

# Disruptive Behavior Scale Professed by Students (DBS-PS): Development and Validation

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## ABSTRACT

This study presents both the construction procedures and the results obtained with a 16-items *Disruptive Behavior Scale Professed by Students (DBS-PS)* for Portuguese students. The sample was made of 915 subjects from the 7th, the 8th, and the 9th grades. Results obtained with that self-report instrument were analyzed, and measures of reliability and of construct and concurrent discrimination were estimated. Three specific factors were identified for the school disruption through *varimax-rotation* factor analysis. These factors accounted for 51 per cent of the total variance. Reliability coefficients ranged between .67 and .88 for different factors and groups (socio-economic status, residential zone, sex, age and grade). Concurrent validity coefficients were satisfactory. Results were in accordance with the psychometric theory of psychological evaluation.

**Keywords:** disruptive behaviour, violence in the school, assessment.

## RESUMEN

El estudio presenta el proceso de construcción y los resultados obtenidos con el cuestionario *Conductas Disruptivas Manifestadas por los Estudiantes (DBS-PS)* en estudiantes portugueses. La muestra estuvo compuesta por 915 participantes de séptimo, octavo y noveno cursos. Se analizaron los resultados obtenidos con este instrumento de autoinforme, y se calcularon medidas de fiabilidad y de validez concurrente y de constructo. Tres factores fueron identificados de conductas disruptivas mediante análisis factorial de rotación *Varimax*. Estos factores explican el 51 por ciento del total de varianza. El coeficiente de fiabilidad varió entre el 0,67 y 0,88 en función de diferentes factores y grupos (nivel socioeconómico, zona residencial, sexo, edad y curso). El coeficiente de validez concurrente fue satisfactorio. Los resultados fueron acordes con la teoría psicométrica de la evaluación psicológica.

**Palabras clave:** conducta disruptiva, violencia escolar, evaluación.

The disruptive behavior concept has been discussed scientifically (Bean, 2006; Coulby & Harper, 1985; Estrela & Ferreira, 2002; Veiga, 1996; 2007; Woolfolk, 2006) and, although largely mentioned in specific literature, it is still considered a new concept in our country. Frequent use, in scientific literature, of the expression 'disruptive behavior', has justified the translation to Portuguese using its equivalents and the concept *school*

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*disruption* is considered as the transgression of school rules, troubling learning conditions, teaching environment or relationship with school. Despite literature on school disruptive behavior being large and scattered, regarding theoretical explanation or acting models, investigators have focused their attention on conclusive evaluation strategies, through observation of general behavior, made by the teachers themselves (Atkins, Pelham, & Lycht, 1989; Bean, 2006; Estrela & Ferreira, 2002; Veiga, 1996, 2007) or by trained observers (Atkins, Pelham, & Lycht, 1989; Bean, 2006; Gotzens, 1986). Another traditional form of evaluation of these behaviors has been made through the research of school official records (Amado, 2001; Bean, 2006; Veiga, 2007). Lately, some investigators have tried to develop evaluation instruments for students' behavior and social competencies at school (Arsenault & Loranger, 1986; Comer *et al.*, 1987; Loranger & Arsenault, 1989). Although there are some instruments connected with the general school climate or the classroom environment, which have some items on disruptive behavior, there is a lack of instruments built to evaluate disruptive school behavior, especially by means of a self-descriptive methodology.

Most existing instruments are less related to disruptive behavior concept than students' social relationship competencies, or else with problems of social-affective adaptation or behavior "deficiencies", useful to a psychological diagnosis. Other instruments are only for students of the 1st grade or only for teachers and students of 2nd and 3rd grades. On one hand, many of the specific items to evaluate children's behavior are not suitable to young people, and on the other, forms for teachers to fill in usually have items that are difficult to understand if they are given to students. Some of the instruments have psychometric qualities, but they do not assume disruptive behavior multi-dimensionality, which is suggested by literature (Gázquez *et al.*, 2005; Veiga, 1991). Now, we are going to describe the different stages we had to consider to develop a scale for young people's disruptive behavior.

## METHOD

We present all criteria in collection and elaboration of the items, the pilot study, the subjects, and the procedures followed in elaborating the process of the Disruptive Behavior Scale Professed by Students (DBS-PS).

