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Causes and effects of teacher conflict-inducing attitudes towards pupils: a path analysis model

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Abstract

A model explaining several causes and consequences of negative teacher–pupil relationships was developed. Data from 109 teachers and 946 high school pupils was analyzed using path analysis. The results suggest that teachers who prefer a custodial approach of controlling pupils, who have lower morale due to school climate conditions and who are less likely to burn out, tend to adopt conflict-inducing attitudes towards pupils. The results also demonstrate a high incidence of educational, psychological and somatic complaints in students whose characterized teachers are perceived as more hostile in their attitude towards pupils. Implications of these findings are discussed.

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Keywords: Teacher–student relationship; Teacher behavior; Teacher attitude; Teacher effectiveness; Path analysis; Conflict

Most of us can remember one or more classroom episodes when teachers' acts determined some lasting negative effects on pupils. Unfortunately, on a scientific level, many writings are encapsulated in recalling these intense emotional experiences only. Yet, their message is clear, underlining that the pedagogical relationship is the heart of effective teaching. Unfortunately, researchers often tend to overlook teachers as a potential source of problems in the classroom (Kearney, Plax, Hays, & Ivey, 1991). Compared to the large body of literature that focuses on positive teacher communication behaviors, fewer studies have been done on negative teacher communication behaviors (Wanzer & McCroskey, 1998). Educational reform also tends to focus on

curriculum and curricular aspects, neglecting the importance of an effective teacher–student interaction. This paper challenges this perspective and focuses on negative teacher–pupil relationships, particularly identifying a model that would explain the main causes and effects of such interactions due to teacher characteristics.

Most previous studies have focused more on analyzing individual influences of various negative aspects on teaching. However, the literature review reported here helped me to develop a model that encompasses causes and effects of teachers' hostile attitudes. The model aims to establish the direction and strength of the relationships among several teacher-related variables that lead to teachers' conflict-inducing attitudes. A secondary aim is to assess the consequences on pupils due to such teacher attitudes. The validation of the proposed model provides insights for educational

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policy-makers about the impact of a negative teacher–student interaction and clarifies the role of several teacher-related factors that lead to these undesirable attitudes.

The literature review section contains two main aspects: teacher-related factors that negatively affect teacher–pupil interaction (TPI), and the respective educational and psychological consequences of a negative teacher–student relationship. Yet, for a better understanding of this topic, I will first address some difficulties encountered in this area due to ethical aspects and confusing terminology.

1. Difficulties in studying negative teacher–pupil interactions

Researching negative teacher–pupil interactions is often considered a taboo, which can make study in this area difficult (Poenaru & Sava, 1998). There are some ethical considerations to be made here. First, the selection of a sample of teachers who misbehave based on paper and pencil measures is questionable from an ethical point of view. However, several authors found that pupils can be used as the final judges of good teaching (Bhasin, 1987). Their ratings are valid enough to be considered reliable ways of measuring interactions between the two parties (Elmore & LaPointe, 1975; Perkins, Guerin, & Schlech, 1990; Worrall, Worrall, & Meldrum, 1988). Secondly, it is ironic to study teacher mistakes or faulty education when their primary aim is to be educational agents. Unfortunately, studying the characteristics of effective teachers will not give us all the elements necessary to understand teacher misbehavior. As an analogy, it is not enough to study the characteristics of non-abused children when dealing with the abused ones. More importantly, the tone of such articles should not criticize teachers for making mistakes, but rather provide a discussion frame of such problems in order to improve the subject knowledge and teacher training programs.

Another barrier to research consists in the lack of conceptual agreement among researchers on this topic. Several terms are used, such as teacher

misbehaviors, didactogeny, teacher maltreatment, and lack of teacher support.

Kearney et al. (1991) defined teacher misbehaviors as those behaviors that interfere with student learning. The concept includes activities that range from an unsatisfactory teacher training (e.g., boring lectures) to aggressive actions that involve teachers who use sarcasm or unfair testing in relating to their pupils. Van Morrow (1991) established a hierarchy of the most common types of misbehaviors. Negative criticism, embarrassment and humiliation constitute the most frequently reported negative experiences of significant impact in schools due to teachers. In addition, Orange (2000) and Thweatt and McCroskey (1996) consider misbehaviors to be unintentional, occurring when using inappropriate educational strategies and techniques.

These negative behaviors can affect the children, who may become afraid of their teacher or start disliking the subject he or she teaches. When this occurs we use the term of didactogeny. This concept is quite wide-spread throughout non-English literature (French, Romanian, Russian, Spanish) and has a similar meaning: a faulty education that harms children. The negative effects of teacher misbehavior may have a medical, psychological or educational nature (Cukier, 1990; Poenaru & Sava, 1998; Sillamy, 1996).

A more harsh term, teacher maltreatment, focuses on psychological maltreatment that occurs in school settings due to teachers. It involves any acts of omission and commission that are judged by professional experts to be psychologically damaging (Hart, Germain, & Brassard, cited in Neese, 1989). An example of maltreatment in schools is using fear and intimidation to install discipline in the classroom.

