

**Universidades Lusíada**

Simões, Maria Celeste Rocha  
Matos, Margarida Gaspar de, 1956-  
Tomé, Gina Maria Quinás, 1973-  
Ferreira, Mafalda Sofia Costa Lopes

**Can school assets moderate the impact of school satisfaction and school achievement on goals and aspirations in adolescents with special needs?**

<http://hdl.handle.net/11067/89>  
<https://doi.org/10.34628/w74t-gn74>

**Metadados**

**Data de Publicação**

2010

**Resumo**

The aim of the present work is to study the effect of school satisfaction and school achievement on goals and aspirations of adolescents with special needs, and the moderate effects of school assets on these relations. The sample included 494 adolescents with special needs, mean age 14 years old. Pupils attended 77 public schools from all Portugal. Data collection was held within the HBSC (Health Behaviour in School aged Children) survey (Currie et al, 2004; Matos et al, 2006). For the purpose ...

**Palavras Chave**

Adolescentes deficientes - Educação - Portugal, Educação especial - Portugal, Estudantes - Aspirações - Portugal

**Tipo**

article

**Revisão de Pares**

Não

**Coleções**

[ULL-IPCE] RPCA, n. 01 (2010)

Esta página foi gerada automaticamente em 2024-09-21T05:43:26Z com informação proveniente do Repositório

# CAN SCHOOL ASSETS MODERATE THE IMPACT OF SCHOOL SATISFACTION AND SCHOOL ACHIEVEMENT ON GOALS AND ASPIRATIONS IN ADOLESCENTS WITH SPECIAL NEEDS?

Celeste Simões<sup>a</sup>  
Margarida Gaspar Matos<sup>a</sup>  
Gina Tomé<sup>b</sup>  
Mafalda Ferreira<sup>b</sup>

**Abstract. Aim.** The aim of the present work is to study the effect of school satisfaction and school achievement on goals and aspirations of adolescents with special needs, and the moderate effects of school assets on these relations.

**Methodology.** The sample included 494 adolescents with special needs, mean age 14 years old. Pupils attended 77 public schools from all Portugal. Data collection was held within the HBSC (Health Behaviour in School aged Children) survey (Currie et al, 2004; Matos et al, 2006). For the purpose of this specific study, the questionnaire included questions about resilience (school assets and goals and aspirations), and school connectedness (satisfaction with school and school achievement).

**Results.** Results showed that school satisfaction and school achievement are associated to goals and aspirations. The adolescents that are more satisfied with school and have higher levels of school achievement have higher scores on goals and aspirations. The analyses conducted to evaluate the moderate effects of school assets (caring adult relationships, high expectations and meaningful participation) over school satisfaction and achievement relation with goals and aspirations had only revealed main effects of high expectations and meaningful participation. These results show, this way, that although they are important resources in this context they can't balance the negative impact of a low achievement and dissatisfaction with school on goals and aspirations.

---

<sup>a</sup> Faculdade de Motricidade Humana/Universidade Tecnica de Lisboa; CMDT/IHMT/UNL  
csimoes@fmh.utl.pt

<sup>b</sup> Doutorandas da Faculdade de Motricidade Humana/Universidade Tecnica de Lisboa;  
CMDT/IHMT/UNL

When designing and implementing school-based intervention programs, these features stress the importance of promoting school assets, and specially implement strategies to promote school achievement and a positive school climate as way to help adolescents in their future-building process.

**Key-words:** Adolescents; Special Needs; School Assets; Goals and Aspirations

**Resumo. Objectivo.** Este trabalho tem como objectivo estudar a relação entre a satisfação com a escola, percepção de competência académica e as metas e aspirações futuras em adolescentes com necessidades especiais e os efeitos moderadores dos recursos escolares nestas relações.

**Metodologia.** A amostra era composta por 494 alunos com necessidades especiais com uma idade média de 14 anos de idade. Os alunos frequentavam 77 escolas públicas portuguesas. A recolha de dados decorreu no âmbito do estudo HBSC – Comportamentos de Saúde em Idade Escolar (Currie et al, 2004; Matos et al, 2006). Para este estudo foram utilizadas as questões relativas ao módulo da resiliência (recursos escolares, metas e aspirações) e ligação à escola (satisfação com a escola e percepção de competência académica).

**Resultados.** Os resultados mostraram que a satisfação com a escola e a percepção de competência académica estão associadas com as metas e aspirações. Os adolescentes que estão mais satisfeitos com a escola e percebem elevados níveis de competência académica apresentam valores mais elevados ao nível das metas e aspirações. As análises conduzidas para verificar o efeito moderador dos recursos escolares (ligações afectivas com os adultos, expectativas elevadas e participação significativa) na relação entre a satisfação com a escola e a percepção de competência escolar e as metas e objectivos revelaram apenas a existência de efeitos principais das expectativas elevadas e participação significativa. Estes resultados mostram que apesar das expectativas e da participação constituírem importantes recursos neste contexto não conseguem contrapor o efeito negativo da percepção de baixo rendimento académico e da baixa satisfação com a escola nas metas e aspirações.

Torna-se assim importante considerar a promoção dos recursos escolares nos programas de intervenção escolar e especialmente estratégias que promovam o sucesso académico e um clima escolar positivo dado que constituem factores importantes para o estabelecimento de metas e aspirações futuras.