### *Item collection and elaboration*

A previous study of psychological intervention models in disruptive behaviors allowed the collection of a base of potential indicators. Considering the problems and worries disruptive behavior can cause, either to teachers, students learning conditions, or to general school staff relationship, we seemed to have, at first, an enormous amount of disruptive behaviors, and, consequently, of all the items representing them.

In the field of theory models, several authors have suggested a connection between those items (Gotzens, 1986; Mendler & Curvin, 1989; Tattum, 1986; Wolfgang & Glikman, 1986). To the construction of items to include in a disruptive behavior evaluation instrument, it was also important a previous analysis of the instruments (Veiga, 1991,

1996) that have been elaborated aiming an evaluation of students social behavior at school (Arsenault & Loranger, 1986; Comer *et al.*, 1987; Loranger *et al.*, 1989).

In a study on teacher's perception of disruptive behavior in the classroom (Lawrence *et al.*, 1984, 1986), a study that has covered several European countries (France, Germany, Denmark, Switzerland and the United Kingdom), we find a clear, concise and operational concept of these kind of behaviors, as well as a survey of their incidence in the teacher's point of view. As this study is updated and comprehensive, besides having the specifications referred above, we decided to look for suggestions regarding the items to use in the evaluation instrument to create. This choice had the advantage of allowing the collection of several specialists (N= 130 educators) whom, besides being directly connected with disruptive behavior types and occurrence, represent the perception of what is going on in this field in five European countries and with an increasing tendency to approach and integration.

In this research and collection study, it was also necessary to decide if we should adopt an enormous amount of disruptive behaviors or choose a smaller number of items that, framed within evaluation purposes of the hypothetic construct *disruptive behavior*, formed a *specifications table*, that is, a scheme of what we pretended to evaluate (Guilford & Fruchter, 1981). We had, then, two alternatives: to include in the scale an enormous amount of disruptive behaviors (such as: throw papers into the air, write on desks, hide teacher's material, cheat in tests, slam doors, spit on the floor, etc.), or to select just the items, which, based on the disruptive concept presented, represented and enclosed all kinds of possible disruptive behaviors, hardly concretely described.

The former reasons, and the eventual inconvenient of a large amount of items (they can be filled in the same way for almost every individual or they can lead to a certain stereotype in individual answers), led to a selection of a small number of items, representative of three hypothetic dimensions specifically related to disruptive behavior (suggested by the literature reviewed): distraction-transgression; schoolmates aggression; teachers and other symbols of school authority aggression (Veiga, 1991, 1996). Trying to cover a whole group of disruptive behaviors hard to define, we included a larger item, 'I leave my seat, make noises or cause other problems, disturbing the class'.

After checking -through a pilot study, as we will see- that the chosen reactive agents had good item characteristics (Almeida & Freire, 2007; Gulford & Fruchter, 1981), they became part of the instrument that, since it was designed to evaluate the level of disruptive behavior students arrogate to themselves, was called 'Disruptive Behavior Scaled Professed' by Students (DBS-PS). It is called Scale because it is an instrument of evaluation with no competitiveness, success or failure meaning (Kerlinger, 1980); it is called Disruptive Behavior because it aims to evaluate students behaviors that disturb or seriously interfere with school environment or learning conditions; and it is Professed because it is the subject who describes himself.

The scale, developed in this context, besides being in consonance with explanatory and school disruptive behavior interference theories (Veiga, 1991, 1996), has the advantage of, globally, confirm the elements we had previously found through an open question to 72 students (24 from the 7th grade, 22 from the 8th and 26 from the 9th grade), asking them to specify possible student's behavior that goes against school rules, impairing

learning conditions or people's relationship within the school -definition of disruptive behavior largely accepted in international literature (Veiga, 1991, 1996).

### *Pilot study*

After having submitted a first scale version, with 20 items, to evaluation and discussion before a five teachers' group from secondary schools and two school psychologists, we made minor adjustments, improving some items formulation. In the initial item discussion, we followed the 'spoken reflection' method (Almeida & Freire, 2007; Guilford & Frucher, 1981), aiming to detect possible ambiguities and item inaccuracy, and if they gave or not, the appearance of evaluate students disruptive behavior, in the sense of an apparent validity of scale.

