Moè 2000), which in turn can lead to perceptions of being less accepted than others (Idan and Margalit 2014; Pavri and Monda-Amaya 2000; Yu et al. 2005), to symptoms of depression and anxiety (Feurer and Andrews 2009; Lackaye and Margalit 2006; Wilson et al. 2009), and to the attribution of failure to internal factors (Pearl et al. 1980). Moreover, this loss of self-esteem can lead to the feeling of just wanting to give up on school (Heiligenstein et al. 1999).

Secondly, adolescents with LDs have problems in constructing social relationships with peers. They more often feel lonely, they are considered less popular, they have difficulty in communicating with others (Wong 1996), and they have difficulties in taking part in group discussions and in emotional comprehension (Gerber and Reiff 1994). Because of these difficulties in social relationships, adolescents with LDs have been found to experience more peer-related loneliness and depression (e.g., Al-Yagon 2003; Idan and Margalit 2014; Tillinger 2013). For example, Idan and Margalit (2014), in their study on a large group of adolescents, showed that individuals with an LD experience higher levels of loneliness and lower levels of autonomy, social competence, quantity of social relationships, and family cohesion. Wang et al. (2013) showed that a higher degree of loneliness is associated with lower social competence and lower self-esteem, especially in early adolescents.

In this regard, relationships with significant adults (family and teachers) might represent a protective factor, reducing the impact of an LD on socio-emotional maladjustment (Al-Yagon 2011, 2012). For example, some authors have underlined the importance of social support from parents as a protective factor, helping adolescents with LDs to cope with the negative emotional aspects of separation from parents and with the difficulties involved in the construction of an autonomous social network (AlYagon 2010; Al-Yagon and Mikulincer 2006). For example, the mother's sense of coherence and family cohesion are supporting factors for adolescents with LDs (Margalit 2004;

Murray and Greenberg 2001). Furthermore, adolescents with LDs might be more dependent on the support they receive from their family when having to cope with stress and upsetting incidents (Hoke 2004; Palombo 1979; Shupe 2000). Indeed, some studies (with children aged between 8 and 12, and with adolescents, with and without learning disabilities) have shown that individuals with LDs are more sensitive than their typically developing peers to the quality of parental personal resources (e.g., positive affect and a good attachment system) (Al-Yagon 2007, 2010, 2011).

Research, however, has also shown that the diagnosis of an LD can be a stressful event for the family, and that a conflictual climate is more often present in families with members with an LD (Feagans et al. 1991). Parents can perceive an LD as threatening and unmanageable (Margalit and Efraim 1996; Margalit et al. 1992), and they may react with overprotective and authoritarian behaviours (Margalit and Heiman 1986). Furthermore, there is a strong relationship between negative aspects of the family context (e.g., lower degrees of family cohesion, poor communications, family rigidity, and disorganization) and socioemotional maladjustment, especially for adolescents with individual weaknesses such as LDs (e.g., Al-Yagon 2003, 2007, 2011; Margalit 2004; Murray and Greenberg 2001; Yu et al. 2005).

Teachers might also be an important source of support for adolescents with LDs. It has indeed been found that a positive teacher-adolescent relationship is an important factor in helping them (Al-Yagon and Margalit 2013; Britzman 2012; de Boer et al. 2010), especially with regard to issues of inclusion in the peer group (Savolainen et al. 2011). Pianta et al. (1995) have shown that a positive teacher-pupil relationship can act as a form of protection in critical situations, for example in the case of school failure or inclusion in special programs. In particular, students who have experienced a more intimate and positive relationship with teachers have achieved better academic achievements than students with an adversarial relationship with the teachers. Furthermore, most of the studies (Wubbels and Brekelmans 2005; den Brok 2001; Van Tartwijk et al. 1998) that have investigated the effects of teacher-student relationship have found that the relationship has more influence on factors related to

emotional dynamics than on cognitive factors. Klassen and Lynch (2007) found that students with LDs with effective support from teachers develop strong motivation and consequently perform better.

Other studies, however, have underlined the potential negative influence of teacher behaviour. For example, AlYagon and Mikulincer (2004) highlighted how students with LDs are more likely to feel rejected and misunderstood by teachers than their TD peers, which was significantly related to loneliness (Al-Yagon and Margalit 2006). Furthermore, students of teachers with negative prejudices often report that they feel misunderstood and accused of laziness (McCarthy et al. 2009). Moreover, negative prejudices on the part of teachers can reduce student confidence and the diligence with which they approach their school work (Hornstra et al. 2010; Wiesmann and Hannich 2011).

The general aims of the present study are to investigate the effects of parents-adolescent relationships (i.e., the perceived quality of parents-adolescent relationship and the adolescent's emotional autonomy) on the adolescent's with LDs socio-emotional adjustment (i.e., loneliness and self concept), as compared to adolescents with TD and to assess whether the teacher-adolescent relationship could be considered a protective factor, especially for adolescents with LDs.