**Palavras-Chave:** Adolescentes; Necessidades Especiais; Recursos Escolares; Metas e Aspirações

## INTRODUCTION

Adolescence is a period full of changes and challenges. Besides regular changes and challenges, adolescents with special needs have to face up further difficulties. Anderson & Clark (1982) spoke about lack of control over one's lives, lack of independence, lack of readiness to comply about adult life challenges

and social isolation in the adolescents with disabilities lives. More recently, the HBSC/WHO study (Matos & Equipa do Projecto Aventura Social, 2003) showed clearly that adolescents with special needs are more frequently victims of bullying, be left alone at school, feel less happy, and have more physical and psychological symptoms. Simões, Matos, Ferreira, & Tomé (2009) referred that adolescents with special needs feel more frequently unhappy, sadder, lonelier, and that their schools performance is lower than the average, while they feel more pressed to do homework.

This scenario, of additional challenges for adolescents with special needs, is similar in what concerns goals and aspirations for the future. Adolescence is the time where individuals make future educational and occupational plans and then pursue them through secondary school course work and out-of-school vocational and volunteer activities (Eccles & Gootman, 2002). Future plans seems important to the motivation and investment of the student in the learning process at a short and long-time, but also to the prevention of involvement in problem behaviors like substance use, violence or delinquency, since in some way they are more engaged with their future (Crosnoe, 2002; Farrington, 2001; Mangham, McGrath, Reid, & Stewart, 1995; Steinberg & Avenevoli, 1998). Literature refers gender differences on future orientation and motivation. Some of those differences seemed best explained in terms of generational differences in gender role expectations. Men had further extension but fewer goals than women (Greene & DeBacker, 2004). These authors refer also that evidence suggested that women's future expectations have become more similar to men's, even if women also have maintained their focus on interpersonal goals. In adolescence it seems that there are also difference between genders in future aspirations. Marjoribanks (1997) refers that family background and adolescents' social capital combine to have medium positive associations with adolescents' aspirations, that are stronger for males than for females.

Some authors point out that, many times, school don't give students the opportunities to explore the options that they might have in their life's and consequently they don't make plans for the future (CPP, 2009; Smith-Maddox & Wheelock, 1998). There are, nevertheless, programs which try to go against this scenario. An example is the MBTI Student Development Programs that focus on three different areas to promote students success: academic development (improve leaning, achieve school success, and promote the transition); career development (awareness, information and goals) and personal and social development (self-knowledge and interpersonal skills). Some of the points presented in this program are core questions in this research field. For instance, the positive relation between school achievement and achievement goals is referred by several authors. Achievement goals describe what learners orient to when learning, particularly the instrumental role of what is learned (Winne & Nesbit, 2010). Gouveia, Diniz,

Santos, Gouveia, & Cavalcanti (2008) refer a positive correlation between achievement goals (more specifically mastery approach goals – defined as goals focused on improvement and academic progression) and school achievement. The American College Testing (ACT) research shows that academic achievement in high school is a strong predictor of college degree attainment, reporting also that well-defined career plans or goals positively influence decisions to remain in college (ACT, 2009). Nevertheless, some authors found no significant relations between academic aspiration and academic achievement (Carroll, et al., 2009).

In this scope, some authors go further and explore moderator's factors on this relation. A review conducted by Covington (2000) points the fact that there are causal links between achievement goals and subsequent academic performance but these achievement goals are themselves controlled in turn by the main classroom incentive systems, either to the benefit or to the detriment of achievement.

This point allows to bring another key feature in literature that is school assets, like, for instance a caring school climate or school boundaries. The feeling of belonging to schools and the bonding effect with teachers and pupils, a participative life in school, as well as the perception of safety in schools, are relevant factors, both in well being and on academic success improvement (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Matos, et al., 2006; Simões, 2007).

One of the central school assets is school climate. The school climate is a key feature that goes beyond school achievement and adjustment to be also a factor that can promote resilience, or in the opposite side be an important risk factor for positive development (Freiberg & Stein, 2003). School climate relates to the school capability to foster in each of its students a feel of individual value, dignity and importance. As Freiberg and Stein (2003, p. 11) mention that school climate "... nurtures children's and parents' dreams and aspirations". For Creemers and Reezigt (2003), school climate comprises different factors, namely, the physical environment of the school, the social system in the school, an organized environment in the school and the expectations about teacher behaviour and student outcomes.

According to Benard (1999), high expectations are an important school asset, as well as caring adult relationships and meaningful participation in school setting. A school with high levels of academic achievement have high expectations for all students and gives support to reach them, revealing this way the essential relation between these two aspects (Benard, 1998). High expectations are essential to promote a sense of confidence and self-efficacy (Brooks, 2006). High expectations lead to feelings of self-worth, the recognition and valorisation of competencies and confidence to deal with challenges. Teachers are extremely relevant elements in school context. The bond that teacher establish with the

students, the support that gives to them, the expectations that holds about each of the students and messages that gives about their competences are important factors for the beliefs about themselves and their academic trajectory.

Some studies point out the positive impact of teacher expectations on learning (Muller, 1997) and school achievement (McGrew & Evans, 2004). Researchers have found that teachers overestimate the achievement of high achievers, underestimate that of low achievers, and predict least accurately the responses of low achievers (McGrew & Evans, 2004). This is especially important given the impact of expectations on behaviour, that is, the self-fulfilling prophecy effect. And research shows that expectancy effects and academic achievement are positively correlated. Nevertheless, the negative impact of low expectations seems only especially true for low achievers. On the other side, it seems also that the increases in achievement for low achievers, predicted by teacher overestimates, were greater than decreases predicted by teacher underestimates. Another important point to stress in this field is that some students (McGrew & Evans, 2004), namely students low self-concept, students with disabilities, students at-risk, or students that are going through key transition points, like school entry, change of schools, elementary to junior high transition, etc., can be more vulnerable to expectancy effects and therefore deal to another obstacle to their achievement.

