Academic Achievement and internalizing problems in primary and secondary school students in Portugal*

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Abstract

The present study aimed to analyze the differences in the internalizing problems (anxiety, depression, somatic complaints), assessed by different informants (parents, teachers and young people), according to the level of academic achievement in primary and secondary school students. For this, a stratified sample representative of the Portuguese population comprised of 1510 students, between the ages of 11 and 18 years. From the set of Achenbach System of Empirically Based Assessment battery tests validated for the Portuguese population the *Child Behavior Checklist 6-18, the Youth Self-Report 11-18* and the *Teacher Report Form 6-18* were used. In general, the results show that students with low academic achievement have more internalizing problems than students with average and/or high academic achievement. However, in the 7th, 8th and 9th grades, from the perspective of the young people themselves, students with high level of academic achievement have higher levels of anxiety/depression, in comparison to students with low academic achievement. These results demonstrate that, apart from the students with low academic achievement being at risk and vulnerable to internalizing problems, it is also necessary to pay special attention to students with high academic achievement. These findings resulted in practical implications relevant to school contexts, more precisely when considering the correlation between academic achievement and psychological well-being.

Keywords

Academic achievement – Psychological well-being – Internalizing problems – Depression – Anxiety.

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Introduction

School is a fundamental context for the development and psychological well-being of children and adolescents. Within this context, where they spend a large portion of their time, children and adolescents face multiple cognitive, emotional, behavioral and social challenges (SAMDAL; DÜR; FREEMAN, 2004). If some children and adolescents are able to deal adequately with these different challenges and demands, many are not, which impacts their mental health, from which several emotional (or internalizing) and behavioral problems may arise (SPRINTHALL; COLLINS, 2003).

The prevalence of Internalizing Problems (IP) has increased in children and adolescents (APA, 2014; WHO, 2012). According to the World Health Organization (2012), per annum, approximately 20% of adolescents show mental health problems, most often depression and anxiety.

The study on the correlation between IP, like depression and anxiety, and low Academic Achievement (AA) is recurrent in the literature. On the one hand, suggesting that the presence of IP may impact AA and, on the other, children and adolescents with low AA may experience IP, such as depression and anxiety, as a consequence of the level of AA (e.g. DELL'AGLIO; HUTZ, 2004; SOWISLO; ORTH, 2013; VERBOOM et al., 2014; WEIDMAN et al., 2015). Nonetheless, studies on the correlation between IP and high AA are meager. Although several research studies report that high AA is a protective factor of psychopathology, the fact that students with high AA want to reach increasingly higher performance levels and meet external expectations can lead to fear of failure or dissatisfaction with their own performance. This, in turn, can lead to low self-esteem with an impact on IP (SHIM; RUBENSTEIN; DRAPEAU, 2016).

Ryff (1989) created a model of Psychological Well-being (PWB) that includes perceptual-cognitive and affective-emotional aspects and considers various dimensions of positive psychological functioning: (i) self-acceptance; (ii) positive relations with others; (iii) autonomy; (iv) ability to manage and effectively respond to external demands; (v) establishing goals and objectives that will give meaning and importance to life, and (vi) personal growth, this is to say, a sense of continuous development as a person (DECI; RYAN, 2008; RYFF, 1989; RYFF; KEYES, 1995). This construct can be studied in all age groups and when referring to the PWB of children and adolescents, school experience cannot be neglected (SAMDAL; DÜR; FREEMAN, 2004). Several authors report that there is a correlation between PWB and school experience. On the one hand, there is research that emphasizes that the students most satisfied with school and school life feel better about themselves, and thus, show higher levels of PWB (FERNANDES et al., 2011; HUEBNER; MCCULLOUGH, 2000; MATOS; CARVALHOSA, 2001). On the other hand, some authors state that PWB has benefits in school involvement (LEWIS et al., 2011), which may be associated with high academic achievement (AA) (e.g. DISETH; DANIELSEN; SAMDAL, 2012; SULDO; RILEY; SHAFFER, 2006). The longitudinal study performed by Salmela-Aro and Tynkkynen (2010) in Finland, during a three-year period with students from the 9th to the 11th grades, corroborates this idea given the results concluded that high AA is associated with a general trajectory of well-being.

