

“To learn, or to be the best?”: Achievement goal profiles in pre-adolescents

Francisco Peixoto* / Joana Pipa* / Lourdes Mata* / Vera Monteiro* / Cristina Sanches*

* Centro de Investigação em Educação, ISPA – Instituto Universitário

This study aimed to examine the achievement goal orientation profiles of 5th and 7th grade students and the profile differences in academic achievement and anxiety. Participants were 1652 Portuguese students who responded to the Achievement Goals Scale and the Achievement Emotions Questionnaire. Based on a person-centered approach, cluster analysis identified six groups of students with distinct motivational profiles: task oriented, ego oriented, success oriented, disengaged, self-defeating oriented and diffuse. The largest number of participants were in the diffuse oriented group. In terms of the gender composition of clusters, differences manifested in the groups of disengaged and self-defeating orientations, with boys predominating in the former and girls in the latter. In age, the success oriented students group was in the majority composed of younger students and older students were more likely to adopt disengaged orientations. Clusters also revealed different compositions when retention was taken into account, with students who had been retained being more represented in the disengaged and diffuse groups. Moreover results showed that goal orientation profiles had effects on academic achievement and anxiety: success oriented students achieved higher grades and students whose profiles are predominantly ego oriented (self-enhancement and self-defeating) express more class and test anxiety.

Key words: Achievement goals, Academic achievement, Anxiety, Person-centered approach, Pre-adolescents.

Introduction

Motivational theories in Education are primarily concerned with understanding student learning behaviours by focusing on their engagement in a particular activity, their persistence and school achievement, using also this reasoning as a measure of school adjustment (Meece, Anderman, & Anderman, 2006). Over the past three decades, Achievement Goals Theory has emerged as one of the more important theoretical frameworks in the field of motivation (Anderman & Wolters, 2006; Kaplan & Maher, 2007; Meece et al., 2006). The approach is followed by researchers who are interested in understanding the reasons or purposes for students in choosing, engaging and persisting in different learning activities, emphasizing “why” students choose to engage with a particular activity (Anderman & Wolters, 2006; Eccles & Wigfield, 2002; Linnenbrink-Garcia, Middleton, Ciani, Easter, O’Keefe, & Zucho, 2012; Meece et al., 2006). Students also define their goals based on two main assumptions: competence and valence. Competence takes into

This research was supported by the FCT – Fundação para a Ciência e a Tecnologia [grant number PTDC/CPE-CED/121358/2010 and grant number FCT – UID/CED/04853/2016].

Correspondence concerning this article should be addressed to: Francisco Peixoto, Department of Educational Psychology, CIE, ISPA – Instituto Universitário, Rua Jardim do Tabaco, 34, 1149-041 Lisboa, Portugal. E-mail address: fpeixoto@ispa.pt

consideration the motives that students have for doing a particular task, if it underlies the *development* of competence or the *demonstration* of competence (Elliot, 1999; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001; Hulleman, Schragar, Bodmann, & Harackiewicz, 2010). On the other hand, competence can be differentiated from valence in terms of approaching success or avoiding failure (Elliot, 1999; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001).

Originally, two types of goals were identified in the literature and research: task and ego orientations (Duda & Nicholls, 1992; Nicholls, 1984; Pintrich, 2000; Skaalvik, 1997). These goals have been alternatively labeled and yet they are conceptually similar, one could find in the literature the terms mastery versus performance orientations (e.g., Ames, 1992; Ames & Archer 1988; Kaplan & Maher, 2007) and learning versus performance orientations (Dweck & Legget, 1988; Elliot & Dweck, 1988). Task oriented students are concerned with learning, in reaching new challenges and developing competence, evaluating their success in an intrapersonal way. Ego oriented students on the other hand are more concerned with demonstrating competence or outperforming their peers, in a normative and interpersonal comparison. In this study, given the theoretical framework of the instrument used (Nicholls, 1984; Pipa, Peixoto, Mata, Monteiro, & Sanches, 2017; Skaalvik, 1997) task and ego orientation terminology are used.

There is a little consensus among the studies evaluating the relationship between achievement orientations and other educational outcomes. Nevertheless there is an agreement concerning task orientation that has the most adaptable outcomes, due to its relationships with variables such as enjoyment, engagement, intrinsic motivation, self-efficacy, academic self-concept, self-esteem, positive emotions and student wellbeing (Elliot & Church, 1997; Elliot & Dweck, 1988; Elliot & Harackiewicz, 1996; Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000; Middleton & Midgley, 1997; Nascimento & Peixoto, 2011; Skaalvik, 1997; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2008, 2012). In the case of ego orientations results show that these can have either more or less adaptive consequences (Eccles & Wiegfield, 2002; Hulleman et al., 2010; Middleton & Midgley, 1997; Skaalvik, 1997; Tuominen-Soini et al., 2008, 2012). Thus, some authors suggest that ego orientation could have positive outcomes in specific environments or situations and could even be positively related with student academic achievement (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Harackiewicz et al., 2000; Pintrich, 2000).