Method

Participants

The first group of participants in the study were 293 typically developing adolescents (TD group), 84 males and 209 females aged between 13 and 20 years ($M = 16.58$, $SD = 2.12$). The participants attended three high schools (two grammar schools and one technical school) in the north of Italy, and came from middle-class families. The second group comprised 50 adolescents (28 males and 22 females) aged between 13 and 20 years ($M = 15.88$, $SD = 1.80$) with a diagnosis of an LD following the DSM-V criteria (American Psychiatric Association 2013). They had an average IQ level, but scored substantially lower on standardized tests (in reading, writing, and/or mathematics) than expected for their age, schooling, and level of intelligence. They attended the same three high schools

as the first group (two grammar schools and one technical school). Each participant had a moderate LD and the diagnoses were distributed as follows: 49 % dyslexia, 22 % dysorthography, 3 % dyscalculia and 26 % mixed disorders. They came from middle class families and were all involved in a support program in a private specialized centre in the north of Italy. There was no significant difference in age between the two groups [$t(348) = 1.77, p = .08$].

Procedure

Permission was obtained from the schools and the data were collected between March and June 2014. The questionnaires were administered in the classroom during regular school hours and took around one hour to complete. The instructions to the adolescents stressed the importance of the confidentiality of the data and that they should work alone after carefully reading the questions. Each participant, and both parents in the case of individuals under 18, gave informed consent.

Measures

Quality of interpersonal relationships

The Italian version (Test delle Relazioni Interpersonali-TRI, Bracken 1996) of the Assessment of Interpersonal Relations (AIR, Bracken 1993b) was used in order to assess the quality of the adolescents' relationships with their parents (both mother and father), male and female peers, and teachers (5 subscales). Each subscale is composed of 35 items and the responses were assessed on a 4-point Likert Scale (1 = never; 2 = seldom; 3 = sometimes; 4 = often). The Italian version (Bracken 1996) has a high internal consistency ($\alpha = .96$ for parents-adolescent relationship and $\alpha = .93$ for teacher-adolescent relationship) and higher test-retest reliability ($\alpha = .95$ for parents-adolescents relationship and $\alpha = .93$ for teacher-adolescent relationship). The normative data was calculated on a sample of 2501 adolescents aged between 9 to 19 years. Only the subscales on the relationship with

parents and teachers were administered. The scales for mothers and fathers were aggregated and used as a combined score. Internal consistency for the quality of parents-adolescent relationship scale was .92 and for the quality of teacher-adolescent relationship scale it was .88. Confirmatory factor analysis showed an adequate fit for the two-factor model ($\chi^2_{(977)} = 182.26$, CFI = .90, and SRMR = .04).

Emotional autonomy

The Italian version of the Emotional Autonomy Scale (EAS, Steinberg and Silverberg 1986) was administered in order to assess the adolescents' emotional autonomy from parents (for the Italian validation of the scale see Ingoglia 2001). Following Beyers' Model (Beyers et al. 2005), the EAS is composed of seven first-order factors (Deidealization, Nondependence, Nonimitation, Privacy, Perceived ignorance, Distrust, and Perceived alienation), and two secondorder factors (Separation and Detachment). The instrument is composed of 20 items on a 4-point Likert scale from 1 (don't agree at all) to 4 (completely agree). Only the second-order factors (separation and detachment) were used. Internal consistency for the separation scale was .83 and for the detachment scale it was .58. Confirmatory factor analysis showed a good fit for the two-factor model ($\chi^2_{(7)} = 17.63$, CFI = .96, and SRMR = .04). Although the alpha for detachment is lower than in other studies with Italian adolescents (Meleddu and Scalas 2002; Pace and Zappulla 2010), the fit indices for the two-factor model were good. We, therefore, decided to follow the model of Beyers et al. (2005), but not to remove any item (in particular, item 19) to improve internal consistency.

Loneliness

The Italian version (Melotti et al. 2006) of the Loneliness and Aloneness Scale for Children and Adolescents (LACA; Marcoen et al. 1987), a multidimensional instrument, was used in order to assess loneliness and attitudes towards aloneness in children and adolescents aged between 11 and 18 years. The scale is composed of 48 items, measured on a 4-point Likert Scale (1 = never; 2 = seldom; 3 = sometimes; 4 = often). It has four subscales, each of 12 items, measuring loneliness toward peers (L-

Peer), loneliness toward parents (L-Part), positive attitude toward aloneness (A-Pos), and negative attitude toward aloneness (A-Neg). For the purposes of this study we considered only the L-Peer and LPart subscales. Internal consistency for L-Part was .69 and for L-Peer it was .94. Confirmatory factor analysis showed an adequate fit for the two-factor model ($\chi^2_{(225)} = 514.34$, CFI = .90, and SRMR = .08).