Recent research by Ng, Huebner and Hills (2015) show that AA and life satisfaction can reinforce each other, since high levels of life satisfaction can have a positive influence on academic results that in turn increase satisfaction with life in the future. This relationship can be explained given that life satisfaction can attenuate stress in the face of challenges and adversities, which consequently can lead these students to improve their behavior in the classroom, be more productive leading to an increase in AA. In addition, students who are more satisfied with school and school life have less internalizing (e.g. anxiety, depression, social withdrawal and somatic complaints) and externalizing (e.g. conflict-generating behaviors and impulsiveness) problems (LYONS et al., 2014). Contrary to this, low levels of life satisfaction can be a risk factor to AA and lead to emotional (IP) and behavioral (EP) problems in children and adolescents (FERNANDES et al., 2011; NG et al., 2015; SULDO; HUEBNER, 2004).

Specifically analyzing IP in children and adolescents, depressive symptoms appear to be influenced by biological, psychological and social variables (COMPAS; EY; GRANT, 1993), characterized by a depressive mood, demotivation and disinterest, weight loss, changes in sleep, psychomotor agitation or slowing, loss of energy, feelings of devaluation, decreased concentration, withdrawal, and thoughts of suicide and suicide attempts (APA, 2014).

The correlation between depression in children and adolescents and AA has been studied by several authors (e.g. PÉREZ; URQUIJO, 2001; SIENER; KERNS, 2012; STEVENSON; ROMNEY, 1984; WRIGHT- STRAWDERMAN; WATSON, 1992), who demonstrated that depression can negatively influence the individual's functioning in different areas and impact AA (HERMAN; MERRELL; REINKE, 2004; SIENER; KERNS, 2012). The findings of a study conducted with adolescents between 12 and 16 years old, from public and private schools in Spain, aimed at analyzing the correlation between AA and depressive symptoms, concluded that adolescents with depressive symptoms had more attention and concentration deficits and disinterest in school, which in turn affects AA (ATIENZA; CUESTA; GALÁN, 2002). In Taiwan, Lin et al. (2008), in a study conducted with 9586 adolescents, verified that the prevalence of depression at this stage of development is high (12,3%), and that among the different risk factors for this symptom is disinterest in school, low AA and low self-esteem.

Some authors (e.g. DELL'AGLIO; HUTZ, 2004; VERBOOM et al., 2014) state that, on the one hand, low AA may be related to the presence of depressive symptoms, low self-esteem and feelings of low self-efficacy. On the other hand, it is also possible that children and adolescents with low AA show depressive symptoms as a consequence, given that they are not able to deal with the demands imposed on them. Some studies show that high AA is a protective factor to the development of depressive problems (FRÖJD et al., 2008; LAZARATOU et al., 2010, MOILANEN; SHAW; MAXWELL, 2010). The findings of the study by Tomé and Matos (2006), confirm that the group of students with average or good grades show lower rates of depressive symptoms. Thus, although several studies associate AA and depression, understanding the directionality of this relationship is the controversial question.

With regard to anxiety, it can be considered adaptive, enabling children and adolescents to adjust to different situations; however, when its intensity and frequency increase, it can become dysfunctional (BORGES et al., 2008). This symptomatology can be characterized by excessive anxiety and worry; agitation, nervousness or inner tension; fatigue; difficulty concentrating; irritability; muscular tension; and changes in sleep (APA, 2014).

The fear associated with academic failure, with the demands and pressures of the school context and adaptation and transition to new teaching cycles appear to generate vast sources of anxiety that can influence AA (ROSÁRIO; SOARES, 2003). Many children do not yet possess effective coping strategies to deal with this set of challenges and, therefore, are more vulnerable to symptoms of anxiety (LAZARUS, 2000). Moreover, according to Eysenck and collaborators (2007), anxiety can also reduce students' attentional availability in testing situations in which, instead of focusing on the test, they will centre their attention on distracting stimuli, incapable of demonstrating their level of knowledge on the educational content, thus compromising their AA (AKINSOLA; NWAJEI, 2013).

