

Teacher's Classroom Management Behavior and Students' Classroom Misbehavior: A Study with 5th through 9th- Grade Students

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Abstract

Introduction. Classroom misbehavior is a major source of classroom-wasted time and a situation that negatively interferes with students' opportunity to learn.

Method. The present study investigated the relation between 5th through 9th grade perceived Portuguese teacher's classroom management, teacher's perceived time spent with misbehavior, teacher's self-efficacy, and teacher's perceived classroom misbehavior. A conditional process analysis of the relation between teacher's classroom management and teacher's perceived classroom misbehavior with mediator and moderator variables was tested.

Results. Generically the results show that (1) teachers who perceive themselves as more controllers of students' behaviors tend to perceive less misbehavior in the classroom; (2) that both teacher's self-efficacy (TSE) and time spent with classroom misbehavior (TSMisb) are better predictors of classroom misbehavior than the classroom behavior management style; (3) both TSE and TSMisb fully mediate the relation between classroom management style and classroom perceived misbehavior.

Discussion and Conclusion. Teachers must, therefore, learn the specific behaviors that more likely optimize the available instructional time and reduce time and energy wasted with students' misbehavior.

Keywords: classroom management style; classroom misbehavior; teacher's self-efficacy; time spent with misbehavior.

Resumen

Introducción. Los problemas de comportamiento constituyen una de las más grandes fuentes de pérdida de tiempo en el aula y afectan negativamente las oportunidades de aprendizaje de los alumnos.

Método. Participaron en este estudio 600 profesores de los segundo y tercer ciclos del sistema educativo portugués (5° a 9° cursos). Se estudio la relación entre las percepciones de los profesores sobre su estilo de gestión de clase, el tiempo usado con conductas disruptivas, la autoeficacia docente y la disciplina en el aula.

Resultados. Genéricamente los resultados muestran que: (1) los profesores que se perciben como más controladores de las conductas de los alumnos tienden a percibir menos problemas de comportamiento en el aula; (2) que la autoeficacia de los profesores y el tiempo gastado con conductas disruptivas en el aula son mejores predictores de la indisciplina que el estilo de gestión de clase; (3) la autoeficacia e el tiempo perdido con conductas disruptivas median totalmente la relación entre el estilo de gestión del aula y la indisciplina percibida.

Discusión y Conclusión. Los profesores deben conocer los comportamientos específicos que más probablemente optimizan el tiempo de instrucción disponible y reducen el tiempo y la energía desperdiciados con la indisciplina en el aula.

Palabras clave: Gestión de clase; problemas de comportamiento; autoeficacia docente; tiempo gastado con conductas disruptivas.

Introduction

Classroom disruptive behaviors are one of the main challenges for teachers (Demir, 2009; Pane, 2010). Indeed classroom misbehavior is the most common reason for teachers to refer to school administrators and other school personnel and for teacher burnout (Wang, Hall, & Rahimi, 2015). Research consistently shows that students' misbehavior disrupts classroom order and learning, negatively affecting academic achievement (Sun & Shek, 2012).

Disrespect for rules and procedures, wandering around the room, talking out of turn, passive engagement in the classroom, disruption of classmates' work and moving the furniture in the classroom, are just some of a wide range of behaviors referred by teachers as classroom misbehavior (Briesch, Briesch, & Chafouleas, 2015; Postholm, 2013; Sun & Shek, 2012). Often teachers attribute these classroom misbehaviors to students' lack of interest in school contents, to wrong educational politics, to school and society permissiveness about misbehavior and violence, and most of all to poor parenting (Ding, Li, Li, & Kulm, 2010; Lopes & Santos, 2013; Riley, Lewis, & Wang, 2012). Research also shows that teachers, schools, and even societies perceive and deal with school and classroom misbehavior in rather different ways (Hagenauer, Hascher, & Volet, 2015). As far as we know, there is however, no extensive study conducted in Portugal relating perceived teacher's classroom management, and teacher's perceived classroom misbehavior. This may not be surprising since classroom management, one of the most important ways of inhibiting classroom misbehavior (Doyle, 1986), is almost absent from pre-service teachers' education in Portugal (Lopes & Oliveira, 2017). This does not happen only in Portugal, however. Landau (2001), for instance, reviewed 20 teacher education programs in the United States and found that only one had a course with the explicit name of Classroom Management. Gore and Parkes (2007) found an identical pattern in Australia.

Classroom Management and Students' Classroom Misbehavior

Teacher's classroom management is classically identified as one of the most important variables to understand students' classroom misbehavior (Doyle, 1986; Brophy, 1996). Classroom management refers to the set of strategies used by the teacher to increase students' cooperation and engagement and to decrease students' disruptive

behaviors, thus keeping an appropriate learning environment (Postholm, 2013). This involves the management of classroom space, time and activities, as well as the management of student behavior, taking into account teacher's characteristics, skills and competencies (Djigić & Stojiljković, 2011). Classroom management also encompasses the establishment of clear rules and procedures to coordinate classroom activities (Brophy, 1996). The rules are intended to control students' behaviors that may disturb classroom activities and environment whereas the procedures represent classroom actions allowed by the teacher, i.e., according to classroom's activities and tasks (Doyle, 1986).

It is not unusual however to find classrooms where rules and procedures are not explicit. This may happen if the teacher both believes that the students are familiar with classroom rules and that the students do not need to be reminded about those rules (Piwovar, Thiel, & Ophardt, 2013). Inconsistencies in rules' setting between teachers may also trigger disruptive behaviors. Also, when there are no rules or when rules are not explicit, some students may test the boundaries of classroom order and may disturb the class, thus interfering with classroom activities (Tauber, 2007).

