ASSOCIATIONS BETWEEN LATE ELEMENTARY SCHOOL STUDENTS' PERCEPTIONS OF TEACHERS' BURNOUT AND PERCEPTIONS OF THE CLASSROOM CLIMATE

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A B S T R A C T

The present study explores associations between perceptions of late elementary school students (LESS) about teachers' burn out and their perceptions of the classroom climate, assessed by an adjusted version of the "Maslach Burnout Inventory" (MBI-ED) and "My Class Inventory" respectively. The sample of the study consists of 501 students. The results indicated a bidirectional relationship between students' perceptions of teachers' burnout and their perceptions of classroom climate. Specifically, emotional exhaustion predicts and is predicted by the majority of classroom climate dimensions (difficulty, satisfaction and cohesiveness). Depersonalization and personal accomplishment predict and are predicted by satisfaction. Moreover, the study showed that there were positive associations between the three dimensions of burnout and difficulty, friction and competitiveness. Also, burnout dimensions were negatively related to satisfaction and cohesiveness. Students' perceptions of teachers' burnout are stronger predictors of classroom climate than the opposite. The results are discussed in the context of the recent literature.

Keywords: teachers' burnout, classroom climate, students' perceptions, late elementary school students (LESS).

INTRODUCTION

Teachers share a significant responsibility in preparing young people to lead successful and productive lives. Teachers can be a source of inspiration and, equally importantly, provide a dependable and consistent influence on young people, as they make choices about further education, work and life (Vertigan, 2009). Despite the crucial role of teachers in fostering children's academic learning, social-emotional well-being, addressing teacher stress and job demands in classroom remains a significant challenge in education (Flook, Goldberg, Pingel, Bonus, & Davidson, 2013). According to Maslach, Schaufeli and Leiter (2001), professional stress can have deep psychological, cognitive, emotional and behavioral effects such as fatigue and lack of activity. While some teachers are able to handle the stress in an appropriate way, others fail to

overcome the work stress and it can lead to a chronic stress condition that causes emotional and physical problems (Maslach, 1982; Näring, Briët, & Brouwers, 2016; Zurlo, Pes, & Capasso, 2016).

Burnout is a phenomenon of dramatic importance in education (Brouwers, & Tomis, 2000). Teacher burnout is regarded as a serious problem in school settings (Shen, McCaughtry, Martin, & Fahlman, 2015) and has received a great deal of research attention (Maslach, 1982; Maslach, & Jackson, 1986; Chan, 2010; Baker, & Moore, 2015; Richards, Levesque-Bristol, Templin, & Graber, 2016; Skaalvik, & Skaalvik, 2016). Burnout has been conceptualised as a response to stress at work characterized by negative attitudes and feelings toward the people with whom one works (depersonalization attitudes) and toward the profession itself (lack of personal fulfillment at work), together with a feeling of being emotionally exhausted (Maslach, & Jackson, 1986). More specifically, emotional exhaustion refers to feelings of being emotionally overextended and depleted of one's

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emotional resources. Depersonalization refers to a negative, callous, or excessively detached response to other people, who are usually the recipients of one's services or care (Maslach, 1982). Reduced personal accomplishment is described as a person's negative self-evaluation in relation to his or her job performance (Shaufeli, Maslach, & Marek, 1993). Some studies of burnout stress a behavioural aspect of the syndrome while many others stress a mental aspect (Oranje, 2001; Brotheridge, & Grandey, 2002; Näring et al., 2016; Zurloet al., 2016). Recent studies view burnout as a state of both physical and mental exhaustion that strikes the individuals involved for a long time in situations that exact a heavy emotional toll (Baker, & Moore, 2015; Shen et al., 2015; Richards et al., 2016; Templin et al., 2016; Skaalvik, & Skaalvik, 2016). A range of studies (Hoy& Hannum, 1997; Marsh, Martin, & Cheng, 2008; Shih, 2015) identified relations between school climate and burnout. The classroom climate is defines as "the intellectual, social, emotional and physical environments in which our students learn" (Amborse, Bridges, DiPietro, & Lovett, 2010). Classroom climate has been related with school performance (Hoy, & Hannum, 1997; Marsh et al., 2008), aggression, victimization (Gottfredson et al., 2005; Wilson, 2004), positive climate development (Marsh et al., 2008; Saavedra, & Saavedra, 2007), cognitive and behavioural enforcement abilities (Fraser, 1998). Grayson and Alvarez (2008) revealed that different aspects of school climate were related to each of the three primary burnout dimensions. However, the few empirical studies acknowledge the climate of schools and classrooms as possible important antecedents to teacher burnout (Collie, Shapka, & Perry, 2012; Malinen, & Savolainen, 2016; Schiefele, 2017). Dorman (2003) mentioned that staff affiliation and work pressure were significant predictors of emotional exhaustion, whereas staff mission consensus and co-operation in classrooms were significant predictors of depersonalization. Staff mission consensus, together with classroom interactions, co-operation and task orientation were significantly related to personal accomplishment (Dorman, 2003). Another study mentioned the role that community and parental expectations play in generating stress and burnout (McCormick, 1997) as well as the role of school and classroom enviroment. The recognition of school and classroom environments as possible predictors of burnout is consistent with Lens and Jesus' (1999)