In the specific case of students with high AA, performance goals and the demand to meet external expectations can contribute to an increase in AA, since these students, by setting high academic standards, can engage more (SHIM; RUBENSTEIN; DRAPEAU, 2016). However, this pattern of perfectionism can lead to fear of failure and to dissatisfaction with one's own performance, boosting vulnerability to the manifestation of IP (EDDINGTON, 2014; SHAFRAN; MANSELL, 2001; SHIM; RUBENSTEIN; DRAPEAU, 2016). Moreover, an association between perfectionism and depression in children and adolescents has been identified (e.g. CASTRO et al., 2004; HUGGINS et al., 2008), given that some characteristics of perfectionism correspond to characteristics found in individuals with depression, such as dichotomous thinking, generalization and personalization, where there is an extreme and negative assessment of situations (BECK et al., 1979).

For a better understanding of the relationship between IP and AA, including high AA, the present study was aimed at analyzing the differences in IP, assessed by different informants, among students from Primary School (5th to 9th grades) and Secondary School2, according to the level of AA.

Method

This study is part of the research project related to the assessment of the ASEBA (Achenbach System of Empirically Based Assessment) battery test in Portugal (ACHENBACH et al., 2014)[3].

2- In Portugal, the compulsory education system is structured as follows: 1st Cycle (1st to 4th grades) of Primary Education (4 years, 6-9 years old); 2nd Cycle (5th and 6th grades) of Primary Education (2 years, 10-11 years old); 3rd Cycle (7th to 9th grades) of Primary Education (3 years, 12-14 years old); Secondary Education (3 years, 15-17 years old).

3- Support from the Fundação para a Ciência e a Tecnologia that financed the research project "Avaliação da psicopatologia em crianças e adolescentes: aferição da Bateria ASEBA" (FCT – PTDC/PSI-PCL/105489/2008).

Participants

The sample, representative of the universe of primary (5th to 9th grades) and secondary school students in Portugal, was comprised of 1510 students from 45 public schools and 12 private schools, 772 girls (51,1%) and 738 boys (48,9%), between the ages of 11 and 18 (M = 14,34, DP = 2,22). The sampling method used was the stratified random sampling and the random selection of students was done by region, sex and type of education, proportional to the distribution of the total. For a more detailed characterization of the participants in the assessment study, see Achenbach et al. (2014).

Instruments

In this study, three instruments of the ASEBA battery were used for the school term:

Child Behavior Checklist for ages 6-18 - CBCL 6 – 18 (ACHENBACH et al., 2014).

The CBCL is a questionnaire aimed at parents or other guardians who live with the child/adolescent, aged 6-18 years. This instrument is composed of 118 items that describe emotional and behavior problems (e.g. *Cries a lot*; Tires too much), as well as a set of skills assessment questions (activities, social and educational) of the child/adolescent.

Teacher's Report Form for Ages 6-18 – TRF (ACHENBACH et al., 2014).

The TRF is a questionnaire aimed at teachers or other educational professionals to observe the child's/adolescent's functioning, aged 6-18 years. This instrument is composed of 118 items, 97 items are shared with the CBCL, and the others are related to the child's/ adolescent's behavior in school (e.g. *Has difficulty following instructions*). This instrument also allows the collection of demographic information about the child/ adolescent, about the role of the parent/guardian, how well they know the child, in what context they observe the child, as well as information regarding the adaptive functioning of the child/adolescent.

In this questionnaire, the academic performance of the child/adolescent is assessed using a scale from 1 (way below class level) to 5 (way above class level). In the present study, the average of the first three subjects identified in this instrument was calculated as a measure of AA.

Youth Self-Report – YSR (ACHENBACH et al., 2014).

The YSR concerns a self-report questionnaire that enables the assessment of young people's perception, aged 11 to 18 years, regarding emotional and behavior problems, as well as a set of skills (activities and social). This instrument is composed of 112 items (e.g. *There are not many things I like*), most of which are shared with the CBCL and has open-ended questions that ask for information regarding difficulties and concerns, as well as on the skills the young people indicate.