We made a 2nd version from this analysis, which had 17 items. The following items were erased: 'I act as a clown in the teacher's back'; 'I write on desks'; 'I cheat in tests'. The other items were placed randomly, except the 'I obey to teacher's orders' and 'I always get to school on time' items, that, being elaborated inversely, had respectively the 3rd and 12th place, to break the tendency to the stereotyped kind of answer (Almeida & Freire, 2007; Guilford & Frucher, 1981). After item numbering, the scale instructions and answer sheet were elaborated. As for answer graduation, we have chosen a Likert scale, relating the frequency of behaviors: entirely disagree (1), quite disagree (2), disagree more than agree (3), agree more than disagree (4), quite agree (5), entirely agree (6). The items 3 and 12 do not refer to disruption (inverse items), so the punctuation should be reconverted. Highest scores correspond to higher levels of disruptive behavior. 120 students were chosen randomly to study the discriminatory item power and the scale consistency coefficient, and the instrument was passed to them. This situation was also used to collect students reactions to answer instructions, the level of understanding of items, and to check the necessary time to answer the questions. The item 'I throw papers to my schoolmates' was withdrawn as it had not much discriminatory power. As the students understood all expressions sense, we decided to accept this 3rd version of the scale which had 16 items.

### *Participants*

The sample was made of 915 subjects among the 7th and the 9th grades, male and female, from public school, from Lisbon and Viseu. More exactly, the mentioned sites were chosen by means of a casual non-probabilistic sampling method. The sample constitution was based on the probabilistic sampling method by grouping: in each site three schools were randomly chosen and, inside them, classes were chosen, two per level and in the different schools, in a total of 36 classes.

### *Procedure*

After permission from the Ministry of Education, DBS-PS was collectively applied by two psychologists. In its application, we tried to control variables considered pertinent

to the study, namely: (a) Investigator gender effects, the scale was administered by two psychologists a man and a woman; (b) Motivation, it was stated that anyone who was not willing to cooperate could leave. We read a note, at the beginning, presenting the purpose of the investigation and informing the students we assured confidential individual results.

The time of day was also considered and the number of classes answering in the morning was similar to the one in the afternoon. The instructions were the same in every school where the instrument was applied.

## RESULTS

SDBP data was computed and subject to statistical analysis procedures with the SPSS software. The statistical analysis of the results was preceded by the inversion of numeric value of the negative items. Since the item discriminatory power analysis was very long, we chose not to include it here. We are going to present the results, as far as accuracy and validity are concerned.

### *Result accuracy*

To the SDBP result accuracy study, we determined the temporal stability of the results through a 'test retest method' and estimated item internal consistency (alpha homogeneity index) using the Reliability from SPSS process.

For the study of item internal consistency, we determined alpha indexes in total sample and in several sub-groups. In Table 1, the several alpha factors referring to the total sample and factors (obtained, as will be developed further on, by factorial analysis), considering the general sample, age, school grade, socio-economical level, region and gender.

In schoolmates aggression factor (SA), we can observe a comparatively inferior consistency index, which may be connected with the larger item heterogeneity; even though, there are groups where the values are superior to 0.75. In spite of the reduced item number in each factor -6 for distraction-transgression (DT), 5 for schoolmates aggression (SA), 5 for school authorities aggression (AA) and 16 in total disruption (DBTO)- in all other situations several consistency coefficient values are high and very high.

In the general factor (DBTO) and in every group analyzed, alpha coefficients are always very high (over 0.80). In younger groups, in the 7th grade, in high socio-economic level (SEL), females living in the Interior region, we find lower coefficients, which can mean this scale has some particularity for those groups; this is a subject that may be further developed in a future study.

Fidelity study for SDBP was conducted by analysis of temporal stability of results, and we used a retest-test in 184 subjects (20.12% of the sample), belonging to classes randomly chosen, with about a month between both applications. We had a value of  $r = 0.85$  for the general factor, which is highly significant ( $p < .001$ ).

Table 1. Internal-consistency reliability (alpha coefficients) of the factors of «DBS-PS».