Caring adult relationships are also very important in school setting. Have a teacher, or other adult at school, that listen to the student, or that care and notice when something wrong, is very important for all students and especially for those who don't have a solid family structure or other resources. Resilient adolescent refer to have a special teacher, that is not merely an academic instructor, but also a confidant and a positive role model (Benard, 1998). A positive school climate is also extremely important to promote school achievement, school satisfaction as well to prevent risk behaviors at short and long term (Bearman, 1998; Bonny, et al., 2000).

The participation in school context or in the classroom through activities that encourage learning can help the students to see themselves as an influent member of their school (Brooks, 2006). A natural way to rise school expectations is create meaningful participation opportunities in school context (Benard, 1998). According to Rutter (1984 cit. in Bernard, 1998) in the schools where students share some level of responsibilities, actively participate in school activities, school where they can meet their interests and can be succeed, there are lower levels of problem behaviors. Horn, Chen, and Adelman (1997) refer that the participation in school-based activities play a positive role in helping moderate and high risk students make the transition from high school to college. Benard (1998) refer that the challenge in this field is to engage students in school through meaningful activities that promote problem solving, decision making and planning skills as well as goals and futures aspirations.

Age and gender seems to be important variables in this context. The HBSC/OMS study (Matos & Equipa do Projecto Aventura Social, 2003; Matos, et al., 2006) shows that girls and younger adolescents refer to like more school comparatively with boys and older adolescents. The girls and the younger adolescents refer also more frequently that school is a good place to be, that belong to the school and school isn't boring. Again, girls and younger adolescents are the ones that refer more often that school rules are fair and boys and the younger ones refer more often that have a meaningful participation in the decision making process about school rules. Boys and older students refer more frequently that students are treated severely. Another study, conducted with students with special needs (Simões, Matos, Ferreira, & Tomé, 2009), showed that girls refer high expectations comparatively to boys. For different age groups it was found that younger students refer more adult caring relationships at school and meaningful participation.

As it was mentioned, all the approached features are important for the success of all students and especially for those that, due to personal or environmental aspects, are at some way at risk to achieve this success. This is the case of adolescents with special needs (Eber, Nelson, & Miles, 1997; Hinton, De Vivo, Fee, Goldstein, & Stern, 2004; Karande & Kulkarni, 2005). As Eber et al. (1997) refer, the educational programs for students with disabilities, in general, have not been associated with positive outcomes. Excessive dropout rates, high rates of academic failure and poor achievement, low graduation rates, high use of homebound instruction and institutional placements, and poor post-school adjustment indicators have been noted consistently among students with emotional and behavioral disabilities (Eber, et al., 1997). It is, this way, especially important to have a particular attention to these adolescents, and to other minorities groups, to their abilities and limitations, as well as to their needs and the way to accomplish them. As Covington (p. 191) state "...perhaps the most important being the need to understand more fully the nature and costs of the continuing mismatch of cultural values that confronts many minority students, both with respect to the goals of schooling and the means by which these goals are achieved".

This study aims at:

- (1) Verifying gender and age group associations with school satisfaction, school achievement, school resources and goals and aspirations in adolescents with special needs;
- (2) Verifying the association between school satisfaction, school achievement and goals and aspirations in adolescents with special needs;

- (3) Verifying if school assets are moderators of the relationship between school satisfaction, school achievement and goals and aspirations in adolescents with special needs.

## METHOD

### Sample

Sample consists of 494 pupils, adolescents with special needs, 285 boys and 209 girls, aged 10 to 19 years old ( $M=14,36$ ;  $DP=2,329$ ). Pupils were selected from 77 public schools, selected at random from all country, 35,4% and were attending 6<sup>th</sup> grade, 25,3%, 8<sup>th</sup> grade and 12,3%, 10<sup>th</sup> grade. Most pupils had Portuguese nationality (95,1%), and have working parents, either father (73,8%), or mother (59,1%).

### The survey

The survey used in this study was the "Risk and resilience in adolescence survey" (Simões, et al., 2009).

The questionnaire includes, besides socio-demographic questions, a set on HBSC/WHO questions regarding life styles, and a set of questions related with Resilience, Mental Health and Life Events.

For the purpose of this study, the following instruments were used:

- HBSC/WHO survey (Currie, Smith, Boyce, & Smith, 2001; Matos & Equipa do Projecto Aventura Social, 2003; Matos, Simões, Carvalhosa, Reis, & Canha, 2000; Matos, et al., 2006) – two school related questions:
  - Satisfaction with school: "How do you feel about school at present" (1=I like it a lot; 2=I like it a bit; 3=I don't like it very much; 4=I don't like it at all)
  - School achievement: "In your opinion, what does your class teacher(s) think about your school performance compared to your classmates?" (1=Very good; 2=Good; 3=Average; 4=Below average)
- "Resilience – California Healthy Kids Program Office" (CHKS, 2000), 4 subscales (3 items each), one referring to Internal Resources (goals and aspirations – "I have goals and plans for the future"); and 3 for School Assets (caring adult relationships – "At my school, there is a teacher or some other adult who really cares about me"; high expectations – "At my school, there is a teacher or some other adult who believes that I will be a success"; meaningful for participation – "At school I do interesting activities") (1=Never; 5=Always).



## Procedures

From a national official list of schools from the whole country, 143 public schools were selected at random. Detailed sampling and data collection procedures were presented elsewhere (Currie, et al., 2001; Matos, et al., 2006; Simões, et al., 2009).

During the data collection procedure, a letter was sent to all the selected schools with the questionnaires and the information about procedures for the different kinds of special needs students. The questionnaire took about 90 minutes to respond. Response rate for schools was 54% and for adolescents with special needs was 35%.