Self concept

The Italian version (Test di valutazione Multidimensionale dell'Autostima; TMA) of the Multidimensional Self Concept Scale (MSCS, Bracken 1993a) was used to evaluate overall self-concept by assessing and summing its different dimensions (six subscales): social, competence, affect, academic, family, and physical. The 150 items (25 items for each dimension) are evaluated on a 4-point Likert Scale from 1 (absolutely untrue) to 4 (absolutely true). A higher score indicates higher overall self-esteem. The Italian version of the instrument (Bracken 2003) shows higher internal consistency ($\alpha = .98$) and test-retest reliability ($>.90$). The normative data was considered on a sample of 2501 adolescents aged between 9 to 19 years. Internal consistency on the sample for the present study was high ($\alpha = .83$). Confirmatory factor analysis showed a good fit for the onefactor model ($\chi^2_{(9)} = 20.04$, CFI = .96, and SRMR = .04).

Data Analyses

We used SPSS version 21.0 for Windows to manage missing data and to calculate descriptive statistics and intercorrelations, and a series of t-tests to assess group differences. The level of significance was set at $p < .05$. To check whether the missing data were 'missing completely at random' (MCAR) we conducted the Little's MCAR test. Results showed that the missing data were missing completely at random (i.e., no identifiable pattern exists in the missing data) for the TD group ($\chi^2_{(131)} = 135.26$, $p = .38$) and missing at random for the LD group ($\chi^2_{(12)} = 23.09$; $p = .027$). Next, we used a multiple imputation technique to estimate missing data. We used Mplus version 5.2 (Muthén

and Muthén 1998–2008) to run confirmatory factor analyses, path analyses, and multi-group analyses. Missing values on predictor variables were managed in Mplus using full information maximum likelihood (FIML) estimation. Two preliminary path analyses were run to test the hypothesized model, one for the LD group and one for the whole TD group. The two groups' sample sizes were very different, so, in order to run multi-group analyses and to assess group differences in the variables considered, a subgroup was considered, consisting of 50 typically developing adolescents, matched with the LD group for gender and age (28 males and 22 females, age in years: $M = 15.48$, $SD = 1.63$).

Finally, in order to assess the moderating role of the relationship with teachers, two models were conducted (using a median split procedure) with multi-group analysis identifying two sub groups in each of the TD subgroup and the LD group, that is, adolescents with either high or low quality of relationship with teachers.

Results

The correlations among the variables considered are presented in Tables 1 and 2, for the TD and LD group, respectively.

A path analysis on both the TD group (see Fig. 1) and the LD group (see Fig. 2) was conducted in order to test the effects of the perceived quality of the relationship with parents and emotional autonomy (separation and detachment) on the socio-emotional dimensions (parent- and peer-related loneliness and self concept).

Perceived quality of the relationship with parents predicted self concept in both groups and parent-related loneliness in the TD group. Furthermore, there was a positive link between separation and parent-related loneliness in both groups and between detachment and parent- and peer-related loneliness in the TD group. Detachment is negatively linked with self concept in the TD group. Parent-related loneliness is positively related with peer-related loneliness in the TD group and self concept is negatively related with peer-related loneliness in both groups; self concept is related with parent-related loneliness, negatively for the TD group and positively for the LD group. The explained

variance for peer-related loneliness, parent-related loneliness, and self concept was 4, 45, and 28 %, respectively in the TD group, and 11, 37, and 29 %, respectively in the LD group.

As shown in Fig. 3, in order to assess whether the relationships between the variables varied across the TD group and the LD group, a multi-group analysis was conducted using the TD sub-group matched for age and gender.

A multigroup analysis permits the estimation of the model simultaneously for the two groups. Although no significant moderation effect was found, some interesting differences between the groups emerged. The link between the quality of the relationship with parents and self concept, although not significant, was stronger for the adolescents with LDs, as were the paths between separation and both parent-related loneliness and self concept. Conversely, the relationship between detachment and peer-related loneliness, although not significant, was stronger for the TD group. Finally, some interesting significant differences emerged around the association between the outcome variables, specifically parent-related loneliness and self concept: the correlation is negative for the TD group and positive for the LD group.

To examine group differences in the quality of social relationships (parents and teachers), emotional autonomy (separation and detachment) parent- and peer-related loneliness, and self concept scores, a series of t-tests was conducted, using data from the LD group and the TD subgroup, matched for age and gender.

As shown in Table 3, the LD group displays significantly higher levels of peer-related loneliness, and lower levels of self concept, and perceived quality of social relationships with both parents and teachers, than typically-developing adolescents. In contrast, no differences emerged in parent-related loneliness, separation, and detachment.

Finally, the moderating role of the relationship with teachers was tested for the two groups.

As shown in Fig. 4, in the TD subgroup model the quality of teacher-adolescent relationship was not a statistically significant moderator for the paths of the model. However for adolescents with a

high quality teacher relationship, the positive link between the relationship with parents and self concept was stronger than for adolescents with a low quality teacher relationship.