Groups	Alpha			
	DT	SA	AA	DBTO
Total subjects (N= 915)	.78	.75	.77	.84
12-14 years (N= 484)	.76	.67	.78	.86
15-19 years (N= 431)	.79	.73	.77	.86
7th grade (N= 308)	.75	.70	.79	.84
8th grade (N= 302)	.76	.72	.77	.86
9th grade (N= 305)	.83	.77	.77	.88
SES low (N= 455)	.76	.71	.80	.85
SES average (N= 366)	.80	.70	.77	.86
SES high (N= 94)	.75	.69	.78	.83
Littoral region (N= 465)	.80	.71	.81	.87
Interior region (N= 450)	.77	.75	.75	.86
Males (N= 423)	.78	.72	.79	.87
Females (N= 492)	.78	.69	.75	.85

Construct validity

We started from the hypothesis that the scale contents, represented the three specific dimensions which were to be evaluated, found in reviewed literature (distraction-transgression, schoolmates aggression and school authority aggression), and presenting furthermore a general factor. This hypothesis was tested by means of a main compound analysis with Varimax rotation, using the Factor-PA1 procedure from SPSS software, with no previous definition of factor number. As a result, we obtained three specific factors with 51.1% of total variance explanation. The construct validity study fell into the sample group (N= 915).

As minimum value to selection of the items to include in SDBP factorial structure factors, we chose 0.42 in the rotated matrix, as this criterion has avoided item repetition in factors and made their interpretation easier.

Table 2 presents the three specific factors found, corresponding to the factorial analysis conducted, stating the item number, its description and total saturation from the round factorial matrix. Furthermore, it shows the variance percentage explained by each factor and its eigen-value.

Table 3 shows that every factor has a positive and statistically significant correlation with the global mark, with a distraction-transgression (DT) emphasis.

In order to interpret factors, we looked for the concept that seemed to synthesize the most the thematic of each selected for every factor. Therefore, we are now going to present each SDBP factor contents, in an explained variance decreasing order.

Table 2. Rotated factor loading for the items of the «DBS-PS» (N= 915).

Item-Factor I: Distraction-transgression (DT)		Loadings
14. I don't pay attention in the classroom.		.733
13. I miss classes		.714
09. I forget to bring my material to the classroom		.664
12. I arrive punctually in school*		.662
04. I speak without permission, disturbing the class		.610
08. I leave my place, yell and cause other disturbances in the classroom		.509
33% of total variance (eigen-value= 5.28)		
Item - Factor II: Schoolmates aggression (SA)		Loadings
02. I physically attack the schoolmates		.758
15. I verbally attack the schoolmates		.610
16. I threaten people at school.		.609
01. I intentionally destroy or break school material		.589
03. I obey the teachers*		.545
10.4% of total variance (eigen-value= 1.67)		
Item – Factor III: Aggression to school authorities (AA)		Loadings
07. I come to school under the influence of alcohol or drugs		.789
10. I steal in school.		.739
05. I physically attack the teachers		.675
11. I verbally attack the teachers		.528
06. I swear in the classroom		.457
7.7% of total variance (eigen-value= 1.23)		

\*Indicate inverse items

Table 3. Correlations between «DBS-PS» factors and the DBTO.

	DT	SA	AA
DBTO	.8718***	.8036***	.7638***

\*\*\* $p < .001$ 

**Factor I: Distraction-transgression (DT).** This factor includes 6 items, with special reference to distraction and forgetfulness, a certain scorn for classes and school, and a certain truancy from school (cut classes and not punctuality).

**Factor II: Schoolmates Aggression (SA).** This factor includes 5 items. The most saturated item in this factor is 'I physically attack the schoolmates'. Although we find some aggressive contents directed towards other 'persons in school' and to school material itself, the items present an inferior saturation, and this fact has some weight in the interpretation choice of 'schoolmates aggression'.

**Factor III: School Authority Aggression (AA).** This 5 item factor, concentrates provocative school behaviors (go to school drunk or drugged), stressing physical or word aggression to teachers and even school robbery itself.

The **General Factor (DBTO)** is formed by an integration of the three specific factors and reflects global disruption. Nevertheless, and although there are high co-relations between general factor and specific disruption areas, we can not assume that the differences from the first reflect differences in a given area.

Higher scores correspond to a greater disruptive behavior, and so it is necessary to do a previous inversion of the numeric value of the items considered inverse. After having done this, the total score consists in the addition of numeric values achieved in every item.

As it was suggested in literature and was previously assumed in this study, the disruptive behavior construct is multidimensional, with three specific factors explaining 51.1% of total result variance, so it can be deduced that the hypothesis of its internal validity is real. The final version of the scale, to be applied in later stages of the research, is included in Appendix 1. We are now going to analyze the scale external validity.