Teacher's Self-efficacy and Students' Classroom Misbehavior

The research suggests that teacher's behaviors and actions in the classroom and the way the teacher deals with classroom misbehavior may be mediated by teacher's self-efficacy beliefs (O'Neill & Stephenson, 2012; Tschannen-Moran & Hoy, 2001). Bandura (1982) defines perceived self-efficacy as a set of judgments about one's ability to perform a certain action or to deal with a specific situation. However, self-efficacy does not refer to the number of skills that a person owns but to what the person thinks she can perform with those skills (Hicks, 2012). Different people with similar skills can, therefore, perform the same actions differently according to their efficacy beliefs (Bandura, 1993).

Within the classroom context, self-efficacy beliefs seem to arise mostly from judgments about the learning process (O'Neill & Stephenson, 2012). Specifically, teachers' self-efficacy beliefs have much to do with the teacher's perceived ability to promote positive changes in the students (Gibson & Dembo, 1984). High self-efficacy

seems to be associated with effective classroom management and to be positively correlated with democratic classroom management (Dârjan, 2012). Consequently, a teacher with high self-efficacy will likely allow more independent students' behaviors in the classroom. Instead, a teacher with low self-efficacy will likely try to strengthen control over the students, limiting their actions.

Gordon (2001) suggests that teachers with high self-efficacy feel more confident managing students' misbehavior. These teachers seem to hold a more humanistic perspective about behavior management and seem to attribute less negative consequences for students' disruptive behaviors. Usually, teachers with high self-efficacy are also more effective in both classroom management and classroom instruction (Dârjan, 2012). In contrast, teachers with low self-efficacy may feel less apt to manage students' behavior. These teachers seem to assume a less humanistic approach, using more negative consequences for students' misbehavior (Khani & Mizae, 2015).

Nevertheless, while authors like Hicks (2012) stress that there is a direct relationship between the perceived behavior of the students and teacher's self-efficacy, others (e.g., Main & Hammond, 2008) caution that perception and reality are separate entities and that teacher's confidence in the management of student's behavior may not translate into practice.

Students' Classroom Misbehavior and Teaching Time Spent with Misbehavior

The maximization of instructional time is crucial for the teachers to reach her teaching goals and to increase students' learning opportunities (Berliner, 1991; Rogers & Mirra, 2014). The classroom instructional time, however, seldom or never equals the allocated time (the amount of time made available for teaching by a national or local authority) because of classroom events such as delays or the transition between activities (Abadzi, 2007). The available learning time is the time left for teaching and learning after classroom time loss is deducted from the classroom allocated time (Rogers & Mirra, 2014).

Time spent with misbehavior has been identified as a significant cause of classroom time loss and a source of impoverished students' performance. Conversely,

an orderly and positive classroom climate has been positively related to student's performance and with the reduction of the impact of students' socioeconomic status on academic performance. Not surprisingly, significant differences between teachers, schools, school neighborhoods, and even countries have been reported (Abadzi, 2007; Organisation for Economic Co-operation and Development, OECD, 2013).

Interestingly there seems to be a mismatch between students and teachers' perceived classroom time spent with misbehavior. An OECD (2013) study about classroom order and student performance, conducted with 15-year old students in 65 countries worldwide (Portugal included) show that two out of three students report that never or almost never is there noise or disorder in the classroom. An even more recent study from the OECD (2015) conducted with students from 39 countries (Portugal included) shows that discipline in classroom improved from 2003 to 2012. On the other hand, a study conducted in Portugal with k-1 through k-12 (6-12 years old) teachers found that teachers report spending an average of 10 to 30% of their classroom time with misbehavior and that more than 85% of the participants feel that classroom disruption significantly increased in the last five years (Lopes & Oliveira, personal communication, National Parliament, May 11, 2015). This mismatch apparently shows that classroom discipline is at least in part a perceived construct and that the classroom status may significantly influence the perception of how orderly classroom are.

The literature does not usually explore the relation between teachers' perceived time spent with misbehavior and teachers' perceived classroom misbehavior. Although we could expect that teachers that perceive to spend more classroom time with misbehavior also perceive more classroom misbehavior, we have no clear evidence about that or of the circumstances under which that relation may occur. It can happen for instance that highly controlling teachers perceive that they are spending too much time with misbehavior even if they perceive that misbehavior is unusual in their classrooms.

Students' Classroom Misbehavior and Grade Level

Although there is no clear reference in the literature about the relationship between perceived classroom misbehavior and grade level, some authors (e.g., Gulchak

& Lopes, 2007; Lopes & Santos, 2013) suggest that students' misbehavior increases till 9th grade and then somehow decline. Other studies (e.g., Putnam, Luiselli, Handler, & Jefferson, 2003; Sugai, Sprague, Horner, & Walker, 2000) found that discipline referrals tend to increase from elementary to junior high schools. This may be partly related to the fact that most disrupting students become increasingly alienated from the school curriculum, which will likely push these students to engage in behaviors that are competitive with the classroom flow (Lopes, 2009). From 9th grade on (14-year-old students) classroom, disruption seems to be more likely in vocational courses than in regular courses. Eventually, students from vocational courses become less involved with the general school's goals and ultimately perceived themselves as less competent. More of these students may so disrupt the classroom flow than their peers from regular classes (Espelage & Lopes, 2013).