## RESULTS

Table 1 presents the descriptive data of the 4 sub-scales of Resilience scale. *Cronbach Alpha* for each of the 4 sub-scales of the Resilience scale ranged from  $\alpha = .62$  to  $\alpha = .82$ . Psychometric properties of this scale were deeply reported elsewhere (Simões, et al., 2009).

**Table 1. Mean values, standard deviations, Minimum and Maximum values and Cronbach Alpha of sub scales from the Resilience Scale**

		Mean	SD	Min.	Max.	$\alpha$
Environmental Assets	Caring Adult Relationships	11,49	3,25	3	15	.82
	School High Expectations	11,49	3,05	3	15	.82
	Meaningful Participation	9,15	2,81	3	15	.62
Internal Assets	Goals and Aspirations	9,80	3,42	3	15	.66

Table 2 presents the descriptive data of the school related variables. Almost half of the students refer that like school a lot (44%) and have an average school achievement (46%). Only a minority refer that don't like school at all (7%) and have a very good school performance (6%).

**Table 2. Frequency and Percentage of school related variables**

School satisfaction	I like it a lot		I like it a bit		I don't like it very much		I don't like it at all	
	N	%	N	%	N	%	N	%
	215	43,5	171	34,6	50	10,1	35	7,1
School achievement	Very good		Good		Average		Below average	
	N	%	N	%	N	%	N	%
	31	6,3	98	19,8	229	46,4	31	21,3

*Gender and age group associations with school satisfaction, school achievement, school resources and goals and aspirations*

The analysis of gender and age group<sup>3</sup> association with school satisfaction and school achievement hadn't reveal significant differences suggesting that school satisfaction and school achievement doesn't differ for boys and girls ( $\chi^2 = 5.86$ ,  $df=3$ ,  $p=ns$ , for school satisfaction;  $c^2 = 2.41$ ,  $df=3$ ,  $p=ns$ , for school achievement) as well as for younger and older special needs adolescents ( $\chi^2 = 1.55$ ,  $df=3$ ,  $p=ns$ , for school satisfaction;  $\chi^2 = 6.47$ ,  $df=3$ ,  $p=ns$ , for school achievement). Nevertheless, the analysis for school assets had revealed that in some aspects these groups differ from each other. Girls with special needs have significant higher scores in high expectations dimension comparatively to boys with special needs ( $F1, 430=4.79$ ,  $p<.05$ ). Younger adolescents with special needs have significant higher scores in caring adult relationships ( $F1, 427=9.13$ ,  $p<.01$ ) and meaningful participation ( $F1, 432=11.46$ ,  $p<.01$ ) comparatively to older adolescents with special needs (see Table 3 for means and standards deviations).

For goals and aspirations the analysis didn't reveal significant differences for each of the comparisons ( $F1, 422=1.40$ ,  $p=ns$ , for gender;  $F1, 420=0.35$ ,  $p<ns$ , for age group).

<sup>3</sup> Two age groups had been created from age (continuous variable): a younger age group that includes adolescents from 10 to 14 years old; and an older age group that includes adolescents from 15 to 19 years old.

**Table 3. Means and standard deviations of school assets for gender and age groups**

		N	Mean	Std. Deviation
Caring Adult Relationships	Male	250	11,26	3,33
	Female	182	11,82	3,12
	Younger	243	<b>11,88</b>	3,21
	Older	186	<b>10,94</b>	3,24
High Expectations	Male	252	<b>11,22</b>	3,08
	Female	180	<b>11,87</b>	2,97
	Younger	245	11,71	3,07
	Older	184	11,17	3,02
Meaningful Participation	Male	257	9,16	2,83
	Female	180	9,13	2,79
	Younger	246	<b>9,55</b>	2,80
	Older	188	<b>8,64</b>	2,74

*Relationship between goals and aspirations with school satisfaction and school achievement*

Two one-way ANOVA were carried out to analyse the relations between goals and aspirations with school satisfaction and school achievement. Previous to the analysis, school satisfaction and school achievement variables were recoded. School satisfaction was recoded into two categories (1=I like school, which aggregates the original categories "I Like it a lot" and "I like it a bit"; 2=I don't like school, which aggregates the original categories "I don't like it very much" and "I don't like it at all"). School achievement and was recoded into three categories (1=Good, which aggregates the original categories "Very good" and "Good"; 2=Average; 3=Bellow average - these two categories remain as the original categories).

For these, and subsequent analyses, the items of goals and aspirations subscale were submitted to an *optimal scaling* procedure (see Simões, Batista-Foguet, Matos, & Calmeiro, 2008, for more details). The factor scores obtained for this dimension were used as the measure of the dependent variable "goals and aspirations" in following analyses.

The variance analysis for school satisfaction factor reveals a significant effect of this factor on goals and aspirations ( $F_{1, 418}=16.28, p<.001$ ). Adolescents that like the school have higher scores on goals and aspirations ( $M=.09$ ;  $SD=1.03$ ) comparatively with students that don't like school ( $M=-.44$ ;  $SD=.74$ ).

School achievement presents also a significant effect on goals and aspirations ( $F_{2, 412}=19.82, p<.001$ ). Post hoc tests reveal that adolescents that refer a good school performance ( $M=.31$ ;  $SD=1.00$ ) or an average performance ( $M=.06$ ;  $SD=1.00$ ) have significantly higher levels of goals and aspirations comparatively with the adolescents that refer a performance below the average ( $M=-.52$ ;  $SD=.81$ ).

*School assets as moderators of the relationship between school satisfaction, school achievement and goals and aspirations*

A set of three-way ANOVA were carried out using school satisfaction, school achievement and each of the school assets (caring adult relationships, high expectations and meaningful participation). The dependent variable was always goals and aspirations.