The completion of the CBCL and YSR should take into account the child's/adolescent's behavior in the last six months, whereas in the TRF teachers should consider the last two months, classifying each statement according to a three-point *Likert* scale: 0 when the statement is not true; 1 when the statement is sometimes true and, 2 when the statement is considered to be very true.

Through the results of these instruments it is possible to obtain, in addition to a global index (Total Problems), composite results on two types of scales: first-order scales (syndrome scales); and second-order scales (internalizing problems and externalizing problems). The syndrome scales in the three questionnaires for the school term are: Anxiety/Depression, composed of 13 items in the CBCL and YSR and 16 items in the TRF (e.g., *Feels worthless or inferior to others*), Withdrawal/Depression, composed of eight items in the three questionnaires (e.g., *Likes being alone more than accompanied*), Somatic Complaints, composed of 11 items in the CBCL, 10 items in the YSR and nine in the TRF (e.g., *Feels dizzy*), Social Problems, composed of 11 items in the three questionnaires (e.g., *Doesn't get along with other children*), Thinking Problems, composed of 15 items in the CBCL, 12 items in the YSR and 11 items in the TRF (e.g., *Can't keep from thinking certain thoughts; obsessions or over thinking*), Attention Problems, composed of 10 items in the CBCL, nine items in the YSR and 26 items in the TRF (e.g., *Is inattentive, easily distracted*), Delinquent Behavior, composed of 17 items in the CBCL, 15 items in the YSR and 12 items in the TRF (e.g., *Breaks the rules at home, in school or in other places*) and Aggressive Behavior, composed of 18 items in the CBCL, 17 items in the YSR and 20 items in the TRF (e.g., *Physically attacks other people*). In the present study the findings of the three scales were used, in relation to Internalizing Problems: Anxiety/Depression, Withdrawal/Depression and Somatic Complaints.

In the validation of these instruments, internal consistency was considered for the reliability analysis. For the assessment of internal consistency of the scales the value for Cronbach's *alpha* (α) was calculated, in which values were obtained in line with the results obtained in international studies: anxiety/depression α=0,75 for the CBCL, α=0,78 for the TRF and α=0,74 for the YSR; withdrawal/depression α=0,68 for the CBCL, α=0,69 for the TRF and α=0,61 for the YSR; somatic complaints α=0,67 for the CBCL, α=0,62 for the TRF and α=0,71 for the YSR.

In terms of construct validity, confirmatory factor analysis (CFA) and assessment of group differences were performed, with the findings supporting the use of the factor structure of these instruments in a Portuguese context (ACHENBACH et al., 2014).

Data collection procedures

In accordance with the ethical and deontological principles that regulate research, protocols were established with the different entities involved and authorization from the National Data Protection Commission was also requested (Authorization no. 1735/2010), from the Ministry of Education (No. 0128800001), as well as from the School Boards/ Pedagogical Councils. After obtaining authorization, participants were given documents

with all the information and objectives of the study, as well as a document was given to students for informed consent, for authorization by Parents/Guardians (ACHENBACH et al., 2014).

Data analysis procedures

To perform the data analysis, the IBM SPSS 24 (*Statistical Package for the Social Sciences*) was used.

In order to achieve the objectives of the study, three groups were created according to students' AA: low, average and high AA. Integration in the low AA group used the minus one standard deviation of the mean criteria (< 2.37); inclusion in the average AA group corresponded to a value between 2.37 and 4.23; finally, integration in the high AA group used the plus one standard deviation criteria (>4.23). Table 1 shows the distribution of participants by level of AA.

Table 1 – Distribution of participants by levels of academic achievement

AA levels	N	*Valid* %
Low AA	213	18,0
Average AA	767	64,9
High AA	201	17,0

Source: survey data.

The data analysis related to the objectives of the study was performed through inferential statistics by carrying out a One-way ANOVA.