psychosocial interpretation of teacher stress and burnout and Maslach's (1999) view that the social environment is at the heart of both understanding the teacher burnout phenomenon and ameliorating it.

Recently, there is an increasing research interest in students' perceptions about their teachers' burnout (Ever et al., 2004; Tatar, &Yahav, 1999). Tatar and Yahav (1999) examined the secondary school students' perceptions (15-16 years) about their teachers' burnout. The students' reported perceptions on disruptive classroom behaviour rare significantly related to the three dimensions of teacher burnout. Ever, Tomic and Brouwers (2004) conducted a reseach about how a high school and university students (16-23 years) perceive their teachers' burnout. They asked high school students to complete the questionnaires about teachers' burnout. The high school students reported that perceptions on disruptive classroom behavior were found to be significantly related to the three dimensions of teachers' burnout. According to Ever et al. (2004) personal accomplishment, which is significantly related to someone's competence, may be a decisive factor in teachers' strategies for coping with job stressors. However, so far no study has been focused on the relationship between the students' perceptions about their teachers' burnout and classroom climate.

Taking into consideration studies which have reported that (a) the classroom environment can be considered asa predictor variable of burnout from the teachers' perspective (Dorman, 2003; Grayson, & Alvarez, 2008) (b) disruptive classroom behaviour is related to teachers' burnout and (c) that secondary school students are able to perceive teachers' burnout (Tatar, & Yahav, 1999; Evers et al., 2004). We expect (a) to identify classroom climate as a predictor of teachers' burnout from the students' perspective and (b) to identify their perceptions of teachers' burnout as predictors of classroom climate.

The investigation of perceptions of late elementary school students embrace the idea that late elementary school students can help clarify and understand the process of teaching. Educating young students is not a unilateral but an interactional process involving teachers and students. The participants' views of this process, their interests and worries should be given equal attention in study programs and everyday school life, for education can thrive only in an environment of mutual respect and interests, that is not troubled by

conflicts or harassment. The usefulness of this study can be appreciated only if teachers are well aware of how children perceive their professional burnout. It is then that they will be able to design and effectively implement the teaching process.

METHODOLOGY

Participants

Students: A total of 501, 5th and 6th grade elementary school students (approximately 51% boys and 49% girls) attending 25 classes, participated in this study. Participants' age ranged from 10.5 to 12.5 years. The schools and the children were randomly assigned to contribute to the research. Parents of students, were informed about the aims of the research and written consent for their children's participation to the study was provided by all of them.

Measures

Measures for late elementary school students (LESS): LESS completed the following scales: "Maslach Burnout *Inventory"* and "My Class Inventory".