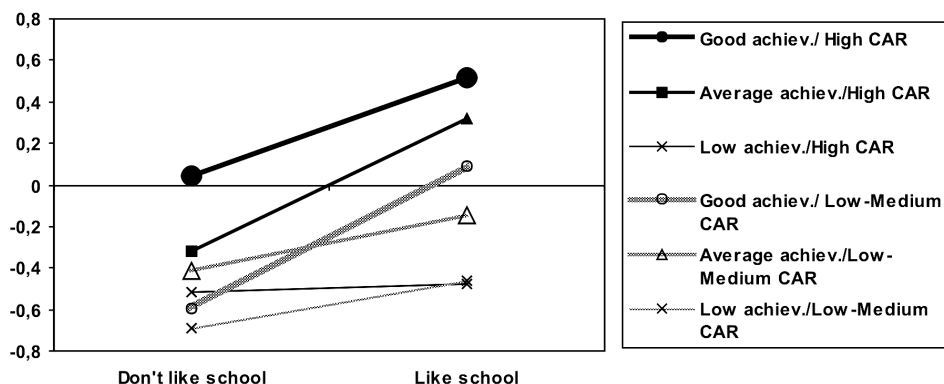
For these analyses, each of the three school assets sub-scales were categorised into two groups: a group that includes the adolescents with low/medium scores on each of the three school assets and another group that includes the adolescents with high scores in each of the three school assets.

In the first analysis (see Graphic 1) it was intended to verify the moderating effect of caring adult relationships in the association between school satisfaction and goals and satisfaction in three different groups of achievers (good, average, below average). This analysis showed a main effect of school satisfaction ( $F_{1, 402}=6.23, p<.05$ ) and school achievement ( $F_{2, 402}=5.08, p<.01$ ).

In short adolescents more satisfied with school have higher values in goals and aspirations ( $M=-.07, DP=.11$ ) when compared to those with lower scores on school satisfaction ( $M=-.37, DP=.11$ ). In the same way, adolescents referring good school achievement presented higher value in goals and aspirations ( $M=.01, DP=.19$ ), as well as those that referred an average school achievement ( $M=-.14, DP=.09$ ), when compared with adolescents that referred a low school achievement ( $M=-.54, DP=.11$ ).

The effect of caring adult relationships on goals and aspirations wasn't significant ( $F_{1, 402}=3.58, p=ns$ ) as well as the first order interactions (caring adult relationships\*school achievement:  $F_{2, 402}=.60, p=ns$ ; caring adult relationships\*school satisfaction:  $F_{1, 402}=.00, p=ns$ ; school achievement\*school satisfaction:  $F_{2, 402}=.73, p=ns$ ) and the second order interaction (caring adult relationships\*school satisfaction\*school achievement:  $F_{2, 402}=.53, p=ns$ ).

**Graphic 1. Analysis of the relationship between Caring Adult Relationships (CAR), School Satisfaction, School Achievement and Goals and Aspirations**

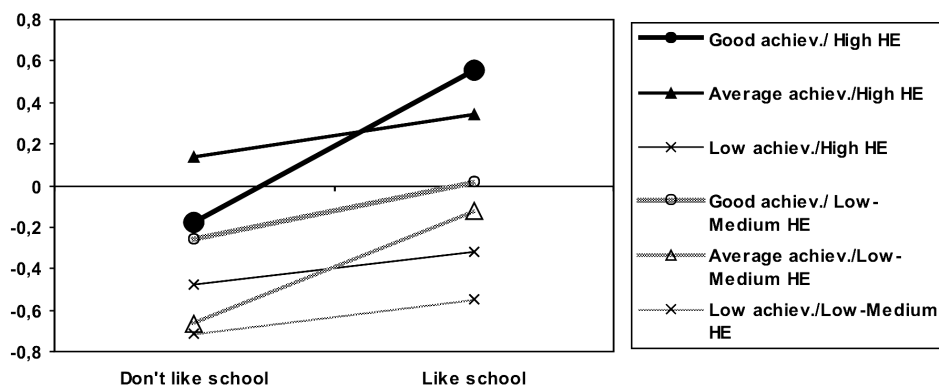


In the next analysis (see Graphic 2) it was intended to verify the moderating effect of high expectations in the relation between school satisfaction and goals and aspirations in three different groups of achievers (good, average, below average). This analysis showed a main effect of high expectations ( $F1, 403=5.79, p<.05$ ), school satisfaction ( $F1, 403=4.53, p<.05$ ) and school achievement ( $F2, 403=5.67, p<.01$ ).

The results showed that the adolescents who refer higher levels of expectations have higher scores in goals and aspirations ( $M=.01, DP=.13$ ) compared to the ones that refer lower levels of expectations ( $M=-.38, DP=.10$ ). For school satisfaction, the main effect means that adolescents that are more satisfied with school have higher values in goals and aspirations ( $M=-.01, DP=.06$ ) when compared to those with lower scores on school satisfaction ( $M=-.36, DP=.15$ ). For school achievement it was verified that adolescents referring good school achievement presented higher value in goals and aspirations ( $M=.04, DP=.20$ ), as well as those that referred an average school achievement ( $M=-.08, DP=.09$ ), when compared with adolescents that referred a low school achievement ( $M=-.52, DP=.11$ ).

The first order interactions (high expectations\*school achievement:  $F2, 403=1.10, p=ns$ ; high expectations\*school satisfaction:  $F1, 402=.02, p=ns$ ; school achievement\*school satisfaction:  $F2, 403=.40, p=ns$ ) and the second order interaction (high expectations\*school satisfaction\*school achievement:  $F2, 403=.49, p=ns$ ) were not significant.