Finally, the same model was run for the LD group (see Fig. 5). A statistically significant moderation effect of the quality of the teacher relationship was found only for the correlation between peer-related loneliness and self concept ($p = .034$). However, for all the paths in the model, the estimates, while not statistically significant, were higher for adolescents with a high quality teacher relationship than for adolescents with low quality teacher relationship.

Discussion

The aim of this study was to investigate socio-emotional adjustment in adolescents with LDs. More specifically, we aimed (1) to assess the effect of the parents-adolescent relationship on adolescents' socio-emotional adjustment, (2) to assess whether there are differences in socioemotional adjustment between adolescents with LDs and their TD peers, and (3) to assess the protective role of the teacher-adolescent relationship.

First, with regard to how relationships with parents affect socio-emotional adjustment and, as a consequence, whether parents could represent an important protective factor, specifically for adolescents with LDs, our results indicate that the presence of an LD slightly intensifies the associations between parental-level dimensions (relationship quality and emotional autonomy) and socio-emotional adjustment (loneliness and self concept). In line with other studies (Margalit et al. 1992; Margalit and Efraim 1996; Margalit and Heiman 1986), this stronger influence of the predictors in the LD group shows that parental-level variables could represent a protective factor for adolescents with LDs, compensating for, or supporting them in, their socio-emotional difficulties. It could be that, because of their lower self concept and higher levels of peer-related loneliness, adolescents with LDs feel more insecure in the autonomous construction of social relationship and are, therefore, more dependent on the family. This dependency might make their socio-emotional development and self-evaluation more sensitive to the quality of the relationships with their parents, and might increase

their need of family support. Conversely, too much influence from parents can lead children with LDs to believe that without external aid they cannot achieve their desired social objectives, resulting in lower motivation, self concept, and sense of self-efficacy. Indeed, some studies have reported that parents of children with LDs are more often inclined to become more controlling and authoritarian, reducing the children's opportunities for social exploration outside the family (e.g., Margalit and Heiman 1986). Therefore, having friends or a rich social network and having a positive self evaluation could be related to positive support from parents more closely in the LD group than in other groups.

Furthermore, as regards the relation between the outcomes dimensions, differences in the correlations between self concept and parent-related loneliness (negative in case of the TD group and positive in case of the LD group) are interesting and need to be investigated further. It might be due to the family exerting a stronger influence, or "control", on the social life of adolescents with LDs. The more adolescents experience loneliness in relation to their parents when the separation/individuation process is developing (that is, when autonomy and distance from parents are increasing), the more they have a more positive self concept. In contrast, the fact that the adolescents in the TD group display lower levels of self concept when they experience higher parent-related loneliness could be connected with the fact that parents are perceived as too distant. However, the relationship between autonomy and self concept needs to be investigated in further research. Furthermore, peer-related loneliness is negatively related to self concept in both of the groups, confirming the central role of relationships with peers in the construction of a positive self-image (Palmonari 2001).

Second, in line with the literature, we found that adolescents with LDs display lower levels of quality of their relationships with parents and teachers, higher levels of peer-related loneliness, and lower levels of self concept than their TD peers (Hoke 2004; Ravit and Stone 1991; Shupe 2000). In other words, adolescents with LDs seem to suffer with regard to social relationships and self-evaluation. These two aspects are related: high levels of difficulty in social relationships have an influence on self-evaluation and, in turn, lower self concept could limit adolescents in their attempts

to make friends, increasing feelings of isolation (Al-Yagon 2007; Lackaye and Margalit 2006; Palmonari 2001; Pavri and Monda-Amaya 2000). In contrast with earlier work (Gerber and Reiff 1994; Idan and Margalit 2014; Margalit 1991; Shupe 2000; Tillinger 2013; Wong 1996), we found no significant differences in emotional autonomy and parent-related loneliness. Furthermore, adolescents with LDs reported lower perceived quality of relationships with teachers, which confirms other studies based on attachment theory (e.g., Al-Yagon and Margalit 2006). According to this perspective (Bowlby 1973), the individual develops a pattern of attachment during the course of his/her relationship with the caregiver and through this constructs internal models (“working models of attachment”) for their other closed relationships with significant adult figures throughout their lifetime (Weiss 1998). These models are stable patterns and can be secure or insecure, according to the characteristics of the relationships. Many studies have investigated the role of the teacher as a “secure base” for the exploration of new contexts and for the acquisition of new skills (Pianta et al. 1995). However, since students with learning disabilities can feel rejected by teachers, they might develop negative relationships with them, and thus not be able to achieve that secure base (Al-Yagon and Margalit 2006; Al-Yagon and Mikulincer 2004).