Objectives and Hypotheses

The main goal of the present study was to study the relation between 2nd Cycle (5th and 6th grade) and 3rd Cycle (7th, 8th and 9th grade) teacher's classroom management, teacher's perceived time spend with misbehavior, teacher's perceived self-efficacy, and teacher's perceived classroom misbehavior. A conditional process analysis of the relation between teacher's classroom management and teacher's perceived classroom misbehavior with mediator and moderator variables was tested. Specifically, we wanted to test the following hypotheses:

- a) Teachers that perceive themselves as more controlling in classroom behavior management perceive less classroom misbehavior.
- b) Both teachers' perceived self-efficacy and perceived time spent with misbehavior mediate the relation between classroom management and classroom misbehavior in the direction hypothesized in a).
- c) The relation hypothesized in b) is furthermore moderated by grade level.

Method

Participants

Six-hundred Portuguese teachers from 5th to 9th grade participated in this study. One hundred and thirty-nine (23.2%) participants were male, and 461 (76.8%) participants were female. From the 600 participants, 11 (1.8%) have less than 3 years of

professional experience, 29 (4.8%) have between 4 and 9 years of experience, 217 (36.2%) have between 10 and 20 years of experience and 343 (57.2%) have more than 20 years of professional experience ($Mdn = 4$, $IQR = 1$)¹. One hundred seventy-five participants (29.2%) are junior high school teachers (5th and 6th grade) (2nd Cycle, in Portugal) and 425 (70.8%) are high school teachers (7th, 8th and 9th grade) (3rd Cycle in Portugal). Four hundred and eighty-eight participants (81.3%) teach in public schools, and 112 (18.7%) teach in private schools.

Instruments

Teacher's Perceived Classroom Misbehavior Questionnaire (TPCMQ). The TPCMQ measures the degree of perceived classroom misbehavior by the teacher in his classroom. The questionnaire includes 14 items that correspond to behaviors usually considered problematic by teachers. Participants are requested to indicate the frequency of these behaviors in their classrooms. Respondent teachers are requested to state how frequently specific students' behaviors occur on their classrooms, in a five-point-scale (Seldom or Never - 1; A Few Times - 2; Sometimes - 3; Often - 4; Most Often - 5). We developed the TPCMQ with a sample of Portuguese teachers from the original Sun and Shek (2012) categories of student problem behavior in the classroom. A principal component analysis (PCA) with an oblique rotation (oblimin) was conducted on the 14 items of the questionnaire. Two components emerged from PCA: one component (eight items) that seems to represent overt classroom unruly behavior; the second component (six items) seems to represent more covert and non-cooperative classroom misbehavior. These two components in combination explain 58.3% of the variance. The average variance extracted is .88. The reliability for all scale is .91 (.89 for component 1 and .84 for component 2). The composite reliability of all scale is .94. A confirmatory factor analysis (CFA) was also conducted. The final adjusted model considering the error correlation of items 2 and 5 and items 1 and 9 revealed a fair model fit, relative chi-square (χ^2/df) = 4.48, goodness of fit index (GFI) = .93, comparative fit index (CFI) = .94, Tucker-Lewis index (TLI) = .92, root mean square error of approximation (RMSEA) = .07. Very high correlations (.70) were found between the overt and covert

¹ According to the TALIS Report (OECD, 2014), the average years of experience of Portuguese teachers high school teachers is 19.4 against an average of 16.2 from participant countries.

behaviors components of the scale. Therefore, multicollinearity problems may arise. For our study, only the overt scale was used.

Behavior and Instructional Management Scale (BIMS) (Martin & Sass, 2010)

The BIMS is a 12-item scale initially developed by Martin and Sass (2010), using a sample of United States teachers. The BIMS is composed of two subscales: Behavior Management (BM) and Instruction Management (IM). BM has to do with the establishment of rules and IM has to do with how the teacher organizes the lesson, monitors seatwork, etc. Each item must be rated on a 6-point scale ranging from strongly agree to disagree strongly, with higher scores indicating a more controlling approach to instruction and behavior.

A Portuguese version of the scale was recently developed by the authors (Sass, Lopes, Oliveira, & Martin, 2016). A CFA revealed a good model fit [$\chi^2(53) = 278.59, p < .001, CFI = .96, TLI = .96, RMSEA = .08$] for the two-factor solution of the scale. Adequate internal consistency reliability estimates were also obtained [BM ($\omega = 0.85, 95\% \text{ CI } 0.83 \text{ to } 0.87, \& \alpha = 0.83$) and IM ($\omega = 0.80, 95\% \text{ CI } 0.78 \text{ to } 0.82, \& \alpha = 0.79$) subscales (slightly better than the original set of items)]. For the purposes of this study, we only used the BM subscale.

Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001). The TSES is a 12-item questionnaire intended to assess teacher's sense of efficacy, defined as "... teachers' judgments about their abilities to promote students' learning" (Hoy & Spero, 2005, p. 343). An exploratory factor analysis with a Varimax rotation, conducted by the authors, revealed a three-factor solution: Instructional Strategies, Classroom Management, and Student Engagement. Each item must be rated on a 9-point scale ranging from 1 (nothing) to 9 (a great deal). The three dimensions in combination explain 69.1% of the variance. The internal consistency for the all scale is $\alpha = 0.94$, ($\alpha = 0.91$ for Instructional Strategies, $\alpha = .90$ for Classroom Management and $\alpha = .87$ for Student Engagement). The internal consistency for our own data is $\alpha = 0.91$, ($\alpha = 0.75$ for Instructional Strategies, $\alpha = .87$ for Classroom Management and $\alpha = .88$ for Student Engagement). For this study, we used the Classroom Management subscale only

Procedure

Data were collected online through the Survey Monkey® platform. Emails were sent to schools' headmasters of all over the country explaining the objectives of the survey, and providing a link through which the school teachers could access the survey. School head teachers were requested to publicize the survey among their school teachers and among other teachers they were familiar with. Participants should fill the questionnaires of the survey by this order: Sociodemographic Questionnaire, TPCMQ, BIMS, and TSES.