Results

Differences in the levels of anxiety/depression, withdrawal/depression and somatic complaints among students with low, average and high academic achievement – 5th and 6th grades

The results of the analysis of variance reveal that there are significant differences in terms of anxiety/depression according to the AA of 5th and 6th grade students, from the parents' perspective, F (2,19) = 5,43, p = .005 and the teachers' perspective, F (2,19) = 4,67, p = .010.

Regarding withdrawal/depression, the differences are significant only from the perspective of teachers F (2,19) = 10, p = .000. In terms of somatic complaints, the differences are significant in the perspective of parents F (2,19) = 8,35 p = .000 and children F (2,16) = 5,85 p = .004 (cf. Table 2).

Table 2 – Differences on internalizing problems according to the academic achievement of 5th and 6th grade students

	Academic Achievement			
	Low AA (n) Average (DP)	Average AA (n) Average (DP)	High AA (n) Average (DP)	
Anxiety/Depression				
YSR	(28) 5,75 (3,48)	(100) 5,22 (3,29)	(33) 4,88 (3,66)	F (2,16) 0,50
CBCL	(35) 6,11 (4,00)	(123) 4,07 (3,04)	(35) 3,97 (3,76)	F (2,19) 5,43**
TRF	(36) 3,97 (3,36)	(122) 2,94 (3,01)	(35) 1,86 (1,88)	F (2,19) 4,67**
Withdrawal/ Depression				
YSR	(28) 3,96 (2,82)	(100) 3,00 (2,15)	(33) 3,15 (2,14)	F (2,16) 1,97
CBCL	(35) 2,71 (2,63)	(122) 2,00 (1,80)	(35) 1,71 (1,64)	F (2,19) 2,55
TRF	(36) 2,69 (2,56)	(122) 1,39 (1,81)	(35) 0,77 (1,00)	F (2,19) 10,27**
Somatic Complaints				
YSR	(28) 4,00 (3,38)	(100) 2,32 (2,22)	(33) 2,15 (2,11)	F (2,16) 5,85**
CBCL	(35) 3,43 (2,68)	(123) 1,83 (1,99)	(35) 1,66 (2,14)	F (2,19) 8,35**
TRF	(36) 0,42 (0,73)	(122) 0,39 (1,02)	(35) 0,17 (0,71)	F (2,19) 0,83

*p<.05 **p < .01
Source: survey data.

The *Gabriel Post-Hoc Test* revealed that from the parents' perspective, students with low AA have higher levels of anxiety/depression than students with average and high AA. From the teachers' perspective, students with low AA have higher levels of anxiety/depression only in comparison to students with high AA. On the scale of withdrawal/depression, from the teachers' perspective, students with low AA show higher levels than students with average and high AA. Regarding the somatic complaints scale, in the parents' and children's perspective, students with low AA show significantly higher results on this scale than students with average and high AA (cf. Table 3).

Table 3 – Differences on internalizing problems according to the academic achievement of 5th and 6th grade students (Gabriel *Post-Hoc*)

	Academic Achievement		
	Low vs. Average	Low vs. High	Average vs. High
Anxiety/Depression			
YSR	ns	ns	ns
CBCL	**	*	ns
TRF	ns	**	ns
Withdrawal/Depression			
YSR	ns	ns	ns
CBCL	ns	ns	ns
TRF	**	**	ns
Somatic Complaints			
YSR	**	*	ns
CBCL	**	**	ns
TRF	ns	ns	ns

*p<.05. **p < .01. ns = not significant

Source: survey data.

Differences in the levels of anxiety/depression, withdrawal/depression and somatic complaints among students with low, average and high academic achievement - 7th, 8th and 9th grades

There are significant differences in terms of anxiety/depression according to the AA of 7th, 8th and 9th grade students, from the parents' perspective F (2,49) = 3,23, p=.040 and children's perspective F (2,50) = 4,66, p = .010. In terms of withdrawal/depression, the differences are significant in the parents' perspective F (2,49) = 4,78, p = .009 and the teachers' perspective F (2,50) = 12,64, p = .000. As for somatic complaints, the differences are significant only from the perspective of teachers F (2,49) = 3,83 p = .022 (cf. Table 4).