Regarding group differences in adolescents’ relationships with parents, our results seem to be somewhat contradictory. Adolescents with LDs perceive a lower quality of relationship with parents than their TD peers, but, at the same time, they have similar levels of emotional autonomy and parent-related loneliness. Thus, their perceived “psychological distance” from parents is similar to that of their peers, even if they are less satisfied with the quality of their relationships in the family. In other words, it seems that having an LD does not affect perceived autonomy or parent-related feelings of loneliness, but does affect the general evaluation of relationships with parents in other dimensions (e.g., positive communication, time spent together). Furthermore, some recent studies—that included a specific assessment of adolescent-father relationship—have reported that individuals with an LD specifically reported lower attachment security toward their fathers (Al-Yagon 2011). So in our study—which did not separately assess adolescent-father relationships—the lower scores in the

quality of the relationship with parents could be explained by specific difficulties in the relationship with the father.

Third, with regard to the relationship with teachers, no clear moderator effect emerged for the associations between parents-adolescent relationships and socio-emotional adjustment. Although no significant moderation emerged for the quality of the relationship with teachers, the coefficients in the path analysis displayed a higher influence of this variable on self-concept for the LD group. In fact, in the LD group familial and social well-being (expressed by a higher quality of parents-adolescent relationship and by lower peer- and parent-related loneliness) does have a stronger relation to self-concept when the relationship with the teacher is better. In this sense, as reported by the studies adopting an attachment perspective, teachers could represent, especially for adolescents with LDs, a “secure base” with an important role in the development of adolescents’ self and in supporting adolescents with LDs in their difficulties in the peer group. This is particularly important during adolescence when the relationships with significant adults, especially parents, are redefined. Thus, our results are in line with previous work (e.g., Al-Yagon and Margalit 2006) that suggested that the relationship with teachers is an important protective factor for social well-being, helping the parents to support the separation-individuation process of adolescents with LDs, compensating for or preventing the long term negative effects of socio-emotional maladjustment. As shown in the research of Klassen and Lynch (2007), the support and encouragement of teachers for students with LDs can help students to decide to take responsibility for their academic performance and can stimulate an adaptive response which is functional in facing the difficulties encountered in life. Furthermore, our data support the idea that teachers could help adolescents to achieve more inclusion in school, reducing loneliness and maladjustment (Al-Yagon and Margalit 2006).

Limitations

This study has some limitations which have to be pointed out. The first limitation of the present study is two-fold: the small size of the sample of adolescents with LDs, and the fact that it was homogeneous in terms of the characteristics of the disorder. Generalisation of the current results is therefore problematic. A homogeneous sample, however, can also be an advantage, because parents' and teachers' behaviour could have different characteristics according to specific characteristics of the disorder. Nevertheless, future research should replicate the current findings on a larger sample, and on a sample with more internal variation so that a range of individual characteristics can be considered, including the level of the disorders (low vs. high), type of school difficulties (reading, math, or writing), age of diagnosis, and kind of treatment.

Second, it would be interesting to investigate socioemotional behaviours in adolescents with LDs, adding observational information to self-reports using a longitudinal design. For example, observing peer-group interaction, using a coding system for assessing communication and social competence, could add important information on the social characteristics of the participants.

Third, we need greater clarity on the question of emotional autonomy/dependence. It would be interesting to assess the representation of parents about the autonomy of their children with an LD, so that the adolescent's perception could be related to the parental perspective. Similarly, multiple perspectives on the adolescent's socio-emotional adjustment could be added by introducing a specific measure on the teacher's perspective on the adolescent's scholastic autonomy and social competence.

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Table 1
Correlations Among all Variables for the TD-Group (n = 293)

	1	2	3	4	5	6	7
1. L-Peer		.25**	.01	-.11	-.41**	-.01	.19**
			-				
2. L-Part			.55**	.16**	-.43**	.55**	.40**
3. TRI-Parents				-.22**	.48**	-.61**	-.24**
4. TRI-Teachers					-.15*	.26**	.13
5. Self-Esteem						-.31**	-.32**
6. Separation							.31**
7. Detachment							

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2: Correlations among all variables for the LD-group (n = 50)

	1	2	3	4	5	6	7
					-		
1. L-Peer		-.10	-.24	.09	.50**	-.03	.14
2. L-Part			-.06	-.24	.33*	.57**	.41**
3. TRI-Parents				-.28	.39**	.26	.05
4. TRI-Teachers					-.31	-.28	-.23
5. Self-Esteem						.31	.07
6. Separation							.44**
7. Detachment							

Note: * p < .05, ** p < .01, *** p < .001.