Data analysis

The statistical package SPSS 23 for Windows was used for descriptive statistics, to conduct slope difference tests and to draw interaction plots between variables. The AMOS 23 software for WINDOWS was used to test the effect of classroom behavior management on classroom misbehavior, by means of a mediation model with multigroup moderation, in the framework of a conditional process analysis. "Conditional process analysis" is used when one's analytical goal is to describe and understand the conditional nature of the mechanism or mechanisms by which a variable transmits its effect on another" (Hayes, 2013, p. 325). In the present case, a conditional process analysis of the relation between perceived teacher's classroom management and teacher's perceived classroom misbehavior with mediator and moderator variables was tested.

Results

Perceived Classroom Behavior Management and Perceived Classroom Misbehavior

The median of the results for the set of items of perceived classroom misbehavior was computed for each participant. Table 1 shows the percentage of participants for each value of the median in this set of items. The same procedure was followed to report results in perceived classroom management.

The results show that almost 75% of the participants refer that misbehavior seldom (or "only a few times") occur in their classrooms and that almost 90% assert to commonly adopting highly controlling behaviors in the classroom.

Table 1
Perceived classroom misbehavior

1	2	3	4	5
Seldom or Never	A Few Times	Sometime s	Often	Most Often
29.8%	44.3%	20%	5%	.8%

Table 2
Perceived classroom behavior management

1	2	3	4	5	6
Completely Disagree	Disagree	Somehow Disagree	Somehow Agree	Agree	Completely Agree
.2%	.2%	.3%	10.2%	44%	45.2%

Note: “Agree” or “Disagree” with teacher’s controlling behaviors

Results also show that classroom behavior management is significantly related to classroom misbehavior [$\tau = -.14$, p (one-tailed) $< .001$]. Specifically, more controlling teachers tend to perceive less classroom misbehavior. However, this association is weak.

Classroom Behavior Management, Teacher’s Self-efficacy, Time Spent with Misbehavior and Classroom Misbehavior

The effect of classroom behavior management (BehMg) on classroom misbehavior (ClasMisb) was tested using a mediation model with multigroup moderation by grade level while controlling for school type (public/private). Teacher’s self-efficacy (TSE) and time spent with classroom misbehavior (TSpentMis) were used as mediators of the relation between BehMg and ClasMisb. Descriptive statistics for TSE and TSpentMis are shown in Table 3.

Table 3

Perceived time spent with misbehavior and teacher's self-efficacy in classroom management

Time spent with Misbehavior		Teacher's self-efficacy	
< 10%	132 (22%)	1	1 (.2%)
10% to 20%	194 (32.3%)	2	1 (.2%)
20% to 30%	155 (25.8%)	3	8 (1.3%)
30% to 40%	66 (11%)	4	1 (.2%)
40% to 50%	27 (4.5%)	5	88 (14.7%)
50% to 60%	18 (3%)	6	74 (12.3%)
60% to 70%	4 (.7%)	7	242 (40.3%)
70% to 80%	2 (.3%)	8	107 (17.8%)
80% to 90%	2 (.3%)	9	78 (13%)
Total	600 (100%)	Total	600 (100%)

Note: For teacher's self-efficacy 1 means "very low self-efficacy" and 9 means "very high self-efficacy."

The results show that around 90% of participants spent no more than 30% of the class time with misbehavior. Also, about 70% of participants hold a result greater than 6 in classroom management self-efficacy (in a scale that ranges from 1 = nothing, to 9 = great deal). Results are therefore biased towards high levels of self-efficacy, generating a non-normal distribution.

Classroom behavior management without mediators significantly predicted classroom misbehavior, [$\beta = -.15$, $t(600) = 10.43$, $p < .001$], and explains a significant proportion of variance in classroom misbehavior scores, [$R^2 = .02$, $F(1, 600) = 8.99$, $p = .003$]. Results also indicate that teacher's self-efficacy (TSE) was a significant predictor of classroom misbehavior [$\beta = -.28$, $t(600) = 22.77$, $p < .001$], predicting a significant proportion of variance in classroom misbehavior scores [$R^2 = .18$, $F(1, 600) = 129.50$, $p < .001$]. Time spent with classroom misbehavior significantly predicted classroom misbehavior too [$\beta = -.34$, $t(600) = 15.72$, $p < .001$], predicting a significant proportion

of variance in classroom misbehavior scores [$R^2 = .29$, $F(1, 600) = 246.97$, $p < .001$]. These results support the mediational hypothesis. The global model is depicted in Figure 1.