Table 4 - Differences on internalizing problems according to the academic achievement of 7th, 8th and 9th grade students

	Academic Achievement			
	Low AA (n) Average (DP)	Average AA (n) Average (DP)	High AA (n) Average (DP)	
Anxiety/Depression				
YSR	(107) 5,22 (3,17)	(315) 5,99 (3,79)	(78) 6,87 (3,73)	F (2,50) 4,66**
CBCL	(102) 4,82 (4,13)	(314) 4,09 (3,24)	(78) 5,00 (3,15)	F (2,49) 3,23*
TRF	(107) 2,69 (3,09)	(315) 2,41 (3,08)	(78) 2,95 (2,92)	F (2,50) 1,09
Withdrawal/Depression				
YSR	(107) 3,79 (2,55)	(315) 3,75 (2,44)	(78) 4,06 (2,28)	F (2,50) 0,52
CBCL	(102) 3,35 (2,65)	(314) 2,74 (2,10)	(78) 2,36 (2,14)	F (2,49) 4,78**
TRF	(107) 2,49 (2,56)	(315) 1,45 (1,95)	(78) 1,06 (1,28)	F (2,50) 12,64**
Somatic Complaints				
YSR	(107) 2,69 (2,31)	(314) 3,20 (2,85)	(78) 3,14 (2,23)	F (2,50) 1,48
CBCL	(102) 2,58 (2,60)	(314) 2,22 (2,30)	(78) 2,38 (2,12)	F (2,49) 0,94
TRF	(107) 0,39 (0,84)	(303) 0,19 (0,66)	(78) 0,18 (0,50)	F (2,49) 3,83*

*p<.05 **p < .01

Source: survey data.

From the analysis of the *Gabriel Post-Hoc Test* it was possible to verify that in young people's perspective, students with high AA have higher levels of anxiety/depression than students with low AA. In relation to withdrawal/depression, from the perspective of both parents and teachers, students with low AA have higher levels on this scale than students with average and high AA. In terms of somatic complaints, from the teachers' perspective, students with low AA have higher levels on this scale than students with average AA (cf. Table 5).

Table 5 - Differences on internalizing problems according to the academic achievement of 7th, 8th and 9th grade students (Gabriel *Post-Hoc*)

	Academic Achievement		
	Low vs. Average	Low vs. High	Average vs. High
Anxiety/Depression			
YSR	ns	**	ns
CBCL	ns	ns	ns
TRF	ns	ns	ns
Withdrawal/Depression			
YSR	ns	ns	ns
CBCL	*	**	ns
TRF	**	**	ns
Somatic Complaints			
YSR	ns	ns	ns
CBCL	ns	ns	ns
TRF	*	ns	ns

*p<.05. **p < .01. ns = not significant

Source: survey data.

Differences in the levels of anxiety/depression, withdrawal/depression and somatic complaints among students with low, average and high academic achievement – secondary school

There are no significant differences in anxiety/depression and somatic complaints depending on the AA of secondary school students, from the perspective of parents, teachers and the students themselves. In terms of withdrawal/depression, the differences are significant from the parents' perspective F (2,47) = 12,23, p = .000 and from the teachers' perspective F (2,46) = 10,38, p = .000. (cf. Table 6).

Table 6 - Differences on internalizing problems according to the academic achievement of secondary school students

	Academic Achievement			
	Low AA (n) Average (DP)	Average AA (n) Average (DP)	High AA (n) Average (DP)	
Anxiety/Depression				
YSR	(61) 6,21 (3,01)	(317) 5,70 (3,71)	(85) 5,91 (3,90)	F (2,46) 0,55
CBCL	(61) 4,57 (3,08)	(320) 3,83 (3,04)	(87) 3,90 (3,72)	F (2,47) 1,40
TRF	(60) 3,58 (3,46)	(314) 2,69 (3,13)	(87) 2,74 (3,17)	F (2,46) 2,02
Withdrawal/Depression				
YSR	(61) 4,31 (2,36)	(317) 3,78 (2,41)	(85) 3,41 (2,27)	F (2,46) 2,54
CBCL	(61) 3,97 (3,16)	(320) 2,65 (2,23)	(87) 2,08 (1,97)	F (2,47) 12,23**
TRF	(62) 2,92 (2,88)	(313) 1,66 (2,26)	(87) 1,28 (1,76)	F (2,46) 10,38**
Somatic Complaints				
YSR	(61) 3,74 (2,82)	(317) 3,31 (2,72)	(85) 2,75 (2,49)	F (2,46) 2,52
CBCL	(61) 2,76 (2,70)	(320) 2,49 (2,46)	(87) 2,23 (2,48)	F (2,47) 0,81
TRF	(59) 0,47 (0,88)	(307) 0,46 (0,97)	(85) 0,21 (0,83)	F (2,45) 2,54