Finally, teacher support can be conceptualized similarly to social support in schools, strongly related to one's psychological well-being. For example, acceptance, care, encouragement and approval from significant others (e.g., teachers in school settings) may enhance self-esteem and self-evaluation of the pupil. In contrast to this, Bru, Boyesen, Munthe, and Roland (1998) asserted that lack of teacher support would negatively influence

the development of a positive self-concept among pupils.

2. Factors that affect TPI

2.1. *Organizational climate in schools*

The organizational climate may be expressed by the description of desired school conditions and the level of satisfaction about those conditions (Kremer-Hayon & Kurtz, 1985). It includes aspects such as principal style, school services and resources, work pressure, teacher relationships with other colleagues, professional prestige or autonomy (Zak, 1981).

Several sources may affect TPI from an organizational perspective. Byrne (1998) ascertains that low salaries, extreme workload or a general negative school environment contribute to low teacher morale. In addition, difficulties with the school administration could raise the level of stress, thus leading to further problems.

2.2. *Burnout*

Burnout is a devastating deterrent to a successful performance of the pedagogue's duties (Byrne, 1998). It is a negative psychological phenomenon that affects human service workers through three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, cited in Starnaman & Miller, 1992). According to Huberman (1993) up to 20% of teachers go through a phase of burnout at some point in time mainly due to the discrepancy between expectations and the perceived reality of the job, or between investments and rewards.

Burnout was found to correlate directly with organizational stressors such as workload and role stress. Conversely, other factors such as perceived social support and participation in decision making reduce the level of burnout (Starnaman & Miller, 1992).

Due to consequences of burnout, such as teachers' irritability, exhaustion, and criticism, it is expected that burnout will negatively influence TPI.

2.3. *Educational beliefs system and cultural factors*

In some countries the use of sanctions and corporal punishment in school is still accepted by teachers and parents. This reflects cultural norms that tolerate the use of physical and psychological punishment as means of control. For example, there are cultural variations between the Arabs from the north and the Bedouins from the south of Israel, the latter being more patriarchal and using more aggressive methods when educating children (Elbedour, Center, Maruyama, & Assor, 1997). Similarly, Australian pupils find authoritarian teachers less offensive than do pupils in Norway and the USA (Lovegrove, Lewis, Fall, & Lovegrove, 1985). Parents from Spain often consider authoritarian teachers to be necessary in their children's education. Thus, pathogenic teachers are still accepted and considered legitimate by society (Cukier, 1990).

The differences in teacher ideology can also occur in the same cultural background. Wilhoer, Eidell, and Hoy (1967) developed the construct of pupil control ideology, conceptualized as a continuum from a highly custodial approach to a highly humanistic pupil control ideology. The custodial approach is the traditional school model that provides a rigid and controlled setting by emphasizing the maintenance of order. Pupils are considered to be irresponsible and undisciplined, teacher–pupil relationships are impersonal and pessimism and mistrust prevails. The humanistic approach stresses the importance of pupils and the creation of an atmosphere that meets students' needs and leads to a democratic orientation between pupils and teachers. In this model, relationships with students are personal, teachers are optimistic and maintain open channels for communication.

3. Effects of teacher misbehavior on pupils

Teachers are pivotal to student perceptions of learning (West, 1994), facilitating or inhibiting student learning. Several studies focused on identifying those interactions between teachers and pupils that most influence the quality of their

relationships. Some of the qualities that lead to effective relationships are positive affection (Coudray, 1995; Poenaru & Sava, 1998), warm attitude (Elmore & LaPointe, 1975), tact of teaching (Van Manen, 1991), teacher immediacy and teacher power (Thweatt & McCroskey, 1996; West, 1994), teacher assertiveness and responsiveness (Wanzer & McCroskey, 1998), and low differential treatment (Brattesani, Weinstein, & Marshall, 1984). Lack of any of these traits may negatively influence TPI. When students perceive their teachers as misbehaving, several negative outcomes can occur. Mainly, there are three categories of negative effects: educational, psychological, and somatic outcomes.

3.1. Educational outcomes due to teacher misbehavior

Teacher misbehavior is a demotivating factor perceived by the pupils as central to their lack of motivation (Gorham & Christopel, 1992). Students whose teachers were perceived as misbehaving reported a higher level of negative affect toward course material (Wanzer & McCroskey, 1998) and had fewer learning opportunities (West, 1994). In addition, highly discriminating teachers negatively influence the educational development of low achieving pupils (Brattesani et al., 1984).