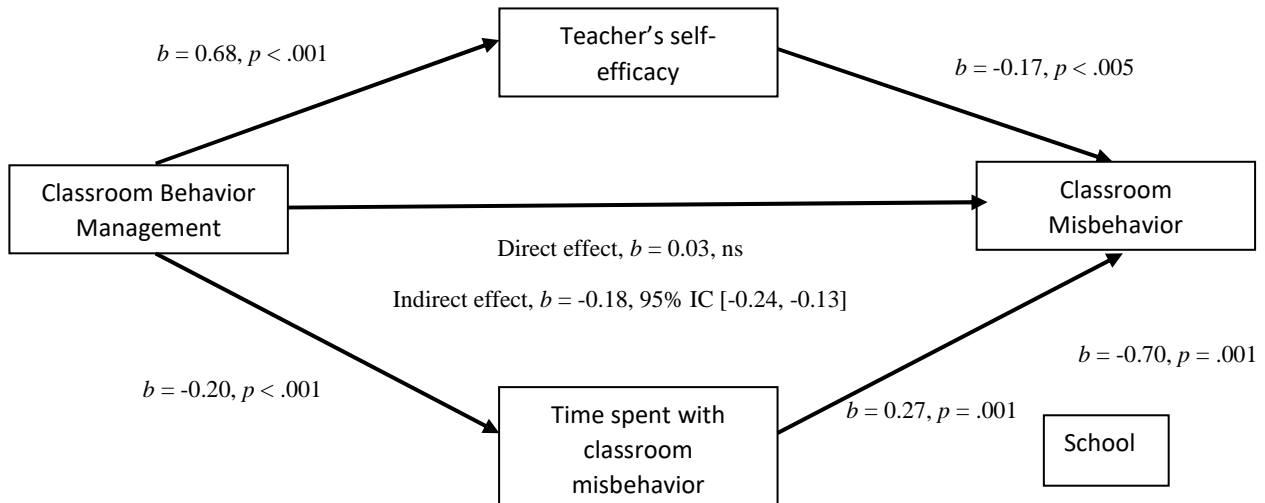


Figure 1. Classroom behavior management and classroom misbehavior with mediators

The results show that classroom behavior management was no longer a significant predictor of satisfaction after controlling for both teacher's self-efficacy and for time spent with misbehavior, which is consistent with full mediation. Moreover in the condition of mediation the slope changes from negative (-.15) to near zero positive.

Approximately 34% of the variance in classroom misbehavior was accounted for by the predictors ($R^2 = .34$). The indirect effect was tested using a bootstrap estimation approach with 2000 samples. These results indicated that higher scores in classroom management (more controlling teachers) were associated with approximately -.33 points in perceived classroom misbehavior (less classroom misbehavior) as mediated by teacher's self-efficacy and time spent with classroom misbehavior. The results also show that time spent with classroom misbehavior is the best single predictor of classroom misbehavior and that classroom behavior management is a powerful predictor of teacher's self-efficacy which means that more controlling teachers feel much more confident about their efficacy in classroom management.

Figure 2 shows the plots for the three-way interactions effects between the independent exogenous variable classroom misbehavior, and the endogenous independent variables teacher's self-efficacy and time spent with a classroom for the prediction of classroom misbehavior. No significant differences for slopes were found (see Table 4). However, the analysis of Figure 2 indicates that teachers with high self-efficacy and low time spent with misbehavior perceive less classroom misbehavior than any other teachers. This shows that both teacher self-efficacy and (mainly) time spent with classroom misbehavior are significant predictors and better predictors of classroom misbehavior than classroom behavior management.

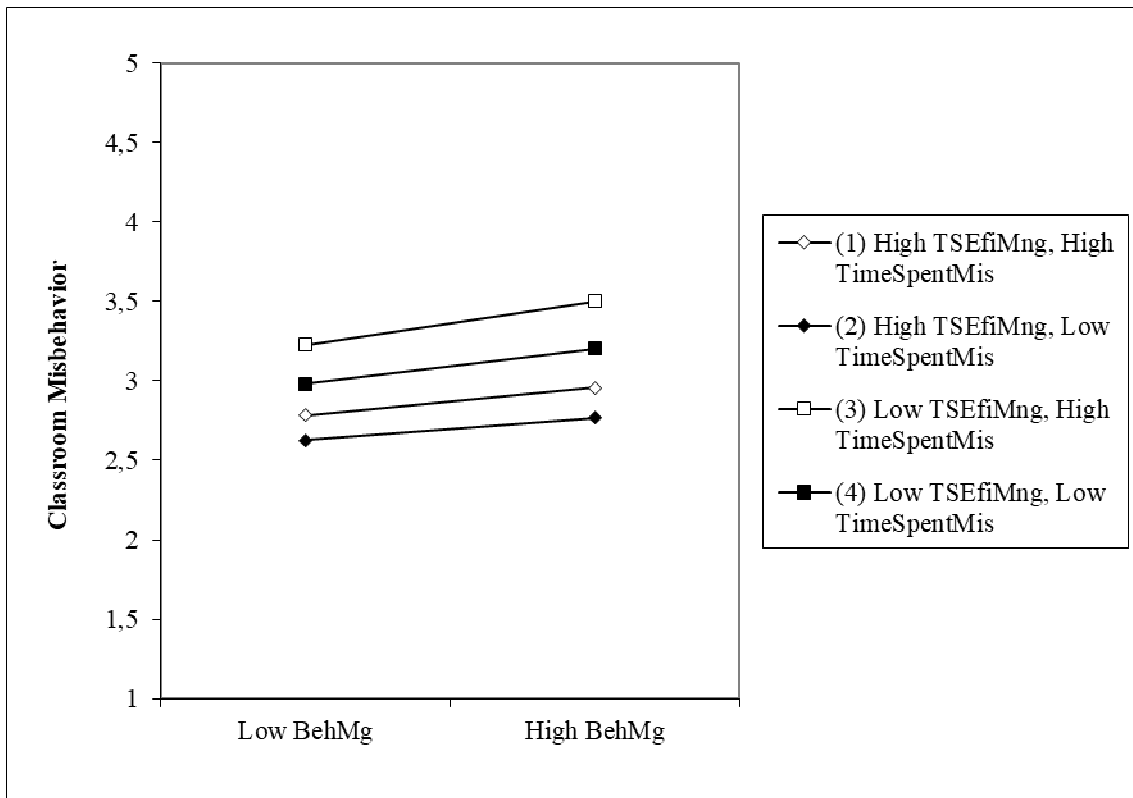


Figure 2. Interaction plots of classroom management, self-efficacy, time spent with misbehavior and classroom misbehavior