### *External validity*

To the study of external validity, it was considered the students' score relation in SDBP, on one hand, with the number of school failures in previous grades and, on the other, the average mark got in the end of the previous term, in the following subjects: Mathematics, Portuguese, History and Science (8th and 9th grades); and Mathematics, Portuguese, History and Arts (7th grade). The reason for the choice of these subjects had to do with considering them closer related to students' achievement, and furthermore, this criteria is largely used in investigation (Almeida & Freire, 2007; Arsenault, Loranger, & Milot, 1986, 1988; Gázquez *et al.*, 2005; Veiga, 1996, 2007). At this stage the hypothesis of an existing correlation between SDBP results and school marks was risen.

In what failures were concerned, there were three groups of students (A, no failures; B, one failure; C, two or more failures) and we made an analysis of variance of results in SDBP factors. Trying to detect or not the existence of differences in disruptive behavior between subjects with different failure numbers, an analysis was conducted of variance, using the Oneway procedure. Considering that the number of failures is bigger in higher grades, we decided to consider each grade separately (Almeida & Freire, 2007; Gázquez *et al.*, 2005; Veiga, 1996). The base hypothesis was the existence of statistically significant differences in disruptive behavior between subjects with no failures, with one failure and with two or more failures, having this last group the highest disruptive behavior.

The choice of the mentioned 'external criteria' (school markets and failure number) was due to two additional reasons. On one hand, it is a largely used criteria in the validity study of this kind of instruments (Veiga, 1991, 1996), and, on the other, we had a shortage of similar evaluation scales considered statistically valid.

Therefore, and considering the sample described above, we are now going to present the statistical analysis on the relation between SDBP scale and failure number. To obtain a more detailed analysis of the differences, we used the contrast tests (Sheffé test). The result variance analysis (Table 4) presented, to the 7th grade, significant F values ( $p < .01$  in PA;  $p < .001$  in the other factors). In the 9th grade, F values are not statistically significant, while in the 8th the difference significance is of  $p < .05$  and only in distraction-transgression (DT) and in the general factor of the scale (DBTO).



The complementary statistical analysis of group contrast (Table 4) reveals that the means are more differentiated between students with no failures (A) and the ones who failed once (B), than among students with no failures and students who have failed twice or more (C). This result may show that C is not B's reinforcement, that is, that students from group C have their own characteristics, besides being a smaller group.

Bilateral contrasts conducted showed that, within distraction transgression factor (DT), there are statistically significant differences between subjects with no failures and the ones who have failed once, whether it was in the 7th grade ( $T = -2.57$ ;  $df = 249$ ;  $p < .01$ ), in the 8th ( $T = -2.24$ ;  $df = 244$ ;  $p < .01$ ), or in the 9th ( $T = -2.57$ ;  $df = 241$ ;  $p < .01$ ). Still in factor DT, the difference between the mean from students with no failures (A) and the mean from students with two or more failures (C), and group C superiority, acquires statistical significance, whether in 7th grade ( $T = -2.75$ ;  $df = 182$ ;  $p < .01$ ), or in the 8th grade ( $T = -2.25$ ;  $df = 194$ ;  $p < .01$ ).

In schoolmates aggression factor (SA), 7th grade students with no failures considered themselves significantly less aggressive than students with one failure ( $T = -3.27$ ;  $df = 249$ ;  $p < .01$ ), and there are no other statistical significant differences except in the 9th grade and only between the students with one failure (B) and two or more

Table 4. Analysis of variance in «DBS-PS», by number of failures and grade.

Subscale	Source	df	MS	F	p
7th grade					
DT	Between-groups	2	113.680	5.778	.003**
	Within-groups	298	19.674		
SA	Between-groups	2	66.185	5.401	.005**
	Within-groups	298	12.253		
AA	Between-groups	2	34.841	6.634	.001***
	Within-groups	298	5.251		
DBTO	Between-groups	2	581.046	8.523	.000***
	Within-groups	298	68.174		
8th grade					
DT	Between-groups	2	95.623	3.929	.021*
	Within-groups	285	24.332		
SA	Between-groups	2	8.136	.794	.452 ns
	Within-groups	285	10.239		
AA	Between-groups	2	12.614	2.017	.134 ns
	Within-groups	285	6.253		
DBTO	Between-groups	2	254.204	3.189	.042*
	Within-groups	285	79.702		
9th grade					
DT	Between-groups	2	83.847	2.829	.060 ns
	Within-groups	293	29.639		
SA	Between-groups	2	21.206	1.826	.162 ns
	Within-groups	293	11.612		
AA	Between-groups	2	13.468	2.047	.130 ns
	Within-groups	293	6.578		
DBTO	Between-groups	2	185.116	2.010	.135 ns
	Within-groups	293	92.087		

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; ns= no significant

Table 5. Mean and Standard Deviation in «DBS-PS», by different groups of failures and grade.