*p<.05 **p < .01

Source: survey data.

From the Gabriel Post-Hoc Test it was possible to verify that from the perspective of both parents and teachers, students with low AA show higher levels of withdrawal/ depression than students with average and high AA (cf. Table 7).

Table 7 - Differences on internalizing problems according to the academic achievement of secondary school students (Gabriel Post-Hoc)

	Academic Achievement		
	Low vs. Average	Low vs. High	Average vs. High
Anxiety/Depression			
YSR	ns	ns	ns
CBCL	ns	ns	ns
TRF	ns	ns	ns
Withdrawal/Depression			
YSR	ns	ns	ns
CBCL	**	**	ns
TRF	**	**	ns
Somatic Complaints			
YSR	ns	ns	ns
CBCL	ns	ns	ns
TRF	ns	ns	ns

*p<.05. **p < .01. ns = not significant

Source: survey data.

Discussion

According to several authors, there is a positive relationship between psychological well-being and academic achievement (e.g. DISETH; DANIELSEN; SAMDAL, 2012; SALMELA-ARO; TYNKKYNEN, 2010; SULDO; RILEY; SHAFFER, 2006). Students most satisfied with school life tend to show higher levels of psychological well-being (FERNANDES et al., 2011; HUEBNER; MCCULLOUGH, 2000; MATOS; CARVALHOSA, 2001) and, consequently, lower levels of internalizing and externalizing problems (LYONS et al., 2014). Specifically, there are several studies that show the negative relationship between IP, such as depression and anxiety, and AA (e.g. FERNANDES et al., 2011; NG et al., 2015; SULDO; HUEBNER, 2004; WEIDMAN et al., 2015).

The present study sought to contribute to the understanding of the correlation between IP and AA, examining it in detail from a representative sample, by school cycle and considering, at the same time, different levels of AA.

In an analysis by school cycle, it can be verified that in the 5th and 6th grades students with low AA show higher levels of anxiety/depression and somatic complaints

than students with average and high AA (from the parents' perspective). Regarding teachers' perspective, students with low AA have higher levels of anxiety/depression and withdrawal/depression than students with average and high AA. As for the perspective of young people themselves, students with low AA have more somatic complaints in comparison to students with average and high AA.

In general, in the 5th and 6th grades, students with low AA have more IP than their school mates with average and high AA. Several studies suggest that high AA is a protective factor in the development of depressive problems (FRÖJD et al., 2008; LAZARATOU et al., 2010, MOILANEN; SHAW; MAXWELL, 2010). More specifically, the present study meets the results of another Portuguese study (TOMÉ; MATOS, 2006) that concluded that the group of students with average or high grades had lower rates of depressive symptoms that the group with lower grades. Children/adolescents that continually experience low AA may develop low perceptions of skill, self-efficacy and self-esteem and, considering the difficulties in dealing with demands imposed on them, this could contribute to the manifestation of IP, such as depression and anxiety (e.g. DELL'AGLIO; HUTZ, 2004; SOWISLO; ORTH, 2013; VERBOOM et al., 2014; WEIDMAN et al., 2015). These results evidenced in the 5th and 6th grades may be related to anxiety caused by school transitions and adaptation to a new teaching cycle. At this stage of the school trajectory, students are faced with a high number of teachers and subjects, and an increasing demand and complexity of the content and tasks proposed (ROSÁRIO; SOARES, 2003). Considering the developmental stage in which these students find themselves, they may not yet be capable of applying effective *coping* strategies to deal with this set of challenges, becoming more vulnerable to anxiety symptoms (LAZARUS, 2000), negatively influencing their psychosocial adjustment (HUSSONG; CHASSIN, 2004).