3.2. Psychosomatic outcomes of teacher misbehavior

Hyman and Snook (1999) defined emotional maltreatment in schools as "any disciplinary or motivational practice that psychologically hurts children" (p. 71). These include humiliation, rejection, excessive authority, sarcasm, and other disciplinary techniques based on fear and intimidation. All these misbehaviors can develop (in the child) a cluster of symptoms, such as neurotic traits, habit disorders, behavior extremes (Neese, 1989), shyness, withdrawal (Bhasin, 1987), intimidation, anxiety or impulsive behavior (Chandler & Shermis, 1985). These manifestations may be temporary or may last the child's entire life. One of my students provided an insightful description for a traumatic event caused by one of her

teachers: "it is like throwing a stone in a lake. For a couple of moments the water ripples which affects the initial calm, but after a few moments everything returns to normal. Yet, at the bottom of the lake something has changed, a stone appeared and it will remain there forever". The lasting effects occur especially when teachers misbehave in front of primary and secondary school children who are more emotionally vulnerable than older students. Several authors such as Mikula and Schlamberger (1985) or Van Manen (1991) have accurately described this negative emotional state called "hurt feelings". Some authors such as Hyman and Snook (1999) went even further and considered that 1% to 2% of pupils develop educator-induced PTSD (posttraumatic stress disorder) and propose an instrument to measure this in the school setting.

Additionally, several somatic complaints appear to be related to lack of teacher social support. Bru et al. (1998) findings confirm the assumption that there is a link between lack of teacher support and musculoskeletal complaints. Also, the anxiety of some children when confronted with school stress due to teacher misbehaviors leads to anxiety-related physiological manifestations.

4. Toward a causal model of teacher misbehavior and its possible consequences

The idea behind the forthcoming model divides the causes of misbehaving into external and internal factors. In the first category we considered aspects of negative school organizational climate (lack of or unsatisfactory school resources and conditions, low salaries, lack of perceived principal support and a negative interaction with other colleagues and pupils) that affect teachers' morale. Teachers' low morale is expected to negatively influence teacher–pupil relationships due to teachers' decreased involvement and satisfaction in teaching. There will also be an indirect effect on perceived TPI due to burnout, which is influenced by organizational stressors (Byrne, 1998; Kremer-Hayon & Kurtz, 1985; Schwab, Jackson, & Schuler, 1986; Starnaman & Miller, 1992; Zak, 1981).

Teacher burnout is also likely to influence the quality of TPI. Several authors, such as Byrne (1998) and Huberman (1993), have discussed the repercussions of burnout on classroom work. Teachers' irritability and exhaustion will deter them from performing pedagogical duties.

As an internal factor I considered teacher's ideology regarding pupil control as a cognitive explanation for a personal approach in teaching. The behaviors teachers adopt depend on their thinking (Packer & Winne, 1995) and on their ideology of teaching (Elbedour et al., 1997; Friedman, 1995), as well as on other factors. The results lead to the conclusion that a custodial approach that supports an autocratic education is more likely to be linked to teacher misbehaviors (Elbedour et al., 1997). Furthermore, teacher ideology seems to relate to teacher burnout, with humanistic teachers being affected mostly by pupils' disrespect, whilst custodial teachers are affected mostly by pupils' inattentiveness (Friedman, 1995).

All three factors, the organizational climate in schools, teacher's ideology, and level of burnout, will affect TPI, as measured by pupil perceptions. Dysfunctional interactions may negatively influence pupils psychologically and somatically as well as educationally. Some possible consequences are lack of self-esteem, anxiety, asthenia, school phobia, conduct disorders, and learning difficulties.

The model presented in Fig. 1 illustrates the causes and effects of negative teacher–pupil inter-

actions to be tested. The design consists in six variables, of which two are exogenous (teacher ideology and school climate) and two are exclusively endogenous (educational and psychosomatic outcomes), influenced by the quality of TPI. The remaining variables, teacher burnout and teacher conflict-inducing attitude, are both independent and dependent. The former is influenced by teacher ideology and school climate and in turn may affect the teacher's attitude that will influence the quality of TPI. The latter will determine some detrimental effects on pupils, and is influenced by teacher burnout, teacher ideology of pupil control and school climate.

The purpose of this study was to determine the validity of this model as well as the strength of influence of each factor involved. Secondarily, I aimed to reveal the concept links between several terms such as teacher misbehavior, negative TPI and lack of teacher support as measured by different assessment scales.

5. Method

5.1. Participants

The sample included 119 teachers and 946 pupils from 15 different high schools located in two Romanian cities: Timisoara and Arad. There were 99 women and 20 men, with a mean age of 39.5 years (10 years standard deviation, range from 23 to 62 years). Their number of years of teaching

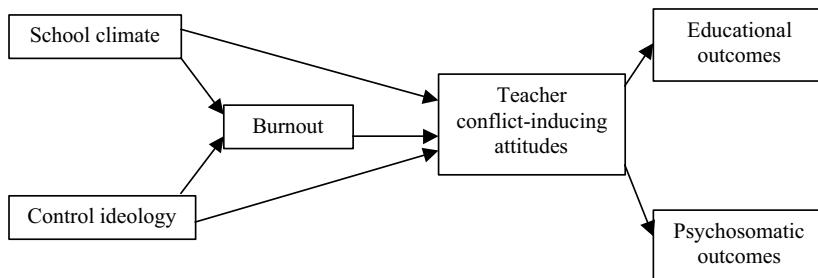


Fig. 1. Hypothesized model of teacher conflict-inducing attitudes causes and consequences.

experience ranged from 1 to 39 with a median of 16.5 and a SD of 10 years. The sample was selected using a two-stage cluster approach determining the high schools and classes that would be evaluated. For each selected high school two classes were chosen by asking the principal to nominate two classes available to be tested. The criteria for selecting the teachers were that they taught at least one of the nominated classes and that they were available for consultation. Of those who met these criteria, 82% agreed to participate. Eight teachers from each school were selected as the available sample group.