Based on these findings researchers posit that ego orientations are best understood if evaluated using a trichotomous model as opposed to the previously mentioned dichotomous model (Elliot, 1999; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001; Middleton & Midgley, 1997), by combining either the definition of competence (intrapersonal and interpersonal) and its valence, resulting in orientations aimed at achieving success and to avoid failure. The trichotomous model proposed by Elliot and colleagues (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Skaalvik, 1997), claim that ego orientations should be separated according to two different goals: self-enhancing ego orientation (or approach) and self-defeating ego orientation (or avoidance). The first orientation is related to the understanding of ego goals (demonstrate competence or outperform others), whereas self-defeating orientation reflects the goal of avoiding failure or avoiding being among the poorest. Further studies with undergraduate students (Murayama, Elliot, & Yamagata, 2011), with high school students (Murayama, Elliot, & Yamagata, 2011; Pipa et al., 2017) and with elementary and middle school students (Middleton & Midgley, 1997; Pipa et al., 2017; Skaalvik, 1997) revealed that these goal orientations are relatively independent from each other, providing support for the proposed trichotomous model.

Some researchers have similarly emphasized that not all students are task or ego oriented and have suggested a distinct goal, the avoidance orientation (or work avoidance), reflecting those students whose aim it is to avoid school work or to do the minimum necessary (Middleton & Midgley, 1997; Nicholls, 1984; Nicholls, Patashnick, & Nolen, 1985; Seifert & O'Keefe, 2001;

Skaalvik, 1997) showing low interest in academic work (Middleton & Midgley, 1997; Nicholls, et al., 1985; Seifert & O'Keefe, 2001; Skaalvik, 1997) but not necessarily trying to avoid feeling incompetent as is the case of self-defeating orientation. Studies analyzing this orientation are still few, but they have shown that students with avoidance orientation reveal the most maladaptive profiles with the most harmful consequences for their wellbeing (Tuominem-Soini et al., 2008, 2012) as they show low perceived competence and attribute less meaning to school tasks (Seifert & O'Keefe, 2001).

More recently, Elliot (1999; Elliot & McGregor, 2001) proposed the 2x2 model of achievement goals suggesting that task orientation should also be separated according to the valence, into both approach and avoidance forms.

In terms of ego goals, it has been shown that when researchers differentiate between self-enhancing and self-defeating orientations the students with self-defeating orientation are those who show the most maladaptive behaviors (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Skaalvik, 1997) and that when self-enhancing orientation is combined with task orientation, the most adaptive profiles result (Pintrich, 2000).

Multiple goals perspective (Pintrich, 2000) states that students could pursue multiple orientations or have different reasons in achieving a particular outcome (Niemi-virta, 2002; Pastor, Barron, Miller, & Davis, 2007; Pintrich, 2000; Tuominem-Soini et al., 2008; Tuominem-Soini, Salmela-Aro, & Niemi-virta, 2011). Several studies found multiple motivational profiles in elementary, middle school and high school students and, although differing in the number of clusters and in its labels (Daniels, Haynes, Stupnisky, Perry, Newall, & Pekrun, 2008; Luo, Paris, Hogan, & Luo, 2011; Niemi-virta, 2002; Tuominem-Soini et al., 2008, 2012), students tended to manifest more adaptive profiles when combining both high task orientation and high self-enhancing orientation (Daniels et al., 2008; Niemi-virta, 2002; Pintrich, 2000; Tuominem-Soini et al., 2008, 2011).

Although the evaluation of multiple goals is based on a person-centered approach most studies explore achievement goals by means of a variable-centered approach (such as correlation and regression analysis or structural equation modelling), evaluating the relationship between variables and each goal orientations separately (Pastor et al., 2007). The person-centered method (such as cluster analysis, Daniels et al., 2008) examines the differences for different subgroups of students where each subgroup represents students with similar profiles in the various dimensions of goal orientations (Niemi-virta, 2002; Pastor et al., 2007; Tuominem-Soini et al., 2008, 2011).

Tuominem-Soini et al. (2008), evaluating the motivational orientations of 9th and 11th grade students, identified six motivational profiles: indifferent students regarding school activities, with moderate levels in each dimension; mastery oriented students, characterized by students with high levels of task orientation; success oriented students, combining high levels of task and the both dimensions of ego orientations; performance oriented students, adopting both self-enhancing and self-defeating orientation; disengaged students, who present low levels in all the dimensions; and avoidant students, meaning those students with higher levels in the avoidance dimension. The students whose profile results in a combination of task orientation and self-enhancing orientation were those with a higher academic achievement and task orientated students showed the most adaptive profile when compared to success oriented students who showed higher levels of stress and emotional exhaustion (Tuominem-Soini et al., 2008). Students adopting both self-enhancing and self-defeating orientations show low levels of self-esteem, commitment and higher depression symptoms, as well as low academic achievement, when compared to success oriented students (Tuominem-Soini et al., 2008). The students with indifferent, disengaged and avoiding profiles reveal less adaptive profiles, where the avoidant subgroup adopt the less adaptive profile and show lower levels of wellbeing (Tuominem-Soini et al., 2008).