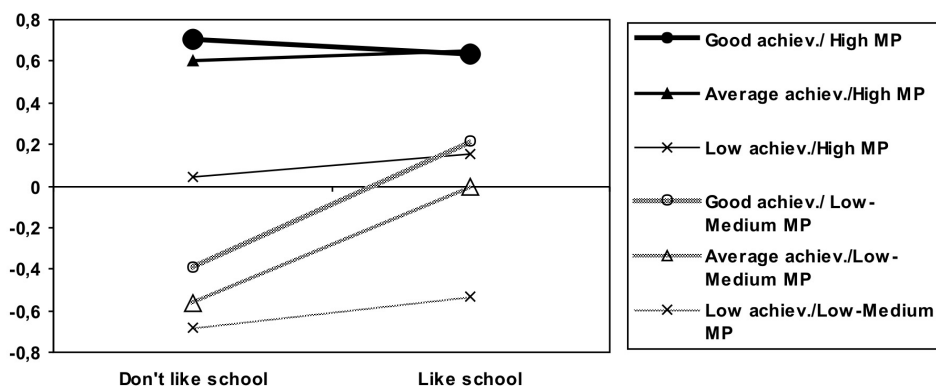
**Graphic 2. Analysis of the relationship between High Expectations (HE), School Satisfaction, School Achievement and Goals and Aspirations**



In the third analysis (see Graphic 3) it was verified the moderating effect of meaningful participation in the relation between school satisfaction and goals and aspirations in the three different groups of achievers. This analysis showed only a main effect of meaningful participation ( $F1, 396=12.00, p<.01$ ) on goals and aspirations. This main effect means that adolescents who refer higher levels of meaningful participation at school present also higher scores on goals and aspirations ( $M=.46, DP=.08$ ) when compared to those that refer lower levels of meaningful participation ( $M=-.33, DP=.21$ ).

The effect of school satisfaction ( $F1, 396=1.05, p=ns$ ) and school achievement ( $F1, 396=2.11, p=ns$ ) on goals and aspirations wasn't significant. The first order interactions (meaningful participation\*school achievement:  $F2, 396=.12, p=ns$ ; meaningful participation\*school satisfaction:  $F1, 396=.81, p=ns$ ; school achievement\*school satisfaction:  $F2, 396=.08, p=ns$ ) and the second order interaction (meaningful participation\*school satisfaction\*school achievement:  $F2, 396=.16, p=ns$ ) were not significant as well.

**Graphic 3. Analysis of the relationship between Meaningful Participation (MP), School Satisfaction, School Achievement and Goals and Aspirations**



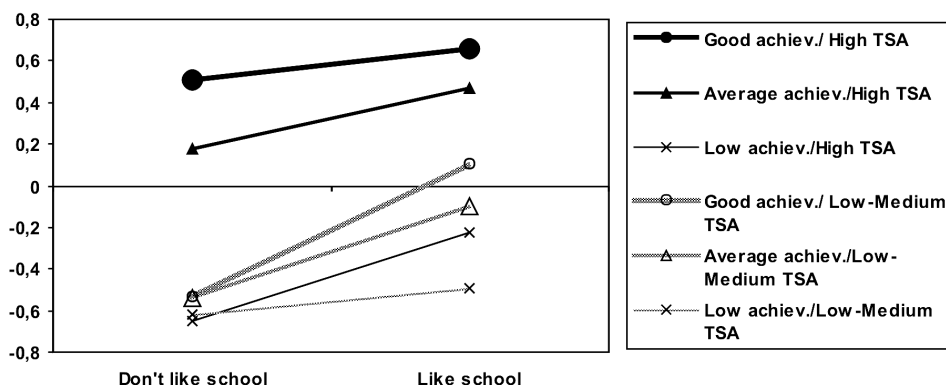
Another analysis was conducted to verify the joined effect of the school assets (total school assets)<sup>4</sup> as moderator of the relation between school satisfaction and goals and aspirations in the three different groups of achievers (see Graphic 4). This analysis showed a main effect of the total school assets ( $F1, 381=8.01, p<.01$ ) and school achievement ( $F2, 381=4.66, p<.05$ ).

The main total school assets effect means that the adolescents that have higher levels of school assets have higher values in goals and aspirations ( $M=.16, DP=.16$ ) when compared to those with lower levels of school assets ( $M=-.36, DP=.09$ ). In the same way, adolescents referring good school achievement presented higher value in goals and aspirations ( $M=.19, DP=.20$ ), as well as those that referred an average school achievement ( $M=.00, DP=.11$ ), when compared with adolescents that referred a low school achievement ( $M=-.50, DP=.16$ ).

The effect of school satisfaction on goals and aspirations wasn't significant ( $F1, 381=3.52, p=ns$ ) as well as the first order interactions (total school assets\*school achievement:  $F2, 381=1.03, p=ns$ ; total school assets\*school satisfaction:  $F1, 381=.09, p=ns$ ; school achievement\*school satisfaction:  $F2, 381=.04, p=ns$ ) and the second order interaction (total school assets\*school satisfaction\*school achievement:  $F2, 381=.33, p=ns$ ).

<sup>4</sup> This factor presents two groups like each of the singular asset: a group that includes the adolescents with low/medium scores in every school assets and another group that includes the adolescents with high scores in every school assets

**Graphic 4. Analysis of the relationship between Total School Assets (TSA), School Satisfaction, School Achievement and Goals and Aspirations**



## DISCUSSION

Results show that the major part of adolescents with special needs refer an average, or below average school achievement. A minority refer a very good performance. These results meet, in part, other authors (Eber, et al., 1997; Hinton, et al., 2004; Karande & Kulkarni, 2005) data that point out the trajectory of students with disabilities is in general associated to poor achievement and low graduation rates.