All the pupils from the classes selected were included in the study. Their responses were used to evaluate teacher misbehavior, teacher support, the quality of TPI, and educational and psychosomatic outcomes of such behaviors. The pupil sample included 91 first year pupils, 156 sophomores, 639 juniors, and 60 seniors.

5.2. Instruments

Teachers received an extensive questionnaire consisting of the following scales:

1. Willoer et al. (cited in Lester & Bishop, 2000) developed the Pupil Control Ideology Scale (PCI) as an instrument with 20 items designed to assess teachers' ideology of pupil control. Participants were asked to respond on a 5-point Likert scale (5 = strongly agree; 1 = strongly disagree). High scores indicate a custodial approach to education that supports autocratic education based on order, discipline and a clear hierarchy between teacher and student. Low scores indicate a humanistic approach based on co-operation between students and teachers and a more permissive educational setting.

2. Friedman (1993) developed an adapted form of Maslach's Burnout Inventory (MBI) that evaluates two burnout symptoms: emotional exhaustion (10 items), and job non-accomplishment (7 items). One item was removed since it was not suitable for the Romanian educational context. Respondents were asked to scale their answers according to 7 frequency ranks each expressing different levels of burnout severity

ranging from Never to Always. Higher scores indicate a higher level of burnout.

3. A 36-item school climate questionnaire (CQ) was designed in order to assess school climate in four areas: principal and colleagues' support (social support), school resources, job accomplishment and prestige, and financial security (Sava, 2001). The overall score was computed as an indirect but general measure of teacher morale due to organizational climate in a particular school. The teachers were asked to respond on a 5-point Likert scale (5 = strongly agree; 1 = strongly disagree). A higher score indicates a higher level of teacher satisfaction, Table 1.

High school pupils involved in the study were asked to evaluate their relationships with the selected teachers by completing four scales and checklists. The first three instruments were used to assess teacher misbehaviors, teacher–pupil negative relationship, teacher lack of support, and to determine the communality of these terms. The last scale was used to evaluate the consequences of such undesirable behaviors and attitudes.

4. An adapted short-form of (Teacher Treatment Inventory Scale (TTI)—Weinstein, Marshall, Brattesani, & Middlestadt, 1982) is an other-reporting questionnaire that involves pupils' perceptions on two aspects: type of teacher feedback (3 items), and teacher supportive help (4 items). Even though the TTI scale was designed for use with children in elementary grades one to six, it is also suitable for high school children. The students responded to each item by marking one of the four alternatives ranging from "always" to "never". The scale can be used in several ways. I chose to assess how each child perceives his or her own treatment by a particular teacher.

5. The TPI rating scale developed by Poenaru and Sava (1998) rates the quality of TPI as perceived by pupils. It is a 20-item scale that concerns teacher positive support and lack of discrimination. Each item is ranked on a 5-point scale. Higher scores reflect positive interactions, while lower scores mean a negative, problematic interaction between teacher and students.

6. Teacher misbehaviors checklist (TMC) assesses three types of misbehaviors: teacher incompetence, teacher offensiveness (hostility), and

Table 1
Cronbach's alpha internal consistency and sample items for the used scales

Scales and variables	Sample item	α
<i>PCI (pupil control ideology)</i>	Being friendly with pupils often leads them to become too familiar.	0.74
<i>MBI (burnout index)</i>		0.82
Emotional exhaustion	I have felt frustrated by teaching.	0.72
Job non-accomplishment	I have been thinking of quitting teaching.	0.84
<i>CQ (school climate index)</i>		0.83
Social support	The principal supports my activities.	0.80
School resources	Working conditions in my school are good.	0.73
Job accomplishment and prestige	Teaching gives me my desired social status within the local community.	0.67
Financial security	The teacher income is less than I deserve.	0.78
<i>TTI (teacher treatment)</i>		0.78
Style of feedback	The teacher scolds me for not trying.	0.78
Supportive help	The teacher calls on me to explain things to the class.	0.81
<i>TPI (teacher-pupil interaction)</i>	The teacher understands me each time I have a problem.	0.97
<i>TMC (teacher misbehaviors)</i>		0.81
Teacher incompetence	The teacher does not encourage students to ask questions.	0.81
Teacher offensiveness	The teacher makes fun of us and humiliates us.	0.87
Teacher indolence	The teacher is late in returning papers.	0.74
<i>ES (consequences of teacher conflict-inducing attitude)</i>		0.88
Educational effects	I get easily bored during X class.	0.88
Psychosomatic effects	During X class my palms sweat more than usual.	0.88

teacher indolence (Kearney et al, 1991). Teacher incompetence refers to inappropriate teaching techniques, teacher hostility comprises sarcasm, prejudice and verbally abusive behavior, while the teacher indolence profile includes lack of motivation perceived in teachers. The 28-item scale has five answer alternatives ranging from "almost never" to "always".