Table 4
Slope difference tests

Pair of slopes	<i>t</i> -value for slope difference	<i>p</i> -value for slope difference
(1) and (2)	.05	.961
(1) and (3)	-.15	.883
(1) and (4)	-.07	.942
(2) and (3)	-.18	.859
(2) and (4)	-.13	.898
(3) and (4)	.10	.918

Finally, a multigroup moderation analysis was conducted using grade (i.e., cycle) as moderator. Specifically, the model was tested with 2nd Cycle (5th and 6th grades) and 3rd Cycle (7th, 8th and 9th grades) teachers using the critical ratios method of comparison. Results show that the moderator effect of the grade is significant only for the control variable school. Specifically private schools 2nd Cycle teachers perceive fewer classroom misbehaviors than teachers from public schools [$z = 2, 99, p < .001$]. However, no differences were found for 3rd Cycle teachers.

Discussion

Classroom Management and Perceived Classroom Misbehavior

Generically the results of our study suggest that teachers who perceive themselves as more controlling of students' behaviors tend to perceive less misbehavior in the classroom. However we must be cautious about these results because: (1) although teachers' perception may be realistic, it can also stem, at least in part, from what teachers think they should (or they would like to) do in classroom, more than from what they actually do; (2) results are largely skewed towards high values of classroom controlling behaviors (about 90% of the participants perceive themselves as highly controlling). This fact limits the conclusions of our study. If these same participants were observed in their classrooms eventually, the variance would be larger, and a more conclusive relation between classroom management and classroom misbehavior would emerge.

Having these caveats in mind, we must stress that research has shown that there is a relationship between teacher's classroom management strategies and classroom order

(Main & Hammond, 2008; Sun & Shek, 2012). These strategies include the establishment of clear rules and procedures to ensure a structured environment that promotes the work in the classroom, and to avoid the unruly behavior of the students, allowing instruction to take place (Brophy, 1999; Doyle, 1986). Classroom behavior management (CBM) seems therefore to assume an instrumental role that allows classroom instruction, although it is not a teaching goal in itself. However, CBM does not guarantee the success of teaching and learning. In fact, CBM alone (i.e., without taking instruction management into account) may not be sufficient to achieve the goals of teaching (Santos, 2007; Tsouloupas, Carson, & Mathews, 2014).

Perceived Self-efficacy, Time Spent with Misbehavior and Classroom Management

The results show that CBM is a strong predictor of teacher's self-efficacy efficacy (TSE) and that TSE is a significant predictor of classroom misbehavior. Specifically more controlling teachers perceive themselves as more effective in classroom management and teachers that perceive themselves as more effective perceive less classroom misbehavior. Previous studies (e.g., Lopes & Santos, 2013) found that more controlling teachers feel more confident about classroom discipline and themselves. Also, teachers with high self-efficacy seem to be more effective both in classroom management and classroom instruction, tend to adopt a pro-active attitude, and are more likely to establish order through the activities (Dârjan, 2012; Gordon, 2001). The literature likewise stresses that teachers with high self-efficacy allow greater independence to the students, while teachers with low self-efficacy try to keep a more strict but ineffective control over the actions of students (Dârjan, 2012).

The most important finding of our study is that teacher's self-efficacy fully mediates the relation between classroom behavior management and classroom misbehavior. This may be partly explained by the fact that the instruments we used to measure the classroom behavior management (the Behavior Management subscale of the BIMS - Martin & Sass, 2010) and the teacher's sense of efficacy (the Classroom Management subscale of the TSES - Tschannen-Moran & Hoy, 2001) significantly correlate. This may explain why the effect of classroom behavior management on classroom misbehavior comes to near zero when mediated by teacher's sense of efficacy. Our model anyway suggests that perceived behavior management might be, in

some circumstances, a poor predictor of classroom misbehavior. We tested an alternative model using classroom management as a mediator between teacher's sense of efficacy and classroom misbehavior, and no mediation effect was found. Moreover, in such model classroom behavior management does not even directly predict classroom misbehavior. It is, therefore, interesting to note that while Tschannen-Moran and Hoy (2001) state that self-efficacy is an illusory construct, our data suggest that it may be anyway a good predictor of classroom misbehavior.

Our results also show that perceived time spent with misbehavior, just like teacher's sense of efficacy, fully mediates the relation between classroom behavior management and classroom misbehavior and that time spent with misbehavior is the best predictor of classroom misbehavior in this model. This finding suggests that participants are aware that time spent with misbehavior is time subtracted to instruction in general (Berliner, 1991; Rogers & Mirra, 2014), therefore lessening students' opportunity to learn (e.g., Shen et al., 2009).

Perceived Classroom Misbehavior and Grade Level

Unlike other studies (e.g., Gulchak & Lopes, 2007), that suggest increasing levels of misbehavior from 1st through 9th grade, we found no moderation effect of grade level on the model (no significant differences between 2nd Cycle (5th and 6th grades) and 3rd Cycle (7th, 8th, and 9th grades were found) except for the control variable *school* in 2nd Cycle. Previous studies suggested that the increase in misbehavior could originate both from development issues (the change from childhood to pre-adolescence and adolescence) and from the gradual alienation of some students from the school curriculum (Lopes, 2009; Lopes & Santos, 2013). We found no evidence for such claim, however.