A search for gender and age differences in school related variables had only reveal differences in the school assets. Girls refer higher level of expectations and younger adolescents refer higher level of caring adult relationships and meaningful participation at school. For goals and aspirations and school achievement there were no significant differences between genders and age groups. For school satisfaction there were also no significant differences between genders and age groups unlike the HBSC/OMS study (Matos & Equipa do Projecto Aventura Social, 2003; Matos, et al., 2006) that shows that girls and younger adolescents refer to be more satisfied with school comparatively with boys and older adolescents.

School satisfaction and school achievement present a significant association with goals and aspirations. Adolescents that like school have higher levels of goals and aspirations. In the same direction was the effect of school achievement in goals and aspirations given that the adolescents that refer a good or average performance have higher scores of goals and aspirations comparatively to the ones that refer an achievement below the average. These results are supported by other authors (ACT, 2009; Gouveia et al., 2008) data that reveal a positive



correlation between goals and school achievement, and that state that a good school climate foster students aspirations (Creemers & Reezigt, 2003; Freiberg and Stein, 2003).

The analyses conducted to search for a moderating effect of school assets on the relation between school satisfaction, school achievement and goals and aspirations had reveal only significant main effects. High expectations and especially meaningful participation had a significant effect on goals and aspirations. The adolescents that have higher scores on these factors have higher scores on goals and aspirations. Caring adult relationship hadn't a significant effect on goals and aspirations. The joined effect of school assets (caring adult relationships, high expectations and meaningful participation) had also a significant effect on the dependent variable. Although these main effects were clear in adolescents with a good or an average school achievement, and not so plain for the ones who have a low school achievement (even in the presence of high levels of school assets), the first order interactions, which were the interactions between school assets and school achievement and the interactions between school assets and school satisfaction weren't significant as well as and the second order interaction, that is the interaction between school assets, school satisfaction and school achievement. It seems that although these assets are important resources in this context, given their significant impact on goals and aspirations, they can't balance the negative impact of a low achievement and dissatisfaction with school on goals and achievement.

The results obtained point out to the value of school assets, achievement and school satisfaction on goals and aspirations emphasize once again that school is therefore an important feature in adolescents future-building (Covington, 2000). In this context teachers are definitely an extremely important resource like Covington (200, p. 193) said, "... if the future is an achievement, (*not a gift*)... then teachers are futurists, along with politicians, filmmakers, and journalists: those individuals who make people's futures more real to them".

Because of all the important outcomes that the development of goals and aspirations have in adolescent's present and future lives is important to develop strategies to promote these goals through high expectations, meaningful participation and especially through the promotion of school achievement and well-being of students at school. This is a central issue for all adolescents and in particular for adolescents that are more vulnerable to reach success in school settings, which is the case of adolescents with special needs. Although this study had only focus the impact of school assets on future goals and aspirations, it is well known also the influence of other significant life contexts on the overall adolescent development, whereupon it is important to promote, besides individual and school-centred interventions, actions that engage family, peers and the community to trigger support resources.

## ACKNOWLEDGEMENTS

Thanks to the Aventura Social Project Team, for their fieldwork, collecting data. Thanks to the national funding agency a Fundação para a Ciência e Tecnologia / Ministério da Ciência e do Ensino Superior – Projecto RIPD/PSI/63669/2005 (April 2006-2008).

## REFERENCES

- ACT (2009). *The Path to Career Success: High School Achievement, Certainty of Career Choice, and College readiness Make a Difference*. Iowa City, IA: ACT.
- BEARMAN, P. (1998, July). Paper presented at the "What do we know about adolescent health? Findings from the national longitudinal study of adolescent health", Consortium of Social Science Associations, Washington.
- BENARD, B. (1998). *Fostering Resiliency in Kids: Protective Factors in the Family, School and Community* Retrieved 20-02, 2008, from [www.cce.umn.edu/nrrc](http://www.cce.umn.edu/nrrc)
- BENARD, B. (1999). Applications of resilience: Possibilities and promise. In M. D. Glantz & J. L. Johnson (Eds.), *Resilience and development: Positive life adaptations* (pp. 269-277). New York: Klumer Academic / Plenum Publishers.
- BONNY, A. E., BRITTO, M. T., KLOSTERMANN, B. K., HORNUNG, R. W., & SLAP, G. B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics* Retrieved 20-09-2002, from [www.findarticles.com](http://www.findarticles.com)
- BROOKS, J. (2006). Strengthening Resilience in Children and Youths: Maximizing Opportunities through the School. *Children & Schools*, 28(2), 69-76.
- CARROLL, A., HOUGHTON, S., WOOD, R., UNSWORTH, K., HATTIE, J., GORDON, L., et al. (2009). Self-efficacy and academic achievement in Australian high school students: The mediating effects of academic aspirations and delinquency. *Journal of Adolescence*, 32(4), 797-817.
- CHKS (2000). *Resilience Module*. Los Alamitos: California Healthy Kids Program Office.
- COVINGTON, M. V. (2000). Goal Theory, Motivation, and School Achievement: An Integrative Review. *Annual Review of Psychology*, 51(1), 171-200.
- CPP (2009). San Diego High School Students Plan for Their Future with the MBTI Assessment. Retrieved from <http://www.docstoc.com/docs/18252321/San-Diego-High-School-Students-Plan-for-Their-Future>
- CREEMERS, B. P. M., & REEZIGT, G. J. (2003). The role of school and classroom climate in elementary school learning environments. In H. J. Freiberg (Ed.), *School climate: Measuring, improving and sustaining healthy learning environments* (pp. 30-48). London: Routledge Falmer.
- CROSNOE, R. (2002). High school curriculum track and adolescent association with delinquent friends. *Journal of Adolescent Research*, 17(2), 143-167.
- CURRIE, C., SMITH, R., BOYCE, W., & SMITH, R. (2001). *HBSC, a WHO cross national study: Research protocol for the 2001/2002 survey*. Copenhagen: WHO.
- EBER, L., NELSON, C. M., & MILES, P. (1997). School-based wraparound for students with emotional and behavioral challenges. *Exceptional Children*, 63(4), 539-555.