In later studies with students from the 9th and 11th grades, the results identify four motivational profiles: maintaining the indifferent (labelled diffuse in Luo et al., 2011 study) and avoiding profiles (Tuominem-Soini et al., 2011, 2012), and with two mixed profiles outlining the idea that ego orientations, when combined with task orientation, could lead to adaptive motivational characteristics.

Despite considering the motivational orientations as a relatively stable disposition (Tuominem-Soini et al., 2011, 2012) these can assume different patterns in relation to students age (Harackiewicz et al., 2002), with studies revealing that there is a tendency for decreasing task orientation and increasing ego orientation across school years, reflecting the educational system's features which become more competitive (Conley, 2012; Pajares & Cheong, 2003; Shim, Ryan, & Anderson, 2008). The study of Pajares and Cheong (2003) with students from 4th to 11th grade showed that younger students demonstrate higher task orientation and that this orientation is more characteristic of girls than of boys.

Current research

Based on this theoretical framework, this study aims to analyse the achievement goals profiles of students in the 2nd and 3rd Cycle of compulsory school. Our research questions are: (a) Which kind of motivational profiles can be identified in 5th and 7th grade students? (b) How do different motivational profiles differ regarding students gender, grade and retention?; and (c) Will groups with different goal orientations present different academic achievement and anxiety levels?

Based on previous research by Luo et al., 2011; Pintrich, 2000; Tuominem-Soini et al., 2008, 2011, 2012; Valle, Núñez, Cabanach, Rodríguez, Rosário and Inglés, 2015, we expected to find different groups of students concerning goals orientations, some with a dominant tendency towards one goal orientation and some presenting more than one goal orientation.

In terms of the differences in group composition, despite the low number of studies addressing this issue, the results of research show that older students are usually more ego-oriented (Conley, 2012; Pajares & Cheong, 2003; Shim et al., 2008), girls are more task oriented than boys (Pajares & Cheong, 2003; Shim et al., 2008) and students with retention history present higher avoidance orientation (Nascimento & Peixoto, 2012).

Finally we anticipate that students belonging to groups where task orientation is prevalent will show higher academic achievement and less anxiety (Luo et al., 2011; Tuominem-Soini et al., 2008; Valle et al., 2015).

Method

Participants

Participants were 1652 students in 5th (54.3%) and 7th grades, from 10 to 17 years old ($M=11.6$, $SD=1.47$) with an equivalent number of boys and girls (50.1%). Students' sociocultural status was obtained based on their mothers' educational qualifications where 38.2% mothers completed their studies until the 9th grade; 30.3% mothers ended their academic path between 10th and 12th grade; 23.7% of the mothers have bachelor/graduation degree; and 7.8% of the students didn't provide any information regarding their mothers' qualifications. In terms of school success, 22.7% of the students already repeated one year.

Instruments

Achievement Goals Scale. To assess students achievement goals, the Achievement Goals Scale (AGS, Skaalvik, 1997; Pipa et al., 2017) was used, measuring four goal orientations of students: Task Orientation, with 5 items measuring goals related to curiosity, learning willingness and competence development (e.g., “What some students learn in school make them want to learn more”); Self-enhancing Ego Orientation, with 5 items assessing student goals to demonstrate competence or outperform their colleagues on a normative basis (e.g., “In school some students try to score higher than other students”); Self-defeating Ego Orientation, measuring the students’ goal to avoid demonstrating incompetence through 4 items (e.g., “When a student gives a wrong answer in class are they most concerned about what their classmates think about them”); Avoidance Orientation, with 5 items evaluating the goal of avoiding work or putting as little effort as possible into schoolwork (“At school some students like to do as little as possible”). A 4-point Likert scale ranged from “Completely like me” (4) to “Completely different from me”(1) was applied. Internal consistency for each dimension of the AGS revealed satisfactory values for Cronbach’s Alpha (Nunnally, 1978), ranged between .78 for Task Orientation and Avoidance Orientation and .83 for Self-defeating Orientation.

Anxiety. To assess anxiety, the anxiety dimensions of AEQ-PA related to emotions in classroom and test situations were used (Peixoto, Mata, Monteiro, Sanches, & Pekrun, 2015). Each anxiety measure is composed by 4 items (e.g., “I feel nervous in the Math class” for class-related anxiety, and “Before the Math test, I feel so nervous that I just want to run away” for test-related anxiety) answered on a 5-point Likert scale (*completely disagree* to *completely agree*).

Academic achievement. Academic achievement was calculated averaging the grades of Portuguese, English, History, Natural Sciences and Mathematics at the end of each term over the school year.

Procedures

This study was part of a larger study including other measures besides achievement goals (e.g., self-concept, school related, emotions). Data was collected in classes, at the end of the 2nd term and at the beginning of the 3rd term. Parental permission was assured, students were informed that their participation was voluntary and also that the confidentiality of their information was guaranteed.