7. The last instrument used was the effects scale (ES), specially designed to assess the effects on pupils of negative teacher-pupil interactions. Three kinds of effects were taken into consideration: educational, psychological and somatic. The 15-item scale factor analysis showed that we can rely on two dimensions only: educational effects and a combination of psychological and somatic effects. The scale contains 15 items distributed as

follows: educational negative effects (6 items), psychological and somatic complaints (6 items), and three filler items, which can be referred to as a third dimension. This addresses general somatic complaints, which gives a broader view of how a particular pupil responds to the school setting. A higher result means positive educational and psychosomatic effects, while a lower score indicates negative effects on pupils. The scale items along with their factor loading resulting from SPSS 9.0 release are presented in the appendix.

5.3. Procedure

Prior to the beginning of the study, the 16 high schools were selected randomly from a telephone directory. A letter of introduction was sent to the

schools asking for their participation in the study. One principal chose not to participate, saying he did not have time for research. As a result, 15 schools were included in the study. Selected teachers were given the questionnaires and asked to complete them privately and return them within one week. Return times ranged from 2 days to 1 week. It took the teachers an average of 45 min to complete the questionnaires. Of the 120 teachers who initially agreed to participate in the study, 119 returned the questionnaires.

After receiving teacher responses, the pupils from the nominated classes were assessed using the instruments outlined above. The pupils were asked to complete the rating scales in the classroom. The scales were completed anonymously and participants were assured that teachers would not have access to their responses. Each pupil was asked to assess a specific teacher who was randomly assigned to him or her. Each selected teacher was evaluated by a different number of children ranging from 5 to 20 pupils. A mean score was then computed for each teacher included in the study.

6. Data analysis

This section contains the results of a principal component analysis of different concepts related to negative TPI as well as a path analysis of the proposed causal model. Both analyses retained 109 complete valid cases since the other 10 cases had large portions of missing data.

6.1. Principal component analysis

This analysis aimed to provide a principal component, which encompasses the communality of several discussed concepts such as teacher misbehaviors, teacher–student negative interaction, and teacher support. The results of this approach will be included in further analyses required to test the proposed causal model.

Five indices were selected for the data analysis process. They include the three teacher misbehavior indicators (indolent teacher subscale, hostile teacher subscale, and incompetent teacher sub-

scale), teacher negative feedback subscale from the TTI, and TPI rating scale. The selection of these indices was based on their direct implication in teacher–pupil relationships. The teacher supportive help subscale from the TTI was not included since it deals mainly with academic support rather than emotional support. Additionally, some items had different meanings for pupils. For example, the question “The teacher calls on me to answer the question” was positively perceived by high achieving pupils, while low achieving pupils tended to consider this act as a revenge from the teacher which was meant to stress their lack of knowledge.

In order to perform a principal component analysis I used a maximum likelihood technique that is provided in PRELIS 2.30 from LISREL 8.30. Data screening resulting from skewness and kurtosis indices revealed that the five subscales required a transformation in order to achieve a normal distribution. Thus, the three teacher misbehavior subscales were inversed ($1/x$), while TPI scale and TTI negative feedback were cubed and squared respectively ($X^3; X^2$). All the transformed variables achieved normality, where low scores indicated a negative evaluation of teachers and higher scores showed a positive teacher perception from pupils. However, due to different ranges of variable metrics I standardized the observations before conducting the principal component analysis. This measure is necessary in order to obtain more reliable estimates of factor loading (Klem, 1998).

The matrix correlation among all five variables is presented in Table 2. Data revealed only one principal component that accounts for 74.3% of all the variation in the five variables with an eigenvalue of 3.71, while the second eigenvalue was only 0.82. Both, Kaiser's stopping rule and Allen and Hubbard's regression equation show that the one principal component solution is appropriate (Johnson & Wichern, 1998). Table 2 also gives the correlation between each variable and the selected eigenvector.

The result indicates that a substantial amount of variance is explained by a single component. Thus, there is a core emotional aspect that influences TPI, which could be named as a co-operative vs. conflict-inducing attitude towards pupils in the

Table 2

Correlation matrix among variables included in the principal component analysis. Correlation between variables and the resulted eigenvector

	1	2	3	4	5	PC1
<i>TMC—teacher misbehavior</i>						
1. TMC—hostility	—					0.97
2. TMC—indolence	0.99	—				0.97
3. TMC—incompetence	0.67	0.66	—			0.73
4. TTI—feedback style	0.60	0.60	0.18	—		0.67
5. TPI—teacher–pupil interaction	0.84	0.85	0.63	0.58	—	0.92
Eigenvalue						3.72
Variance explained (total)						74.32%