Professional burnout: Professional burnout was assessed by the "Maslach Burnout Inventory" (MBI-ED version for teachers), developed by Maslach and Jackson (1986). This scale has been used before with Greek teaching populations (Antoniou, Polychroni, & Vlachaki, 2006; Kamtsios, & Lolis, 2016a; Kantas, 2001; Kokkinos, 2000; Papastyliannou, Kaila, & Polychronopoulos, 2009). The three factor structure of the MBI-ED was confirmed in samples of primary (Gold, Roth, Wright, Michael, & Chin-Yi, 1992) and secondary school teachers (Chan, 2010; Shaufeli, Daamen, & Van Mierlo, 1994). It consists of 22 statements where the respondents identify how often they feel professional burnout on a 7-point Likert type rating scale ranging from 0 "never" to 6 "every day". The three dimensions of professional burnout assessed by the tool are: emotional exhaustion, personal accomplishment and depersonalization. The nine items in the emotional exhaustion subscale describe feelings of being emotionally overextended and exhausted by one's work (e.g. I feel emotionally drained from my work). The five items in the depersonalization subscale describe an unfeeling and impersonal response towards recipients of one's care or service (e.g. I feel students blame me for some of their problems). The subscale of personal accomplishment contains eight items that describe feelings of competence and successful achievement in one's work with people (e.g. I have accomplished many worthwhile things in this job). For emotional exhaustion

and depersonalization, high mean scores correspond to higher degrees of burnout. In contrast to the other two subscales, lower mean scores on personal accomplishment correspond to a higher degree of burnout. The reliability coefficient of internal consistency (Cronbach's α) the three factors in the indicator ranged from .67 to .90 (Brouwers, & Tomis, 2000; Maslach, & Jackson, 1986; Maslach, Schaufeli, & Leiter, 2001; Koustelios, & Tsigilis, 2005).

Maslach Burnout Inventory" (MBI-ED version for teachers) was originally developed for teachers. For this reason the questionnaire was adapted in order to comment on LESS perceptions of their teachers' levels of burnout. In doing so words that students had a difficulty to understand were replaced by simpler ones (according to their suggestions). In order to test these changes in wording, the questionnaire was administered for a field test to a small sample of students (n = 50) in the target population (10.5–12.5 years). Students commented on the appropriateness of the questions, clarity, language suitability and wording. Minor changes were made at this point (e.g. "I feel disappointed in my job" modified to "it seems to me that he/she is unhappy with his/her job").

Classroom climate: My class inventory (MCI) (Fraser, Anderson, & Walberg, 1982) measures the climate of classroom. This questionnaire has been used before with Greek primary student population and its factorial validity has been confirmed (Matsagoura, 1987; 2000; Koustelios, & Kousteliou, 2001). The questionnaire included in the present study was classified into five categories: Satisfaction (5 items) (e.g. The course passes pleasantly), Friction (5 items) (e.g. Children fighting continued between them), competitiveness (5 items) (e.g. Some childrens always try to overcome others), Difficulty (5 items) (e.g. Only clever children can solve the exercises) and Cohesiveness (5 items) (e.g. All my classmates are my friends). Children select agree or disagree.

METHODLOGY

Data collection: The questionnaire was administered in the classroom by a research assistant. The whole procedure lasted for 40 minutes in each class. The questionnaries were administrated under the permission of each school headmaster.

Statistical analyses

Descriptive statistics: Initially, means and standard deviations were calculated for all factors for LESS. Reliability of the scales was examined using Cronbach's

alpha coefficient. This procedure has been the most commonly employed to estimate the internal consistency of test scores among several variables of personality.

Correlation analysis: Subsequently, the relation between the above two instruments (MBI, MCI) was studied. Specifically, we examined the correlations among the subscales of the two instruments.

Regression analysis: Stepwise hierarchical multiple regression (where the correlates determine the order of entry) used to explore assess (a) if the classroom climate is a predictor of students perceptions of teachers' burnout and (b) if the burnout predicts classroom climate.

RESULTS

According to late elementary school students' perceptions, teachers' mean score on emotional exhaustion was 11.00 (SD 1.11), on personal accomplishment 33.50 (SD 8.64) and on depersonalization 4.80 (SD 5.51). Means, standard deviations and internal consistencies of the MBI and the MCI and their subscales are presented in Table 1. Internal consistency coefficients (Cronbach's alpha) are satisfactory for both the MBI and MCI (Table 1). We did not check further the psychometric properties of the questionnaires since both of them had been used in previous study in Greece (Koustelios, & Tsigilis, 2005) and their factorial validity had been confirmed.

Table 1. Number of items, means and internal reliability of the subscales of the questionnaires.