Data analysis

As we used a person-centered approach, cluster analysis was chosen to classify the students with similar profiles. This statistical technique is considered adequate when the aim is to study the effects of multiple goals (Pastor et al., 2007). In our analysis the procedures proposed by Hair Jr., Black, Babin and Anderson (2009) were followed using a hierarchical classification method and subsequent *K-means* analysis. A discriminant analysis was also used to validate each cluster.

A chi-square test was performed alongside these analyses in order to examine the differences in clustering, considering student gender, grade and grade retention. In addition, an analysis of variance was conducted to verify if students from different clusters differ in relation to school achievement and test anxiety. In these analyses the Bonferroni pairwise tests were used in order to adjust the significance level for multiple comparisons and because of the number of participants the 0.01 level was used as the criterion of significance.

Results

Cluster analysis

The dendrogram resulting from the hierarchical cluster analysis with Ward method revealed that 3 or 6 clusters were possible solutions for classifying the data. The profile analysis in each solution provided stronger evidence for the 6 clusters, being more adequate from a conceptual point of view and representing a greater diversity of profiles. Further analysis was conducted using the *K-means* method and with a prior definition of 6 clusters. The solution found was then submitted to a discriminant analysis, revealing a 95.1% of classification adequacy.

Figure 1 shows the different profiles obtained from the cluster analysis. The first cluster with 263 subjects is labelled “task oriented”, meaning that students in this subgroup show the highest scores in task orientation and the lowest in the other orientations. “Ego oriented” is the second cluster and includes the 213 students who revealed the highest levels in self-enhancing and self-defeating ego orientations. Students from the third cluster ($n=302$) had high levels in both task and self-enhancing ego orientation and for this reason this cluster was labelled “success oriented”, adopting the terminology used in other studies with similar findings (Pulkka & Niemivirta, 2013; Tuominen-Soini et al., 2008, 2011, 2012). The fourth cluster, “disengaged” is characterized by avoidance orientation, where students from this group ($n=185$) had high levels of avoidance orientation and low levels in the remaining domains. The fifth cluster includes students with high self-defeating ego orientation, slightly less high levels of task orientation and low levels of self-enhancing and avoidance orientation. This cluster with 210 students was labeled “self-defeating oriented”. The last cluster is the largest ($n=476$) and is characterized by moderate levels in most orientations and low levels of task orientation. Again, in line with previous research where this profile emerged (Luo et al., 2011), we labeled it “Diffuse”.

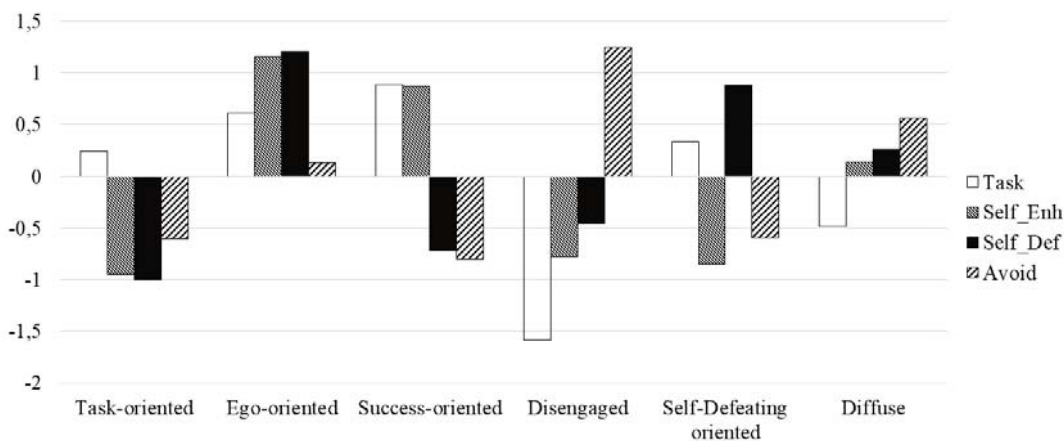


Figure 1. Students' standardized mean scores on achievement goals across the six clusters

Note. Task=Task orientation, Self_Enh=Self-enhancing ego orientation, Sef_Def=Self-defeating ego orientation, Avoid=Avoidance orientation.

Cluster composition

The analysis regarding cluster composition in function of gender shows significant differences, $\chi^2(5)=43.3, p<0.001$. Table 1 shows that boys are predominant in the group of disengaged students

whereas girls are the majority in the self-defeating oriented group. The number of boys in the success-oriented group is also slightly higher than the number of girls.