N = 109

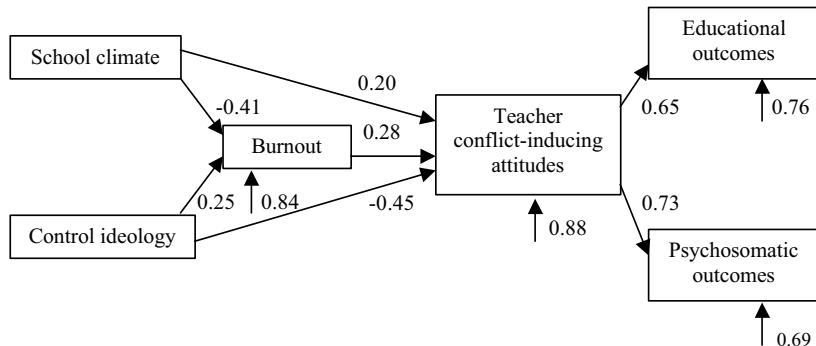


Fig. 2. Tested model of teacher conflict-inducing attitudes causes and consequences with standardized path coefficients provided.

classroom. A negative, conflict-inducing attitude (lack of teacher emotional support, teacher misbehavior or hostility) leads to defensive and negative responses from the pupils, a win–lose approach in education. However, it is not very clear if there is a real empirical link between the discussed concepts or if I am just dealing with a tautology that implies a semantic relationship due to the many similar attributes which these terms encompass.

6.2. Path analysis

In order to test our hypothesized model, a second data analysis required the use of structural equation modeling (SEM) for a manifest variables model. A recursive path analysis model was developed according to previous research results

that have proven different links among variables considered in the study. I chose to use a manifest variables model due to the relatively small sample size ($N = 109$), which is unsatisfactory for a latent variables structural equation model with four latent indicators and 12 manifest variables. When the sample size for maximum likelihood estimation is relatively small, as the number of parameters increases, it loses the precision of estimating complex models (Hair, Anderson, Tatham, & Black, 1998; MacCallum & Austin, 2000).

The manifest variables scores included in the model originate from the PCI scale, Friedman's version of the MBI, the CQ scale, the retained principal component that expresses the communality of several TPI indices, and the ES. The relationships between variables are presented in Fig. 2.

Table 3
Input covariance and correlation matrices for path analysis

	1	2	3	4	5	6
1. PCI	69.009					
Pupil control ideology	—					
2. MBI	28.867	95.446				
Burnout	(0.36***)	—				
3. CQ	−22.427	−49.074	110.695			
School climate	(−0.26**)	(−0.48***)	—			
4. PC-1	−3.361	0.202	1.961	1.000		
Conflict-inducing attitude	(−0.40***)	(0.02)	(0.19*)	—		
5. EDUC	−4.988	3.408	2.810	2.432	13.822	
Educational outcomes	(−0.16)	(0.09)	(0.07)	(0.65***)	—	
6. PSI	−15.269	−0.687	8.709	3.836	9.728	27.788
Psychosomatic outcomes	(−0.35***)	(−0.01)	(0.16)	(0.73***)	(0.50***)	—

The correlations are presented within parenthesis.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (two-tailed).

Table 3 presents both covariance and correlation matrices used to determine whether or not the data fit the model.

The proposed model proves to fit with the data. All path coefficients were significant, and several overall model fit indicators show there is a good fit of the model. Thus, we obtained a χ^2 (7, $N = 109$) = 3.894, $p > 0.79$, the Jöreskog–Sörebrom GFI was 0.989, its adjusted form AGFI 0.966 and the standardized root mean square residual (SRMSR) was 0.034. In addition, the Bentler–Bonnett normed fit index (NFI) was 0.982, while the Bentler–Bonnett non-normed fit index (NNFI) was 1.032. Of particular interest according to Hu and Bentler (1998) is root mean square error of approximation (RMSEA) which appears to be sensitive to model misspecification. It provides a confidence interval and yields appropriate conclusions about the model quality. In our model, we obtained a RMSEA = 0.005 within a confidence interval range from 0 to 0.072. The accepted standard for the above-presented indicators of fit varies from above 0.90 for GFI, AGFI, NFI and NNFI indicators to below 0.05 in case of RMSEA. Similarly, a SRMSR close to zero and a chi-square not significant also indicates a good model fit (Kelloway, 1998). All these procedures indicate a good fit of the model, which is a plausible explanation, even though this does not imply that is the only possible model.

It is also important to pay attention to parameter estimates since it is entirely possible for relationships among variables to be weak even though it is a good fitting model. In observing the input correlation matrix for SEM we can notice a wide variety of relationship strengths with a good reproduction of model paths. However, it seems that burnout does not correlate with teacher attitude towards pupils. In an attempt of model-trimming I eliminated the corresponding path and obtained: χ^2 (8, $N = 109$) = 11,354, $p > 0.18$; the Jöreskog–Sörebrom GFI 0.967; its adjusted form AGFI 0.913; the standardized root mean square residual (SRMSR) was 0.074, while RMSEA became 0.014. The chi-square difference statistic between the two models was χ^2 (1, $N = 109$) = 7,46, $p < 0.01$ and the relative chi-square changed from 0.55 to 1.42. In addition, due to this change, another parameter, teacher morale, lost its significance. These results prove the superiority of the first model and help me conclude that the modification of the initial model is not a good solution, even though the second also provides a good fit of data.