	Construct	Items	Students perceptions (N=501) M [std]	Cronbach Alpha
Subclass	Maslach Burnout Inventory	22		
	Emotional Exhaustion	9	11.00 [1.11]	0.87
	Personal Accomplishment	8	33.50 [8.64]	0.84
	Depersonalization	5	4.80 [5.51]	0.91
	Construct			
	My class inventory	25		
Subclasses	Satisfaction	5	12.58 [3.17]	0.83
	Friction	5	9.40 [3.26]	0.73
	Competitiveness	5	11.76 [3.16]	0.72
	Difficulty	5	7.76 [2.91]	0.72
	Cohesiveness	5	11.18 [3.87]	0.86

Correlations: The correlations of all variables are statistically significant at level 0.01. (2-tailed).

Results from correlational analysis revealed significant correlations between all of the dimensions of burnout with the dimensions of the classroom climate. The three burnout dimensions gave the highest correlations with satisfaction (one of the classroom climate dimensions). In particular, satisfaction was negatively and positively correlated with emotional exhaustion, depersonalization and personal accomplishment respectively. The same pattern of correlations, (although lower correlations), was the case between the three dimensions of burnout and friction. Moreover, we identified positive medium-low correlations between emotional exhaustion and depersonalization with competitiveness, difficulty and cohesiveness. The same pattern of negative correlations was the case between personal accomplishment and the above three dimensions of classroom climate (Table 2).

Table 2. Bivariate Pearson correlations matrix for the variables considered in the study.

		1	2	3	4	5	6	7	8
1	Emotional exhaustion		0.84**	-0.85**	-0.62**	-0.37**	0.20**	0.28**	0.31**
2	Depersonalization			-0.79**	-0.58**	-0.33**	0.23**	0.26**	0.32**
3	Personal accomplishment				0.59**	0.31**	-0.15**	-0.20**	-0.31**
4	Satisfaction					0.39**	-0.25**	-0.25**	-0.44**
5	Friction						-0.36**	-0.29**	-0.35**
6	Competitiveness							0.23**	0.37**
7	Difficulty								-0.09**
8	Cohesiveness								

**Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed).

The classroom climate as a predictor of LESS perception for teachers' burnout: The results of the regression analyses of the LESS data show that the three (difficulty, satisfaction, cohesiveness) out of the five dimensions of classroom climate predict emotional exhaustion. Difficulty was a positive predictor whilst satisfaction and cohesiveness were negative predictors. Also, three (competitiveness, friction, satisfaction) out of the five dimensions of classroom climate predict depersonalization. Competitiveness and friction are positive predictors and satisfaction a negative predictor. Satisfaction and difficulty predict personal accomplishment in a positive and negative way respectively. Difficulty, satisfaction and cohesiveness account for 42,8 per cent of variance in emotional exhaustion (Table 3). Friction and satisfaction account for 28,6 per cent of variance in personal accomplishment. Over 30 per cent of variance in depersonalization was attributable to competitiveness, friction and satisfaction.

Table 3. Results of regression analyses for the classroom climate scale predicting the teacher's burnout.

Classroom climate	Burnout	B	SE B	β
Competitiveness				
R^2=0.053, F=27.735, p=.000	Depersonalization	11.13	.025	.132
Friction				
R^2=0.102, F=56.394, p=.000	Depersonalization	8.497	.025	.189
R^2=0.111, F=30.938, p=.000	Personal accomplishment	10.81	.041	-.059
Difficulty				
R^2=0.083, F=40.076, p=.000	Emotional exhaustion	6.859	.011	.076
Satisfaction				
R^2=0.392, F=320.178, p=.000	Emotional exhaustion	14.53	.010	-.179
R^2=0.410, F=168.383, p=.000	Depersonalization	11.89	.039	-.084
R^2=0.404, F=114.674, p=.000	Personal accomplishment	11.31	.020	.079
Cohesiveness				
R^2=0.144, F=83.676, p=.000	Emotional exhaustion	12.62	.014	-.132

Summarizing the effect of students' perceptions of classroom climate on teachers' burn-out, Figure 1 shows clearly that the three dimensions of burnout (emotional exhaustion, personal accomplishment, depersonalization) are predicted by three, three and two dimensions of classroom climate respectively. Emotional exhaustion and depersonalization were predicted by three dimensions of classroom climate with stronger predictive power than personal accomplishment. Specifically, depersonalization was positively related to competitiveness and friction and negatively to satisfaction. Emotional exhaustion was negatively predicted by satisfaction and cohesiveness and low positively predicted by difficulty. Personal accomplishment was low positively predicted by satisfaction and negatively by friction. Satisfaction was a strong predictor of emotional exhaustion and the weakest predictor of personal accomplishment.