Table 3: Descriptive statistics (means and standard deviations) and t-tests for all variables

	LD-group		TD-group		<i>t</i> (<i>df</i> = 98)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
L-Peer	2.95	0.50	1.97	0.73	7.14	<.001
L-Part	2.00	0.59	2.01	0.46	-0.39	.93
Self-Esteem	2.17	0.45	3.41	0.49	-15.02	<.001
TRI-Parents	2.58	0.14	2.98	0.34	-7.27	<.001
TRI-Teachers	2.42	0.53	3.01	0.36	-5.69	<.001
Separation	2.70	0.59	2.65	0.53	0.47	.64
Detachment	2.27	0.48	2.31	0.43	-0.41	.69

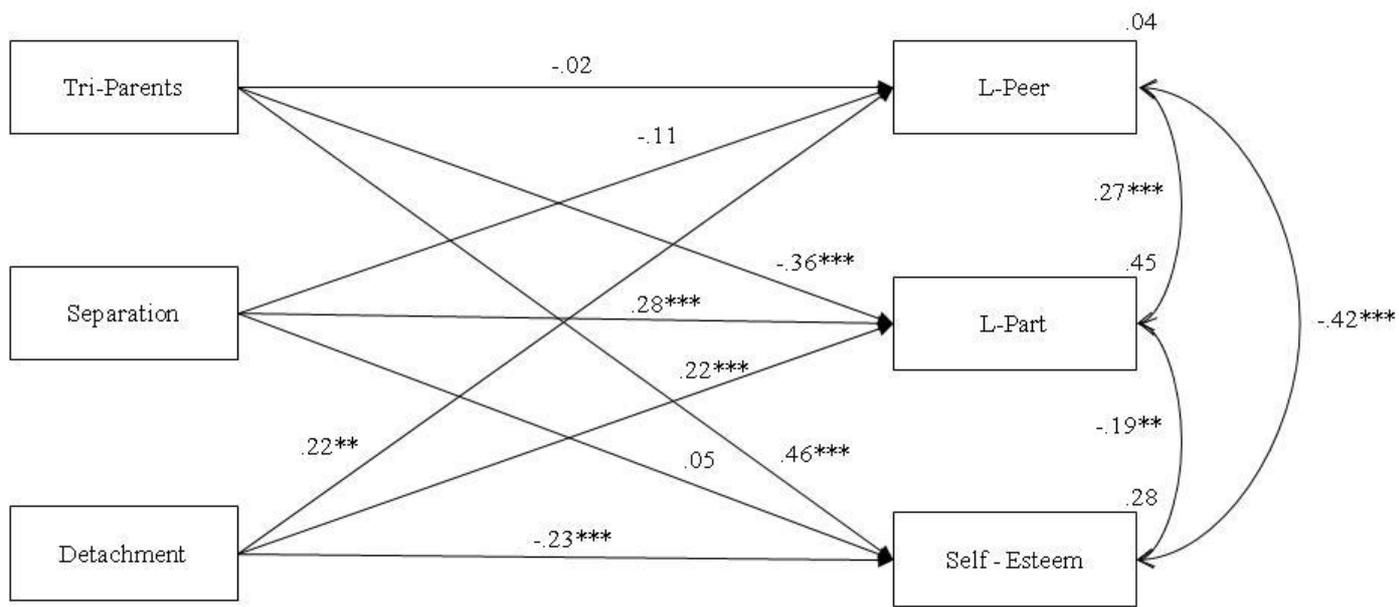


Figure 1. Standardized path estimates of the hypothesized model. Explained variance is shown beside the dependent variables (TD-group).

* $p < .05$. ** $p < .01$. *** $p < .001$.