Looking at the standardized parameters from the first model, significant relationships can be seen in all seven specified paths. These findings come once again in favor of the proposed model and its plausibility. All the parameter estimates, the standard errors, as well as the associated

Table 4
Path analysis parameter estimates, their standard errors and their significance

Parameters	Unstandardized				Standardized			
	Value	SE	t	p	Value	SE	t	p
(PCI-MBI)	0.294	0.099	2.967	0.003	0.250	0.081	3.092	0.002
(CQ-MBI)	-0.384	0.078	-4.914	0.001	-0.413	0.074	-5.552	0.001
(PCI-PC 1)	-0.054	0.011	-4.956	0.001	-0.451	0.079	-5.690	0.001
(MBI-PC 1)	0.028	0.010	2.778	0.005	0.278	0.098	2.837	0.005
(CQ-PC 1)	0.019	0.009	2.100	0.036	0.203	0.095	2.147	0.032
(PC 1-EDUC)	2.432	0.271	8.988	0.001	0.654	0.055	11.920	0.001
(PC 1-PSI)	3.836	0.348	11.024	0.001	0.728	0.045	16.133	0.001
Epsilon-MBI	8.254	0.562	14.697	0.001	0.845	0.040	20.987	0.001
Epsilon-PC1	0.880	0.060	14.697	0.001	0.880	0.039	22.590	0.001
Epsilon-EDUC	2.812	0.191	14.697	0.001	0.756	0.047	15.937	0.001
Epsilon-PSI	3.616	0.246	14.697	0.001	0.686	0.048	14.338	0.001

confidence intervals and *t* values are presented in Table 4.

7. Discussion

Finding evidence regarding the psychosomatic and educational outcomes due to conflict-inducing attitudes of teachers proved to be solid in the model presented in this paper. In order to gain more clarity in explaining the model I divided it in two main sections: factors that influence students' perceptions of TPI, as well as the psychological, somatic and educational effects of teacher conflict-inducing attitudes.

A link between pupil control ideology and the perceived quality of TPI was found, a result that underlines other findings provided by Elbedour et al. (1997) and Friedman (1995). It is difficult to distinguish if a teacher's attitude towards punishment reflects cultural norms or if it is a personal attribute. Additionally, pupil control ideology appears to have an indirect influence towards the pupils' perceptions of their teachers using the level of burnout as mediator. Thus, more humanistic teachers tend to have a lower level of burnout, while teachers using a custodial approach have an increased level of burnout. This result is understandable since the former category stresses an effective communication and higher level of tolerance between teachers and students. Conver-

sely, a custodial approach implies a strict control on classroom settings and a lower level of flexibility towards others, which facilitates the occurrence of burnout. The custodial approach in education creates the communication barrier of adulthood, with its core message "since you don't see what I see, you are at fault" (Nelsen, Lott, & Glenn, 1997). This kind of approach to educational problems leads to burnout, which may be the consequence of a perceived discrepancy between investments and the expected rewards (Huberman, 1993).

An interesting link is the positive relationship between burnout and the perceived teacher attitude towards children. While there is not a direct correlation between the two measures ($r = 0.02$), when computing a partial correlation I obtained a significant association ($pr = 0.28$). This apparently strange correlation implies that pupils have a more positive perception of teachers with a higher level of burnout when comparing teachers with similar school conditions and similar ideology of pupil control. This may be seen as an indirect proof of burnout as related to idealism and dedication (Gold, 1985), traits that are appreciated by adolescents in providing a qualitative education. However, this result conflicts with those reported by Tatar and Yahav (1999), who consider that burnout leads teachers to fight against pupils.

As expected, teachers' work conditions, assessed by their level of job satisfaction, affect TPI. Hence,

a higher level of job satisfaction leads to a better teacher morale, an aspect that is positively perceived by pupils. Also, the school climate indirectly affects the TPI due to teachers' level of burnout. It has been proven that a higher level of job satisfaction will lead to a decrease in burnout and vice versa. This result converges with similar findings that work conditions affect the level of burnout. This is due to factors such as principal style, school services and resources, work pressure, teacher relationships with other colleagues, professional prestige or autonomy (Kremer-Hayon & Kurtz, 1985), teacher alienation (Thomson & Wendt, 1995), or low salaries, extreme workload and general negative school environment (Byrne, 1998).

The model suggests that teacher ideology of controlling pupils has the most important influence ($pr = -0.45$) on pupils' characterizations of their teachers. This value is almost double when compared to teacher level of burnout ($pr = 0.28$) or teacher morale due to school climate ($pr = 0.20$).