Our results may be partly explained by the fact that in the Portuguese educational system a significant number of students are retained in 5th and 6th grade. Taking into account that these grade repeaters more likely misbehave, misbehavior may increase during the primary school grades (grade 1 through grade 4) but not from 5th grade on.

Limitations and implications for practice

The present study has a number of limitations. Firstly, the study focuses on teachers' perceptions not in what happens in the classrooms. Second, data were collected online, and it was not possible to check the reliability of the answers. Thirdly, this study was conducted with teachers, which gives us the perspective of the teachers about classroom misbehavior only. Fourth, there might be some problems with participants. The mean teaching experience of participants is high, and the variance is low. Therefore the number of beginning teachers is marginal. Fifth, the variance in classroom behavior management and teacher's self-efficacy is small which limits the conclusions of the study. Sixth, the measurement of the constructs *classroom behavior management* and *teacher's self-efficacy* is difficult because the definition and operationalization of these constructs remain problematic. Moreover, there seems to be some social desirability in participants' answers to the questionnaires. Indeed, it seems unlikely that so many participants feel so self-confident about classroom behavior control.

The results from this study may have some implications for practice: (1) it seems crucial for teachers and for schools to improve available classroom instructional time by controlling time spent with misbehavior; (2) assuming that the more time spent with misbehavior, the fewer opportunities to learn for students and the more wasted energy for teachers, preservice and in-service teacher education must instruct teachers on how to protect classroom allocate time from disciplinary and from any other interruptions; (3) it is vital for teachers to develop effective classroom management behaviors that can prevent misbehavior more than reacting to it; (4) time and sense of efficacy although important predictors of misbehavior are not directly trainable variables. To save time spent with misbehavior and to become more confident about their actions, teachers must learn the specific behaviors that more likely optimize the available instructional time and reduce time and energy wasted with students' misbehavior.

References

- Abadzi, H. (2007). *Absenteeism and beyond: Instructional time loss and consequences*. Washington, DC: The World Bank.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122–147. doi: 10.1037/0003-066X.37.2.122
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117–148. doi:10.1207/S15326985ep2802
- Berliner, D. (1990). What's all the fuss about Instructional Time? In M. B.-P. R. Bromme (Ed.), *The nature of time in schools: Theoretical Concepts, practitioner perceptions* (pp. 3-35). New York, NY: Teachers College Press.
- Briesch, A. M., Briesch, J. M., & Chafouleas, S. M. (2015). Investigating the usability of classroom management strategies among elementary schoolteachers. *Journal of Positive Behavior Interventions*, 17(1), 5-14. doi: 10.1177/1098300714531827
- Brophy, J. (1996). *Teaching problem students*. New York, NY: The Guilford Press.
- Brophy, J. (1999). Perspectives of classroom management: Yesterday, today and tomorrow. In H. J. Freiberg, *Beyond behaviorism: Changing classroom management paradigm* (pp. 43-56). Massachusetts, MA: Allyn and Bacon.
- Dârjan, I. (2012). Correlations between teachers' sense of self-efficacy and classroom management. *Academia.edu Web site*. Accessed, March 5, 2014, in https://www.academia.edu/3658101/Correlations_between_teachers_sense_of_self-efficacy_and_classroom_management
- Demir, S. (2009). Teacher perceptions of classroom management and problematic behaviors in primary schools. *Procedia - Social and Behavioral Sciences*, 1(1), 584–589. doi:10.1016/J.Sbspro.2009.01.105
- Ding, M., Li, Y., Li, X., & Kulm, G. (2010). Chinese teachers' attributions and coping strategies for student classroom misbehaviour. *Asia Pacific Journal of Education*, 30, 321-337. doi: 10.1080/02188791.2010.495832
- Djigić, G., & Stojiljković, S. (2011). Classroom management styles, classroom climate, and school achievement. *Procedia - Social and Behavioral Sciences*, 29, 819–828. doi:10.1016/J.Sbspro.2011.11.310
- Doyle, W. (1986). Classroom organization and management. In M. C. Wittrock, *Handbook of research on teaching* (pp. 392-431). New York, NY: Macmillan.
- Espelage, D., & Lopes, J. (2013). *Indisciplina na escola*. Lisboa, Portugal: Fundação Francisco Manuel dos Santos.

- Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569–582. doi:10.1037/0022-0663.76.4.569
- Gore, J. M., & Parkes, R. J. (2007). On the mistreatment of management. In A. Phelan & J. Sumsion (Eds.), *Critical reading in teacher education* (pp. 1-16). New York, NY: Sense Publishing.
- Gordon, L. M. (2001). *High teacher efficacy as a marker of teacher effectiveness in the domain of classroom management*. Paper presented at the Annual Meeting of the California Council on Teacher Education (San Diego, CA, Fall 2001).
- Gulchak, D. J., & Lopes, J. A. (2007). Interventions for students with behavioral disorders: An international literature review. *Behavior Disorders, 32*, 267-281.
- Hagenauer, G., Hascher, T., & Volet, S. E. (2015). Teacher emotions in the classroom: associations with students' engagement, classroom discipline and the interpersonal teacher-student relationship. *European Journal of Psychology of Education, 30*, 385-403. doi: 10.1007/s10212-015-0250-0
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York, NY: Guilford Press.
- Hicks, S. D. (2012). *Self-efficacy and classroom management: A correlation study regarding the factors that influence classroom management*. Doctoral Dissertation (EdD), Liberty University, Lynchburg, VA. (<http://digitalcommons.liberty.edu/doctoral/562>)
- Hoy, A. W., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: a comparison of four measures. *Teaching and Teacher Education, 21*, 343-356. doi: 10.1016/j.tate.2005.01.007
- Khani, R., & Mirzaee, A. (2015). How do self-efficacy, contextual variables, and stressors affect teacher burnout in an EFL context? *Educational Psychology, 35*(1), 93-109. doi: 10.1080/01443410.2014.981510
- Landau, B. E. (2001). *Teaching classroom management: A stand-alone necessity for preparing new teachers*. Paper presented at the Annual meeting of the American Educational Research Association, Seattle, WA.
- Lopes, J. A. (2009). *Comportamento, aprendizagem e "ensinagem" na ordem e desordem da sala de aula*. Braga, Portugal: Psiquilíbrios.
- Lopes, J., & Oliveira, C. (2017). Classroom discipline: Theory and practice. In J. P. Bakken (Ed.), *Classrooms: Academic content and behavior strategy instruction*