N	DT		SA		AA		DBTO	
	M	SD	M	SD	M	SD	M	SD
7th grade								
A 134	11.64	3.95	7.50	3.01	5.67	1.29	24.82	6.47
B 117	13.04	4.58	8.88	3.55	6.69	2.78	28.61	8.80
C 50	13.88	5.22	8.74	4.46	6.48	2.99	29.10	10.84
8th grade								
A 154	13.25	4.74	7.54	2.93	6.00	2.59	26.81	8.56
B 92	14.71	5.02	8.06	3.69	6.51	2.37	29.29	9.57
C 42	15.19	5.37	7.88	2.94	6.73	2.40	29.80	8.76
9th grade								
A 165	13.82	5.30	7.88	3.43	6.35	2.71	28.05	9.74
B 78	15.48	5.82	8.24	4.00	6.88	2.64	30.61	10.55
C 53	15.05	5.28	7.09	2.52	6.00	1.87	28.15	7.39

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; ns= no significant

failures ( $T = -2.02$ ;  $df = 129$ ;  $p < .05$ ). In school authority aggression factor (AA), the results are similar to the ones related to schoolmates aggression we have already discussed (Table 5).

The results also discriminate the contrast groups taken to the general factor (DBTO), in 7th and 8th grades (Table 6). Therefore, differences in DBTO among students with no failures (A) and students with one (B) or more failures (C), and these last groups superiority, are statistically significant in the following situations: 7th grade, contrast A/B ( $T = -3.84$ ;  $df = 249$ ;  $p < .001$ ); 7th grade, contrast A/C ( $T = -2.62$ ;  $df = 182$ ;  $p < .01$ ); 8th grade, contrast A/B ( $T = -2.11$ ;  $df = 244$ ;  $p < .05$ ); 8th grade, contrast A/C ( $T = -1.92$ ;  $df = 194$ ;  $p < .01$ ). In the 9th grade and still considering the DBTO, only the students with no failures present less disruptive behavior than students with one failure ( $T = -1.94$ ;  $df = 241$ ;  $p < .05$ ).

The indicated means always present inferior disruptive values in students with a smaller number of failures, except in the contrasts B/C where the tendency is that

Table 6. T values in «DBS-PS», by different groups of failures (A/B/C) and grade.

N	DT	SA	AA	DBTO
7th grade				
A/B	-2.57**	-3.27***	-3.63***	-3.84***
A/C	-2.75**	-1.80 ns	-1.84 ns	-2.62**
B/C	-0.98 ns	0.20 ns	0.43 ns	-0.28 ns
8th grade				
A/B	-2.24**	-1.15 ns	-1.53 ns	-2.11*
A/C	-2.25**	-0.65 ns	-1.68 ns	-1.92*
B/C	-0.52 ns	0.31 ns	-0.49 ns	-0.31 ns
9th grade				
A/B	-2.22**	-0.70 ns	-1.46 ns	-1.94*
A/C	-1.43 ns	1.81 ns	1.06 ns	-0.06 ns
B/C	0.44 ns	-2.02*	2.24*	1.44 ns

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; ns= no significant

students with one failure have higher means, even showing statistically significant differences in schoolmates and teachers aggression, in the 9th grade. The smaller differentiations between groups B and C can be related to the smaller number of students in both cases, or with the 'selective effect' that failures have in school population, that is, students with greater learning disabilities may have been persuaded that they were not able to do it, and may have left school (Almeida & Freire, 2007; Veiga, 1996; 2007). The consideration of the number of failures as external criteria of result validation in SDBP has to face, in this way, some difficulties.