- ECCLES, J., & GOOTMAN, J. A. (2002). *Community programs to promote youth development*. Washington DC: National Academy Press.
- FARRINGTON, D. P. (2001). Prevenção centrada no risco. *Infância e Juventude*, 3, 9-29.
- FREIBERG, H. J., & STEIN, T. A. (2003). Measuring, improving and sustaining healthy learning environments. In H. J. Freiberg (Ed.), *School climate: Measuring, improving and sustaining healthy learning environments* (pp. 11-29). London: Routledge Falmer.
- GOUVEIA, V. V., DINIZ, P. K. D. C., SANTOS, W. S. D., GOUVEIA, R. S. V., & CAVALCANTI, J. P. N. (2008). Metas de realização entre estudantes do ensino médio: evidências de validade fatorial e consistência interna de uma medida. *Psicologia: Teoria e Pesquisa*, 24(4), 535-544.
- GREENE, B. A., & DEBACKER, T. K. (2004). Gender and Orientations Toward the Future: Links to Motivation. *Educational Psychology Review*, 16(2), 91-120.
- HINTON, V. J., DE VIVO, D. C., FEE, R., GOLDSTEIN, E., & STERN, Y. (2004). Investigation of Poor Academic Achievement in Children with Duchenne Muscular Dystrophy. *Learn Disabil Res Pract*, 19(3), 146-154.
- HORN, L. J., CHEN, X., & ADELMAN, C. (1997). Toward resiliency: At-risk students who make it to college Retrieved 11-05-2000, from <http://www.ed.gov/pubs/Resiliency/>
- KARANDE, S., & KULKARNI, M. (2005). Poor school performance. *Indian Journal of Pediatrics*, 72(11), 961-967.
- MANGHAM, C., MCGRATH, P., REID, G., & STEWART, M. (1995). Resiliency: Relevance to health promotion - Discussion paper Retrieved 05-07-1999, from [www.hc-sg.gc.ca/hppb/alcohol-otherdrugs/pub/resilncy/analysis.htm](http://www.hc-sg.gc.ca/hppb/alcohol-otherdrugs/pub/resilncy/analysis.htm).
- MARJORIBANKS, K. (1998). Family Background, Social and Academic Capital, and Adolescents' Aspirations: A Mediational Analysis. *Social Psychology of Education*, 2(2), 177-197.
- MATOS, M. G., & Equipa do Projecto Aventura Social (2003). *A saúde dos adolescentes portugueses (Quatro anos depois)*. Lisboa: Edições FMH.
- MATOS, M. G., SIMÕES, C., CARVALHOSA, S. F., REIS, C., & CANHA, L. (2000). *A saúde dos adolescentes portugueses: Estudo nacional da rede europeia HBSC / OMS (1998)*: FMH/PEPT.
- MATOS, M. G., SIMÕES, C., TOMÉ, G., GASPAR, T., CAMACHO, I., DINIZ, J. A., et al. (2006). A saúde dos adolescentes portugueses: Hoje em 8 anos Retrieved 20-12-2006, from <http://www.fmh.utl.pt/aventurasocial/pdf/191206/nacional.pdf>
- MCGREW, K. S., & EVANS, J. (2004). Expectations for Students with Cognitive Disabilities: Is the Cup Half Empty or Half Full? Can the Cup Flow Over? Retrieved from [http://www.osepideasthatwork.org/toolkit/ta\\_exceptions\\_student\\_cong\\_d.asp](http://www.osepideasthatwork.org/toolkit/ta_exceptions_student_cong_d.asp)
- MULLER, C. (1997). The Minimum Competency Exam Requirement, Teachers' and Students' Expectations and Academic Performance. *Social Psychology of Education*, 2(2), 199-216.
- SIMÕES, C. (2007). *Comportamentos de risco na adolescência*. Lisboa: FCT/FCG.
- SIMÕES, C., BATISTA-FOGUET, J. M., MATOS, M. G., & CALMEIRO, L. (2008). Alcohol Use and Abuse in Adolescence: Proposal of an Alternative Analysis. *Child: Health, Care and Development*, 34(3), 391-301.
- SIMÕES, C., MATOS, M. G., FERREIRA, M., & TOMÉ, G. (2009). *Risco e Resiliência em adolescentes com necessidades educativas especiais – Da teoria à Prática*. Lisboa: Aventura Social & Saúde/FMH
- SMITH-MADDOX, R., & WHEELOCK, A. (1998). Untracking and Students' Futures: Closing the Gap Between Aspirations and Expectations *Mensa Research Journal*, 40, 81-94.

- STEINBERG, L., & AVENEVOLI, S. (1998). Disengagement from school and problem behavior in adolescence: A developmental-contextual analysis of the influences of family and part-time work. In R. Jessor (Ed.), *New perspectives on adolescent risk behavior* (pp. 392-424). New York: Cambridge University Press.
- WINNE, P. H., & NESBIT, J. C. (2010). The Psychology of Academic Achievement. *Annual Review of Psychology*, 61(1), 653-678.