Table 1
Gender, grade and underachievement frequencies for each cluster

	Gender		Grade		Previous Retention	
	Boys	Girls	5 th	7 th	No	Yes
Task-oriented	128	133	146	115	218	40
Ego-oriented	107	106	138	75	166	42
Success-oriented	167	135	212	90	265	36
Disengaged	118	67	61	124	99	85
Self-defeating oriented	68	141	135	74	171	36
Diffuse	230	240	205	265	336	130

The composition of clusters regarding grades is also different, $\chi^2(5)=104.98, p<0.001$. Fifth graders are more likely to adopt success-oriented goals whereas 7th graders, being the most in the disengaged group, are more likely to adopt avoidance goals. Moreover, there is a slight difference in the ego-oriented group where the presence of 5th graders is proportionally larger than the 7th graders (Table 1).

Differences in cluster composition in terms of academic history – if they had previously retaken a year – are also significant, $\chi^2(5)=96.47, p<0.001$. Students who have previously retaken a year are predominantly in diffuse and disengaged clusters whereas students who have never repeated a grade are mainly in success-oriented, task-oriented, and self-defeating oriented clusters. Diffuse orientation cluster represent the highest number of students for both groups (Table 1).

Differences in academic achievement and anxiety

A one-way ANOVA was carried out in order to analyse the effects of goal orientation profiles on academic achievement with achievement goal orientation profiles as independent variable and academic achievement as dependent variable. The results showed that achievement goal orientation groups are significantly different in academic achievement, $F(1,1634)=34.24, p<0.001, \eta^2=0.095$. The pairwise comparison of means (Table 2) showed that success-oriented students had the highest school grades, differing from all the other groups. Conversely, students in the disengaged group showed the lowest school achievement levels, differing significantly from all the other groups.

Table 2
Descriptive statistics for academic achievement and anxiety for each cluster

	Academic achievement		Class anxiety		Test anxiety	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Task-oriented	3.32 ^a	0.67	2.32 ^{ac}	0.87	2.47 ^a	1.03
Ego-oriented	3.15 ^{ab}	0.65	2.77 ^{bd}	1.02	2.93 ^b	1.18
Success-oriented	3.51	0.73	2.12 ^c	0.89	2.40 ^a	1.06
Disengaged	2.80	0.63	2.49 ^{ad}	1.00	2.57 ^{ab}	1.16
Self-defeating oriented	3.17 ^{ac}	0.64	2.94 ^b	0.90	2.95 ^b	1.08
Diffuse	3.04 ^{bc}	0.63	2.53 ^d	0.97	2.88 ^b	1.06

Note. Means within a column with the same letter are not significantly different at $p<0.01$.

The MANOVA analysis with goal orientation group as independent variables and class and test related anxiety as dependent variables showed a main effect of group, Pillai's Trace=.083, $F(10,2842)=12.32$, $p<0.001$, $\eta^2=0.042$. Univariate analysis showed that differences arose both for class anxiety, $F(5,1421)=22.88$, $p<0.001$, $\eta^2=0.075$, and test anxiety, $F(5,1421)=12.43$, $p<0.001$, $\eta^2=0.042$. Student ego and self-defeating oriented presented the highest scores in anxiety both for test and class anxiety and scored significantly higher than success and task oriented students (Table 2).

Discussion

The main goal of this research was to characterize the motivational profiles of pre-adolescent students and to analyse the differences in their composition, as well as to explore differences in academic achievement and anxiety between students with different profiles.

Our results are in line with previous research, showing that students can present different achievement goals profiles (Luo et al., 2011; Pintrich, 2000; Tuominen-Soini, et al., 2008, 2011, 2012; Valle et al., 2015). In using cluster analysis, six different profiles were obtained and were labelled as task-oriented, ego-oriented, success-oriented, disengaged, self-defeating oriented and diffuse. Some of these cluster defined profiles where one dimension is salient (e.g., task oriented, disengaged) but others showed multiple goals with different dimensions associated (e.g., success oriented).

Despite the tradition in the literature and research being to contrast task goals and ego goals, with the assumption that task goals are more adaptive (Anderman & Wolters, 2006; Kaplan & Maehr, 2007; Maehr & Zusho, 2009), more recent research points to the importance of multiple goals (Daniels et al., 2008; Dela Rosa & Bernardo, 2013; Luo et al., 2011; Pintrich, 2000). Our findings are in line with several studies showing that ego goals, namely self-enhancing orientation, can be adaptive in academic contexts when task goals are also endorsed (Conley, 2012; Tuominen-Soini et al., 2008, 2012). Success oriented students presented a profile where task orientation coexists successfully with self-enhancing orientation. This group showed the highest grades and simultaneously the lowest scores on anxiety, both for class and test situations. This result emphasizes the importance of both orientations for academic success, taking into account that academic success is usually evaluated in terms of student grades. Furthermore, these results highlight the fact that some students strive to improve competence but are also concerned with the marks that they can achieve and want to score high marks.