- for students with and without disabilities* (Vol. 2, pp. 231-253). New York, NY: Nova Science Publishers.
- Lopes, J. & Oliveira, C. R., (2015). *Indisciplina escolar: Um estudo com professores do Ensino Básico, Secundário e Superior*. Lisboa, Portugal. Comunicação pessoal.
- Lopes, J., & Santos, M. (2013). Teachers' beliefs, teachers' goals and teachers' classroom management: A study with primary teachers. *Revista de Psicodidáctica / Journal of Psychodidactics*, 18, 5-24. doi: 10.1387/RevPsicodidact.4615.
- Main, S., & Hammond, L. (2008). Best practice or most practiced? Pre-service teachers' beliefs about effective behavior management strategies and reported self-efficacy. *Australian Journal of Teacher Education*, 33(4), 28–39. doi:10.14221/Ajte.2008v33n4.3
- Martin, N. K., & Sass, D. A. (2010). Construct validation of the behavior and instructional management scale. *Teaching and Teacher Education*, 26, 1124–1135. doi:10.1016/J.Tate.2009.12.001
- OECD. (2013). *PISA in Focus No.32: Do students perform better in schools with orderly classrooms?* Paris, France: OECD.
- OECD. (2015). *PISA in Focus No.52: How have schools changed over the past decade?* Paris, France: OECD.
- O'Neill, S., & Stephenson, J. (2012). Does classroom management coursework influence pre-service teachers' perceived preparedness or confidence? *Teaching and Teacher Education*, 28, 1131-1143. doi:10.1016/j.tate.2012.06.008
- Pane, D. M. (2010). Viewing classroom discipline as negotiable social interaction: A communities of practice perspective. *Teaching and Teacher Education*, 26, 87-97. doi: 10.1016/j.tate.2009.05.002
- Postholm, M. B. (2013). Classroom Management: What does research tell us? *European Educational Research Journal*, 12, 389-402. doi:10.2304/eej.2013.12.3.389
- Piwovar, V., Thiel, F., & Ophardt, D. (2013). Training inservice teachers' competencies in classroom management. A quasi-experimental study with teachers of secondary schools. *Teaching and Teacher Education*, 30, 1-12. doi: 10.1016/j.tate.2012.09.007
- Putnam, R. F., Luiselli, J. K., Handler, M. W., & Jefferson, G. L. (2003). Evaluating student discipline practices in a public school through behavioral assessment of office referrals. *Behavior Modification*, 27, 505–523.

- Riley, P., Lewis, R., & Wang, B. (2012). Investigating teachers' explanations for aggressive classroom discipline strategies in China and Australia. *Educational Psychology, 32*, 389-403. 10.1080/01443410.2012.662151
- Rogers, J., & Mirra, N. (2014). *It's about time - Learning time and educational opportunity in California High Schools*. Los Angeles, CA: UCLA IDEA.
- Santos, M. A. (2007). *Gestão de sala de aula: Crenças e práticas em professores do 1º ciclo do Ensino Básico*. Dissertação de Doutoramento em Psicologia da Educação, Instituto de Educação e Psicologia: Universidade do Minho, Portugal.
- Sass, D. A., Lopes, J., Oliveira, C. R., & Martin, K. N. (2016). An evaluation of the Behavior and Instructional Management Scale's psychometric properties using Portuguese teachers. *Teacher and Teacher Education, 55*, 279–290. doi: 10.1016/j.tate.2016.01.020
- Shen, J., Zhang, N., Zhang, C., Caldarella, P., Richardson, M., & Shatzer, R. (2009). Chinese elementary school teachers' perceptions of students' classroom behaviour problems. *Educational Psychology, 29*, 187–201. doi: 10.1080/01443410802654909
- Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing school violence: The use of office discipline referrals to assess and monitor school-wide discipline interventions. *Journal of Emotional and Behavioral Disorders, 8*, 94–101.
- Sun, R. C. F., & Shek, D. T. L. (2012). Student classroom misbehavior: An exploratory study based on teachers' perceptions. *The Scientific World Journal, 2012*, 1–8. doi:10.1100/2012/208907
- Tauber, R. (2007). *Classroom management: Sound theory and effective practice*. Santa Barbara, CA: Praeger Publishers.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783–805. doi: 10.1016/S0742-051X(01)00036-1
- Tsouloupas, C., Carson, R. L., & Matthews, R. (2014). Personal and school cultural factors associated with the perceptions of teachers' efficacy in handling student misbehavior. *Psychology in the School, 51*, 164–180. doi:10.1002/pits

Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education*, 47, 120-130. doi: 10.1016/j.tate.2014.12.005