The simultaneous external validity has been evaluated by punctuation inter-correlation analysis in SDBP with the mean of school marks and four subjects usually used in this kind of study. Correlation coefficients found, as well as their statistical significance level, are presented in Table 7. We can see that only in the 7th and the 8th grades appear statistically significant and negative correlation coefficients, although not very high. The greatest correlation indexes ( $p < .001$ ) are in DBTO, total punctuation of disruptive behavior. Schoolmates aggression appears to be the less related with students school marks dimension, although it shows a high level of statistic significance ( $p < .01$ ).

In the 9th grade, none of the values found was statistically significant, which can be related to the 'selective effect' of failure and disruptive behavior within student population (students with greater disruptive behavior and/or greater learning disabilities might have already left school), or with progressive dissociation, alongside schooling and age, between disruptive behavior and school markets. This explanation may be a less determining influence of disruptive behavior in older students profit from school work.

*Table 7.* Correlations between results in factors of "DBS-PS" and school marks for 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> grade.

Subscale	7th grade (N= 308)	8th grade (N= 302)	9th grade (N= 305)
DT	-.18**	-.15**	-.01 ns
SA	-.16**	-.15**	-.04 ns
AA	-.16**	-.19***	-.06 ns
DBTO	-.21***	-.19***	-.04 ns

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ ; ns= no significant

## DISCUSSION

A scale was built to determine disruptive behavior evaluation and its psychometric qualities were analyzed. The construct disruptive behavior multi-dimensionality hypothesis was confirmed by means of a result factorial analysis. This analysis showed that, besides a general factor, there were 3 factors (that explain 51.1% of total variance) and was of use to study the construct or internal validity of the scale. The psychometric

qualities of SDBP were evaluated within internal consistency coefficients to different factors, from temporal stability and external validity.

In external validity study, two parameters of profiting from school work were used, having, in relation to school marks, been found statistically significant correlation coefficients to 7th and 8th grades, but not to the 9th grade. Yet, school results analysis for disruptive behavior in 9th grade students has shown some statistically significant differences between students with no failures and students with one or more failures. The results point to other studies that have found significant and opposite correlations between school profit and socio-school behaviors professed by students (Arsenault, Loranger & Milot, 1988; Loranger *et al.*, 1989; Gázquez *et al.*, 2005). Progressive dissociation, alongside schooling, between the number of failures and disruptive behavior, may be explained by a progressive reduction, in adolescence, of cultural pressure to obedience to rules -as a reflex of cultural stereotypes ('When you grow up, you can do things your way'), and by the social consideration of progressive autonomy as useful to human development. In fact, cultural pressure to obey the rules is weaker and more inconsistent in older subjects, allowing them to resort, in a weak school performance situation, to self valorization through new and different sources: working world entrance perspective, and completion of psychosocial moratorium (Kaplan, 1982; Veiga, 2001; 2007).

Attending to the identified factors contents, we may presume that the weight reduction of those variables calls to a greater consideration for students' real interests, their involvement in specific activities relating to schoolmates integration, and even to the development of a free and more human relation between teachers (symbols of school authority) and students. Disruptive behavior instruments existence may represent a useful way to a better student knowledge by psychologists, teachers and other education professionals. It was concluded, at last, that the results of the statistical analysis conducted on psychometric characteristics of SDBP had positive values in terms of their use in practice and investigation in Education Sciences.

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Received, november 2, 2007

Final acceptance, february 15, 2008

**APPENDIX**  
**DISRUPTIVE BEHAVIOR SCALE PROFESSED BY STUDENTS (DBS-PS)**

On a scale from 1 to 6 with 1 indicating that you strongly disagree and 6 indicating that you strongly agree, rate the extent to which you agree/disagree with the following statements:

Strongly disagree						Strongly agree
1	2	3	4	5	6	
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01. I intentionally destroy or break school material						
02. I physically attack the schoolmates						
03. I obey the teachers*						
04. I speak without permission, disturbing the class						
05. I physically attack the teachers						
06. I swear in the classroom						
07. I come to school under the influence of alcohol or drugs						
08. I leave my place, yell and cause other disturbances in the classroom						
09. I forget to bring my material to the classroom						
10. I steal in school						
11. I verbally attack the teachers						
12. I arrive punctually in school*						
13. I miss classes						
14. I don't pay attention in the classroom						
15. I verbally attack the schoolmates						
16. I threaten people at school						
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