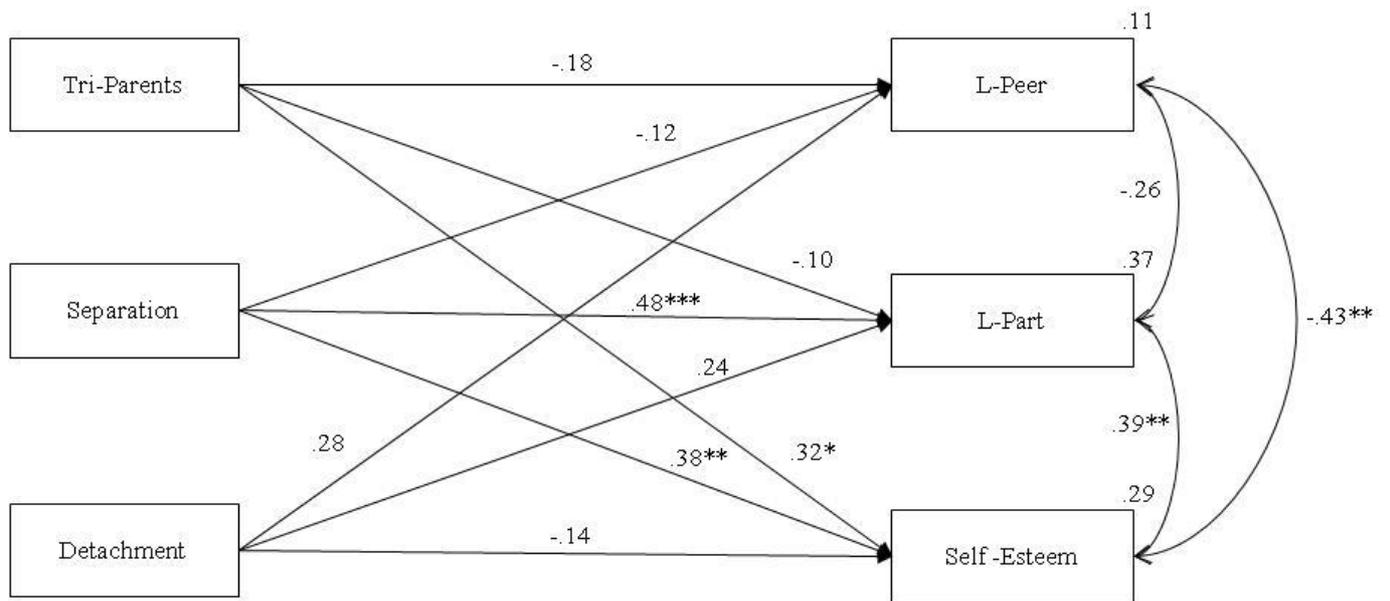


Figure 2: Standardized path estimates of the hypothesized model. Explained variance is shown beside the dependent variables (LD-group).

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

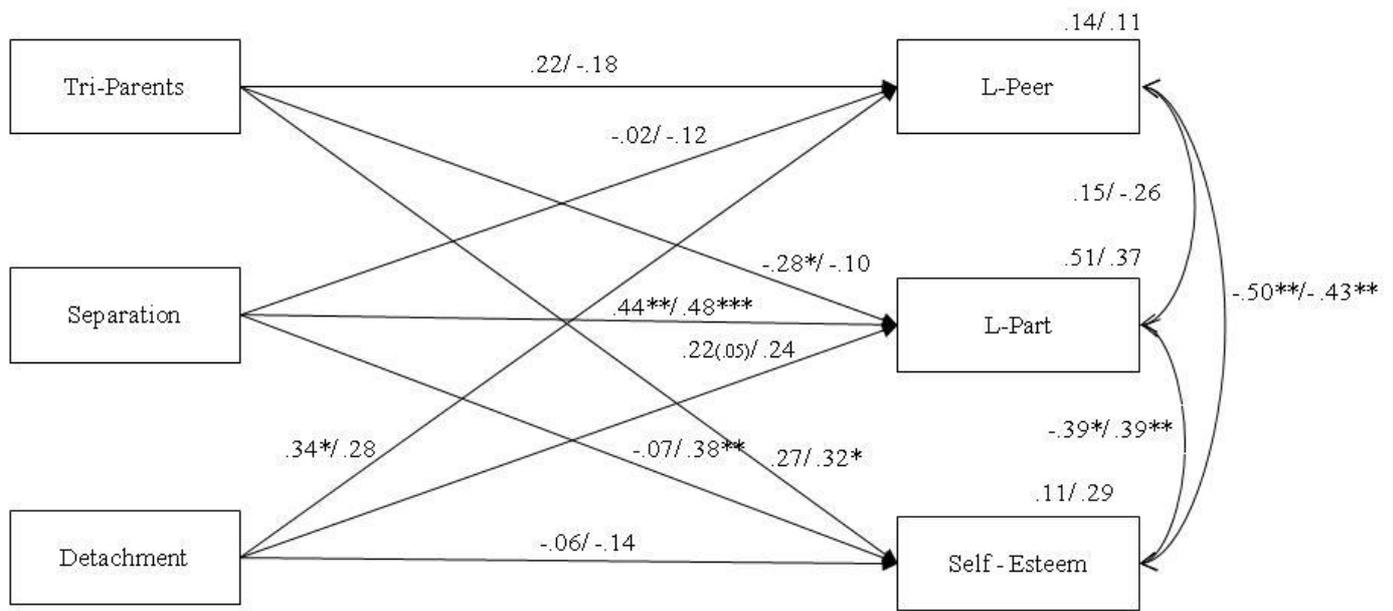


Figure 3: Standardized path estimates for the model testing moderation effect across the two groups (TD-group/LD-group). Explained variance is shown beside the dependent variables.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