With regard to task orientation, the literature has emphasized this goal as the most adaptive (Maehr & Zusho, 2009; Valle et al., 2015). Valle et al. (2015) arguing that profiles including task orientations display more adaptive learning behaviors from a motivational point of view than those where these goals are not predominant. Our results, in some part, support this assertion, taking into consideration that success-oriented students show the highest scores in task orientation. In addition, task oriented students, despite presenting academic achievement levels not significantly different from ego- and self-defeating oriented students, are the second group in terms of academic achievement and also the second with the lowest levels of anxiety, although differing significantly from success oriented students in academic achievement. Here, a point must be made regarding the task oriented profile obtained. This group, regardless of task orientation being predominant, presents scores around the average value for task orientation similar to those shown by self-defeating oriented students and lower than the scores of ego- and success-oriented students. Our results in terms of academic achievement thus seem to emphasize the importance of the combination between self-enhancing and task orientations over the primacy of task goals.

Additionally our findings point to the detrimental role of ego goals, namely self-defeating orientation, for academic adjustment. Consistent with previous research, students focused on not looking incompetent to others usually show higher levels of anxiety or stress (Elliot & McGregor, 2001; Maehr & Zusho, 2009; Skaalvik, 1997; Tuominen-Soini et al., 2008). Our results are in the same direction, taking into account that the two clusters with higher scores in self-defeating orientations (ego- and self-defeating oriented) are those which present the highest levels of anxiety. These high levels of anxiety can reflect the pressure that these students feel to outperform others and to not demonstrate incompetence, which is what probably hinders the beneficial role of task goals and what could result in them not being able to achieve better grades.

Our findings support the results of some research suggesting that avoidance goals are detrimental to learning and academic achievement (Tuominen-Soini et al., 2008, 2012), showing that the two clusters with higher scores in avoidance orientation are the groups with the lowest academic achievement: disengaged and diffuse oriented. The diffuse group presents the higher number of students and its profile is mainly characterized for scores close to the mean for all dimensions, resulting in a profile neither clearly ego nor task oriented and with a predominance of avoidance orientation. This result is similar to other research that used a similar group (Luo et al., 2011; Tuominen-Soini et al., 2008, 2011, 2012) despite different labels (indifferent in the works of Tuominen-Soini et al., 2008, 2011, 2012). This diffuse/indifferent motivational orientation amongst our participants is associated with lower levels of academic achievement when compared with almost all the other groups. Furthermore, these students present relatively high levels of test and class anxiety showing that this motivational orientation is not an adaptive one, not only for academic achievement but also for the emotions experienced in tests and classes. In research by Luo et al. (2011) with students from Singapore, those included in the diffuse clusters also showed high levels of test anxiety and other negative emotions, had moderate achievement results as well as the lowest levels in homework and class engagement and in subjective task value. As Tuominen-Soini et al. (2008, 2011, 2012) state, this being the largest group, in some way represents the prototypical student who must acknowledge the importance of learning at school and also the importance of grades but at the same time seems hesitant in investing in those goals, namely in those that could be more adaptive such as task goals (Elliot & Church, 1997; Elliot & Dweck, 1988; Elliot & Harackiewicz, 1996; Harackiewicz et al., 2000; Middleton & Midgley, 1997; Nascimento & Peixoto, 2011; Skaalvik, 1997; Tuominen-Soini et al., 2008, 2012).

The disengaged group is characterized by the prevalence of the avoidance orientation with all the remaining orientations with values below the mean. This result suggests that these students appear to have lost the meaning and the interest in schoolwork and strive to minimize the effort in academic activities. In terms of composition this is the second group with students with previous retention (the cluster with the highest number of students with history of retention is the diffuse oriented), representing almost half of the students of this group. Despite the assumption that avoidance orientation affects academic achievement negatively, in the case of students with previous retention this orientation could be adaptive, in the sense that it can help to restore and/or to maintain self-esteem levels. Previous research has shown that one of the strategies followed by underachievers in order to maintain self-esteem is the devaluation of academic competences (Peixoto, 2010; Peixoto & Almeida, 2010), and in this context avoidance orientation could be a consequence of this strategy, in which students try to avoid failure in order to preserve their feelings of self-worth (Nascimento & Peixoto, 2012). Although the fact that avoidance orientation can have an adaptive pattern from the point of view of self-esteem, the motivational profile of the disengaged students seems to be the less adaptive when academic achievement is observed, where students in this group show the lowest academic achievement and also some anxiety related to classes and tests. Their predominant facet of avoiding academic tasks seems to have a negative impact on their performance. Disengaged students can be considered as at risk because in many

cases they can have lost the sense that they are able to deal with academic tasks (Seifert & O'Keefe, 2001; Tuominen-Soini et al., 2008), and attributing less meaning to school tasks can consequently lead to dropping out of school.

This study contributes to current research showing the advantages of using a person-centered approach when studying goal orientations. Looking at different groups sharing similar orientations has given us a better understanding of the contribution of each orientation to important outcomes such as academic achievement and anxiety. When identifying two clusters, success and task oriented, they are shown to be the most adaptive, as students achieve better and mention feeling less anxious towards math classes and tests. Consequently, our results emphasize that there are different ways of being motivated, with positive impact on achievement and also in affects, and that the combination of task focus and ego focus can also be positive. Not only is the traditional perspective on achievement goals that states that mastery goals are beneficial for achievement-related outcomes reinforced, but also the more recent perspectives that assume that multiple goals can be positive because performance goals may be beneficial for some individuals under certain circumstances. Thus, striving for competence (task orientation), but simultaneously endorsing self-enhancement goals seems to be a possible path for academic success in pre-adolescent students.