In the second part of the model, I suggest that negative perceptions of teachers by pupils lead to psychological, somatic and educational repercussions on some pupils. The pupils saw negatively perceived teachers as a source of their own demotivation and reported developing negative attitudes towards the particular subject taught by the teacher ($r = 0.65$). Additionally, psychosomatic complaints due to a particular teacher are strongly related to pupils' perceptions of their teachers ($r = 0.73$).

The above data bring us to the conclusion that approximately 44–50% of the total explained variances of educational and psychosomatic outcomes depend on co-operative vs. conflict-inducing attitudes of teachers. Hence, conflict-inducing attitudes from teachers will lead to educational and psychosomatic complaints in pupils, while co-operative attitudes constitute an educational motivating factor and contribute to pupils' state of well-being in the classroom. The results are somewhat similar to those of Gorham and Christophe (1992) who found that 43% of demotivating factors were related to teacher behaviors. They also found that teachers demotivate more than they motivate.

I should highlight the fact that TPI is not the only dimension of teacher effectiveness. This concept is multidimensional and also involves organization, workload/difficulty, expected/fairness of grading, instructor knowledge, and perceived learning. However, the quality of TPI (teacher liking) has a very strong influence on the overall score when students evaluate their teachers (Marks, 2000).

Teacher effectiveness can be obtained both by positive and negative control. The latter will negatively effect the student and will lead to school inactivity, apathy, lack of interest towards school matters, and behavior disorders (Skinner, 1971 (1968)). The use of fear as a motivator promotes either defensive behaviors or danger control processes. Both force students to become motivated to learn in order to control the danger or to control their fear (Witte, 1998). Neither way represents the best approach when compared to positive control and co-operative attitudes towards children.

7.1. Implications for teaching

It is probably unrealistic to think that negative control can be totally avoided. In fact, everybody engages in these kinds of behaviors occasionally. However we should limit such control since its use often teaches aggression, causes more physical responses (e.g. crying, muscle tension), produces only temporary effects, and determines negative emotional conditioning (Baldwin & Baldwin, 1981).

The use of negative control interferes with student learning most of the time, thus it may be considered as an act of misbehavior. This leads to negative repercussions for TPI, causing students to consider teachers as a legitimate cause for some of their school problems. Unfortunately, these behaviors are culturally acceptable and determine a negative teacher evaluation as well as poor attendance, boredom or lower level of perceived academic self-efficacy. The discourse of educational reform must acknowledge the role of emotions in the process of teaching and learning (Hargreaves, 1998). Recognizing these potential consequences, educational reform should pay

more attention to teacher–student rapport since the present research as well as previous studies show that teachers are responsible for the way pupils perceive and like different school subjects. Moreover, since teacher ideology of pupil control was the most important aspect in determining pupil perceptions of their teachers, educational policy makers should urge the development of programs that deal with this issue. These programs should create and maintain educational settings that protect pupils and provide a positive psychological and educational climate to enable children to strive for their positive development.

Future studies should especially take into account an additional variable, the behavioral patterns of pupil respondents as seen by the evaluated teachers. It is assumed that this measure will provide further insights into the factors that influence the way teachers interact with their pupils. Furthermore, a bigger sample size would give the opportunity of using a structural equation modeling with latent variables in order to assess this complex model with more accuracy, reducing the measurement error. For these rea-

sons, the present research is subject to some limitations. However, bearing these limitations in mind, it should be noted that the results confirm the presumptions expressed in the proposed model. This supports the branch of researchers and educators that sustain the importance of good pedagogical relations, in order to achieve a higher common aim: a better school for better pupils.

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Appendix A. The effects scale

Principal components factor analysis—rotated component matrix using varimax (see Table 5).

Table 5

Item	I	II	III
<i>Educational effects</i>			
I like X classes. (1)	0.82	0.35	-0.04
If I could, I would miss X class. (2)*	0.74	0.22	0.19
I would like to take my final exam in this subject. (3)	0.83	0.07	0.10
I get easily bored during X class. (4)*	0.79	0.17	-0.03
I like learning this subject. (5)	0.80	0.11	0.04
The teacher shows trust in me. (7).	0.59	0.28	-0.02
<i>Psychosomatic effects</i>			
I have felt humiliated by the teacher. (6)*	0.34	0.76	-0.01
I have thought of ways of revenging my sufferance caused by teacher misbehaviors. (8)*	0.38	0.70	0.03
When I think of X classes, my stomach gets upset. (9)*	0.31	0.81	-0.04
Sometimes I have the impression that I am not good at anything. (10)*	0.06	0.72	0.26
During X classes my palms sweat more than usual. (12)*	0.04	0.82	-0.09
After X classes I feel tired. (15)*	0.35	0.73	0.18
<i>General somatic effects (used as filler items only)</i>			
In general, I feel full of energy during the school hours. (11)	0.08	0.02	0.70
After a school day my neck becomes tense. (13)*	-0.03	0.03	0.73
I have been sick at school. (14)*	-0.05	0.10	0.76

Note: X is the subject that is taught by the evaluated teacher.

The item order is presented within parenthesis. * The reversed score items are marked.

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