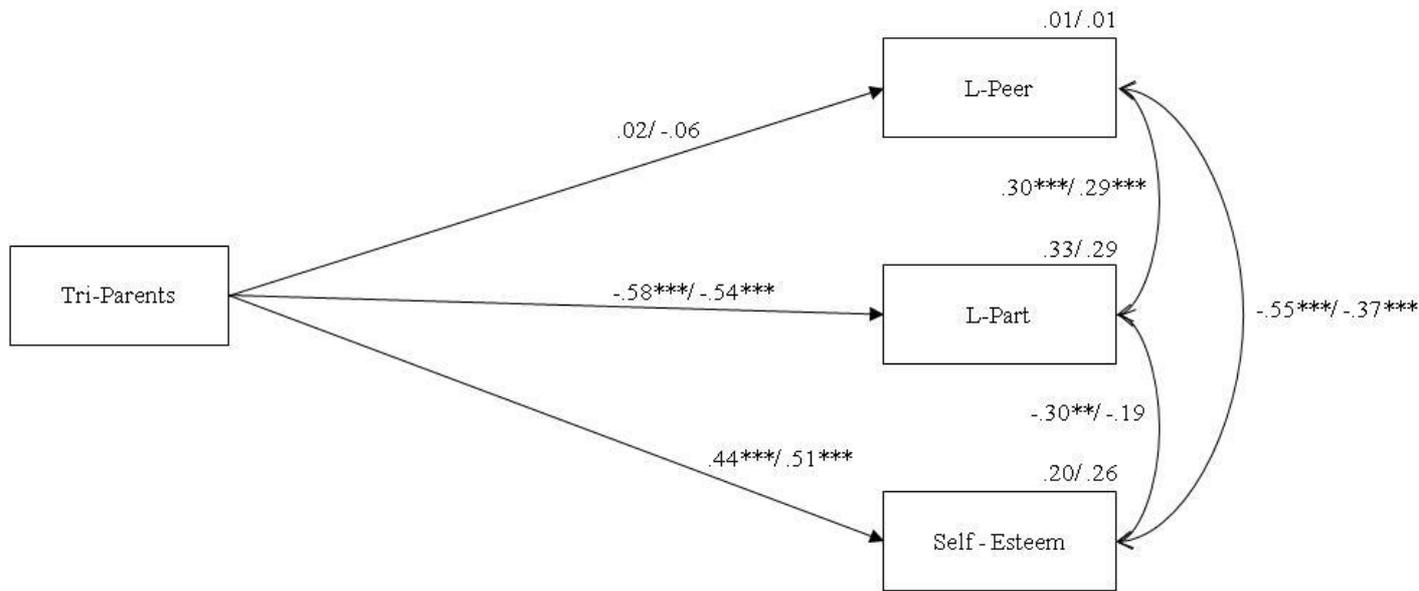


Figure 4: Standardized path estimates for the model testing moderation effect of quality in the relationship with teachers (low/high) for TD-group (n = 50). Explained variance is shown beside the dependent variables.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

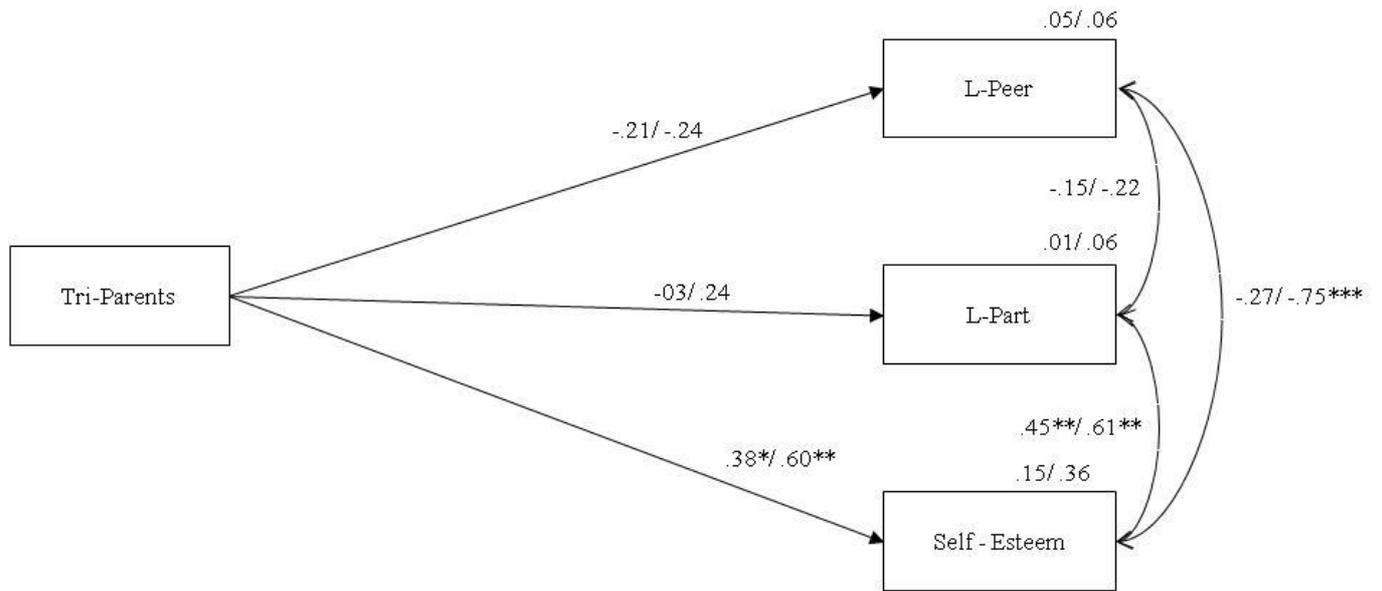


Figure 5: Standardized path estimates for the model testing moderation effect of quality of the relationship with teachers (low/high) for LD-group (n = 50). Explained variance is shown beside the dependent variables.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.