As for the 7th, 8th and 9th grades, from the parents' perspective, students with low AA have higher levels of withdrawal/depression than students with average and high AA. From the teachers' perspective, students with low AA show higher levels of withdrawal/depression and somatic complaints when compared to students with average and high AA. However, in the perspective of young people, students with high AA show higher levels of anxiety/depression than students with low AA. This finding may be associated with a pattern of perfectionism in academic performance. According to Wei et al. (2004), maladaptive perfectionism is linked to anxiety and depression. Attempting to achieve high academic standards when they are excessively high and unrealistic can lead to high AA, but can also lead to symptoms of anxiety (EDDINGTON, 2014; SHAFRAN; MANSELL, 2001). In this sense, although it is expected that students from the 7th, 8th and 9th grades show more *coping* strategies to deal with different challenges, perfectionism, fear of failure and symptoms of anxiety can block the application of these strategies.

Finally, in relation to secondary school, in the perspective of both parents and teachers, students with low AA have higher levels of withdrawal/depression than students with average and high AA. In addition, according to the perspective of young people themselves, there are no significant differences in the three scales of IP. Although secondary education is a stage with several demands and pressures from a school context (ROSÁRIO; SOARES, 2003), these findings can be explained by a developmental perspective, which

considers that at this stage, students will have more internal resources to deal with these pressures. The results may also suggest that in this developmental stage, AA when compared to other variables, such as the need for autonomy and the role of peer relationships, does not have a specific impact on psychological well-being (SOARES, 2007).

Conclusions

With this study it was possible to analyze the differences in IP, evaluated by different informants, in students from the 5th to 9th grades and secondary education, depending on the level of AA in Portugal. In general, students with low AA show more IP than students with average and/or high AA. However, it should be emphasized that, in the 7th to 9th grades, from the perspective of young people themselves, students with high AA have higher levels of anxiety/depression compared to students with low AA. These results indicate that, in addition to students with low AA, they are at risk and vulnerable to IP, in line with several previous studies (e.g. DELL'AGLIO; HUTZ, 2004; SOWISLO; ORTH, 2013; VERBOOM et al., 2014; WEIDMAN et al., 2015). It is also necessary to pay special attention to students with high AA, considering the impact of this variable on psychological well-being.

As strengths of the present study, the sample size and its representative character of the Portuguese population are highlighted, the fact of using three informants (parents, teachers and young people) to assess IP, as well as the analysis by school cycle, associated with different developmental and school tasks. In terms of limitations, we highlight the fact that this is a cross-sectional study, which made it impossible to understand the reciprocal effects between IP and AA. As proposals for future research, longitudinal studies and the inclusion of other variables relevant to understanding the impact of AA on students' psychological well-being are suggested (e.g. sex, life satisfaction, school involvement and pedagogical relation).

This study emphasizes the need to promote attention to the psychological well-being of students and the different dimensions that interfere with it, within the educational community, including parents and teachers. Firstly, the results reinforce the importance of adopting an integrated approach to school development and success. Thus, the intention to promote academic success should be reinforced, not only purely pedagogical issues, but also psychological ones. For example, the stimulation of self-regulation and *coping* skills in students, particularly from the 5th to 9th grades, may contribute to a more adequate management of the challenges faced by students in a school context.

In addition, the adoption of methodologies like the universal design for learning and the multilevel approach (MITCHELL, 2014) appear to contribute to the promotion of AA. As the results show, students with low AA tend to have more internalizing symptoms, which reinforces the need to prevent academic failure.

Finally, and in view of the results identified in the 7th to 9th grades, in which students with high AA show more anxiety/depression than their peers with low AA, it is equally important to monitor the trajectories of these students, in order to support them in the regulation of performance standards.

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