References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*, 260-267.
- Anderman, E., & Wolters, C. (2006). Goals, values and affect: Influences on students motivation. In P. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (2nd ed., pp. 369-389). Mahwah: Lawrence Erlbaum Associates.
- Conley, A. (2012). Patterns of motivation beliefs: Combining achievement goal and expectancy-value perspectives. *Journal of Educational Psychology, 104*, 32-47. doi: 10.1037/a0026042
- Daniels, L. M., Haynes, T. L., Stupnisky, R. H., Perry, R. P., Newall, N. E., & Pekrun, R. (2008). Individual differences in achievement goals: A longitudinal study of cognitive, emotional, and achievement outcomes. *Contemporary Educational Psychology, 33*, 584-608.
- Dela Rosa, E. D., & Bernardo, A. I. (2013). Are two achievement goals better than one?. Filipino students' achievement goals, deep learning strategies and affect. *Learning and Individual Differences, 27*, 97-101. doi: 10.1016/j.lindif.2013.07.005
- Duda, J., & Nicholls, J. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84*, 290-299.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256-273.
- Eccles, J., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review Psychology, 53*, 109-132.
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist, 34*, 169-189.

- Elliot, A. J., & Church, M. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality & Social Psychology, 72*, 218-232.
- Elliott, E., & Dweck, C. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*, 5-12.
- Elliott, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology, 70*, 461-475. doi: 10.1037/0022-3514.70.3.461
- Elliot, A. J., & McGregor, H. A. (2001). A 2x2 achievement goal framework. *Journal of Personality and Social Psychology, 80*, 501-519. doi: 10.1037/0022-3514.80.3.501
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall Publishing.
- Harackiewicz, J. M., Barron, K. E., Tauer, J. M., Carter, S. M., & Elliot, A., J. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology, 92*, 316-330. doi: 10.1037/0022-0663.92.2.316
- Hulleman, C. S., Schrager, S. M., Bodmann, S. M., & Harackiewicz, J. M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels?. *Psychological Bulletin, 136*, 422-449.
- Kaplan, A., & Maehr, M. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review, 19*, 141-184. doi: 10.1007/s10648-006-9012-5
- Linnenbrink-Garcia, L., Middleton, M., Ciani, K., Easter, M., O'Keefe, P., & Zusho, A. (2012). The strength of the relation between performance-approach and performance-avoidance goal orientations: Theoretical, methodological, and instructional implications. *Educational Psychologist, 47*, 281-301. doi: 10.1080/00461520.2012.722515
- Luo, W., Paris, S. G., Hogan, D., & Luo, Z. (2011). Do performance goals promote learning?. A pattern analysis of Singapore students' achievement goals. *Contemporary Educational Psychology, 36*, 165-176. doi: 10.1016/j.cedpsych.2011.02.003
- Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. R. Wenzel, A. Wigfield, K. R. Wenzel, & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 77-104). New York, NY, US: Routledge/Taylor & Francis Group.
- Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology, 57*, 487-503. doi: 10.1146/annurev.psych.56.091103.070258
- Middleton, M. J., & Midgley, C. (1997). Avoiding the demonstration of lack of ability: An under-explored aspect of goal theory. *Journal of Educational Psychology, 89*, 710-718.
- Murayama, K., Elliot, A., & Yamagata, S. (2011). Separation of performance-approach and performance-avoidance achievement goals: A broader analysis. *Journal of Educational Psychology, 103*, 238-256.
- Nascimento, S., & Peixoto, F. (2012). Relações entre o estatuto escolar e o autoconceito, auto-estima e orientações motivacionais em alunos do 9º ano de escolaridade. *Análise Psicológica, XXX*, 421-434.
- Nicholls, J. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review, 91*, 328-346.
- Nicholls, J., Patashnick, M., & Nolen, S. (1985). Adolescents' theories of education. *Journal of Educational Psychology, 77*, 683-692. doi: 10.1037/0022-0663.77.6.683
- Niemivirta, M. (2002). Motivation and performance in context: The influence of goal orientations and instructional setting on situational appraisals and task performance. *Psychologia, 45*, 250-270.

- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Pajares, F., & Cheong, Y. (2003). Achievement goal orientations in writing: A developmental perspective. *International Journal of Educational Research*, 39, 437-455. doi: 10.1016/j.ijer.2004.06.008
- Pastor, D. A., Barron, K. E., Miller, B. J., & Davis, S. L. (2007). A latent profile analysis of college students' achievement goal orientation. *Contemporary Educational Psychology*, 32, 8-47. doi: 10.1016/j.cedpsych.2006.10.003
- Peixoto, F. (2010). Relationships between self-esteem, self-concept and academic achievement in adolescents. In R. Zukauskienė (Ed.), *Proceedings of the 12th Biennial Conference of the European Association for Research on Adolescence* (pp. 249-253). Bologna: Medimond Editore.
- Peixoto, F., & Almeida, L. S. (2010). Self-concept, self-esteem and academic achievement: Strategies for maintaining self-esteem in students experiencing academic failure. *European Journal of Psychology of Education*, 25, 157-175. doi: 10.1007/s10212-010-0011-z
- Peixoto, F., Mata, L., Monteiro, V., Sanches, C., & Pekrun, R. (2015). The Achievement Emotions Questionnaire: Validation for pre-adolescent students. *European Journal of Developmental Psychology*, 12, 472-481. doi: 10.1080/17405629.2015.1040757
- Pintrich, P. (2000). The role of goal orientation in learning and achievement. *Journal of Educational Psychology*, 92, 544-555. doi: 10.1037/0022-0663.92.3.544
- Pipa, J., Peixoto, F., Mata, L., Monteiro, V., & Sanches, C. (2017). The Goal Orientations Scale (GOS): Validation for Portuguese students. *European Journal of Developmental Psychology*, 14, 477-488. doi: 10.1080/17405629.2016.1216835
- Pulkka, A., & Niemivirta, M. (2013). Adult students' achievement goal orientations and evaluations of the learning environment: A person-centred longitudinal analysis. *Educational Research and Evaluation*, 19, 297-322. doi: 10.1080/13803611.2013.767741
- Seifert, T., & O'Keefe, B. (2001). The relationship of work avoidance and learning goals to perceived competence, externality and meaning. *British Journal of Educational Psychology*, 71, 81-92. doi: 10.1348/000709901158406
- Shim, S. S., Ryan, A. M., & Anderson, C. J. (2008). Achievement goals and achievement during early adolescence: Examining time-varying predictor and outcome variables in growth-curve analysis. *Journal of Educational Psychology*, 100, 655-671. doi: 10.1037/0022-0663.100.3.655
- Skaalvik, E. (1997). Self-enhancing and self-defeating ego orientation: Relations with task and avoidance orientation, achievement, self-perceptions, and anxiety. *Journal of Educational Psychology*, 89, 71-81. doi: 10.1037/0022-0663.89.1.71
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2008). Achievement goal orientations and subjective well-being: A person-centred analysis. *Learning and Instruction*, 18, 251-266. doi: 10.1016/j.learninstruc.2007.05.003
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2011). Stability and change in achievement goal orientations: A person-centered approach. *Contemporary Educational Psychology*, 36, 82-100. doi: 10.1016/j.cedpsych.2010.08.002
- Tuominen-Soini, H., Salmela-Aro, K., & Niemivirta, M. (2012). Achievement goal orientations and academic well-being across the transition to upper secondary education. *Learning and Individual Differences*, 22, 290-305. doi: 10.1016/j.lindif.2012.01.002
- Valle, A., Núñez, J. C., Cabanach, R. G., Rodríguez, S., Rosário, P., & Inglés, C. J. (2015). Motivational profiles as a combination of academic goals in higher education. *Educational Psychology*, 35, 634-650. doi: 10.1080/01443410.2013.819072

Este estudo pretendeu caracterizar os perfis motivacionais de alunos do 5º e 7º ano, bem como avaliar os efeitos da adoção de diferentes perfis no rendimento académico e na ansiedade.

Responderam à Escala de Orientações Motivacionais e ao Questionário de Emoções de Desempenho 1652 alunos portugueses. Através de uma abordagem centrada na pessoa e com recurso à análise de clusters identificaram-se seis grupos com perfis motivacionais distintos: orientado para a tarefa, orientado para o ego, orientado para o sucesso, não envolvido, orientado para o evitamento e difuso. A maioria dos participantes apresentaram um perfil motivacional difuso. No que diz respeito ao género, verificaram-se diferenças na sua representação nos grupos não envolvido e orientado para o evitamento, estando os rapazes mais representados no primeiro grupo e as raparigas no segundo. Relativamente à idade, verificou-se uma maior representação de alunos mais novos no grupo com perfil motivacional orientado para sucesso e que os alunos mais velhos teriam maior tendência para adoptar orientações de não envolvimento. Quando considerada a retenção escolar verificaram-se igualmente diferenças na composição dos grupos: alunos retidos apresentaram perfis motivacionais orientados para o não envolvimento e difuso. Adicionalmente, os resultados demonstraram efeitos das orientações motivacionais no rendimento académico e na ansiedade. Os alunos com orientações para o sucesso apresentaram um melhor rendimento académico e estudantes cujos perfis eram predominantemente orientados para o ego (autovalorização e autodefesa) apresentavam níveis mais elevados de ansiedade tanto na sala-de-aula como nos testes.

Palavras-chave: Orientações motivacionais, Rendimento académico, Ansiedade, Abordagem centrada na pessoa, Pré-adolescentes.

Submitted: 21/10/2015

Accepted: 31/03/2016