Burnout as a predictor of classroom climate: Given that the correlation between burnout and classroom climate is relational and not causal (Dorman, 2003), a regression analysis with the burnout as an independent variable was conducted to explore whether burnout predicts school climate. All of the three dimensions of burnout appear to predict only three out of the five dimensions of the classroom climate, with emotional exhaustion to be the strongest predictor. Competitiveness and friction are not predicted by any burnout dimension. More specifically, both emotional exhaustion and depersonalization predict difficulty in a positive way and satisfaction and cohesiveness in a negative way. Personal accomplishment positively predicts satisfaction and cohesiveness (Table 4). The total amount of the variance explained by the predicting variables was 50,4 per cent for emotional exhaustion, 37,2 per cent for depersonalization and 24,7 per cent for personal accomplishment, respectively.
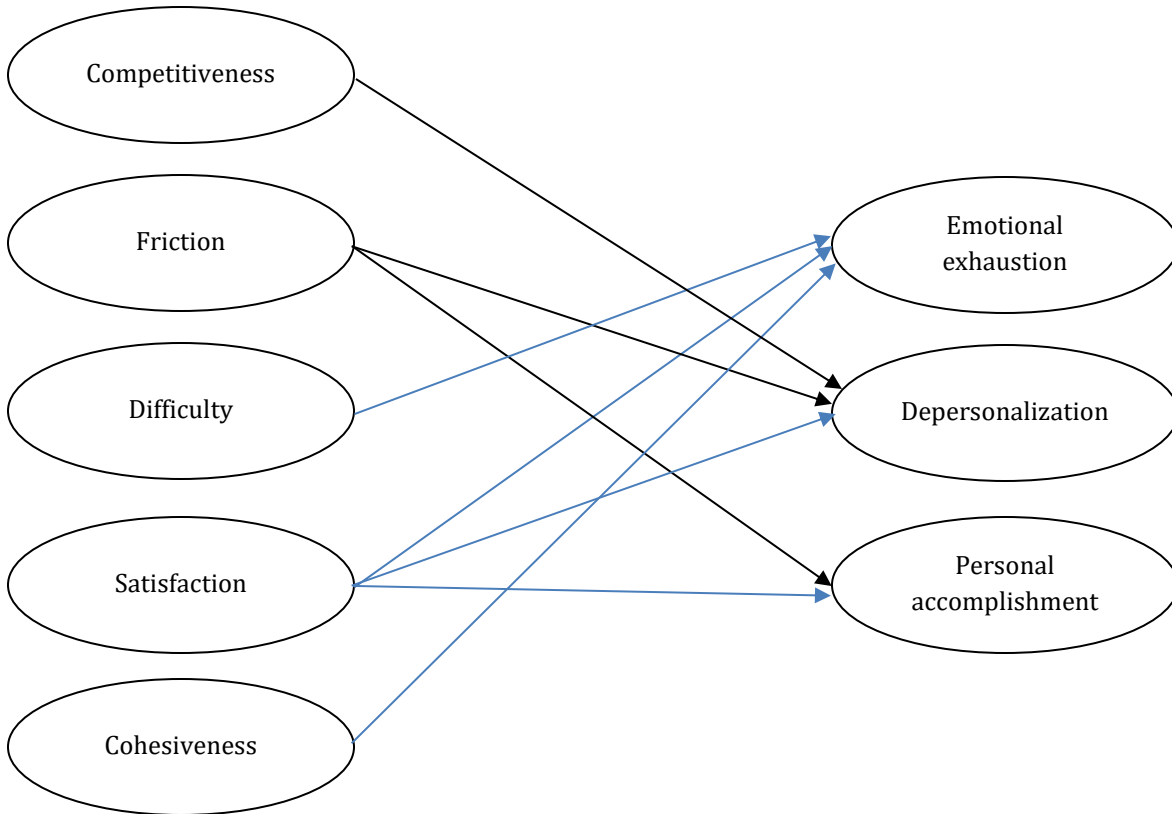
Figure 1. Regression analyses dimensions of classroom climate as predictors (beta coefficients) of burnout.
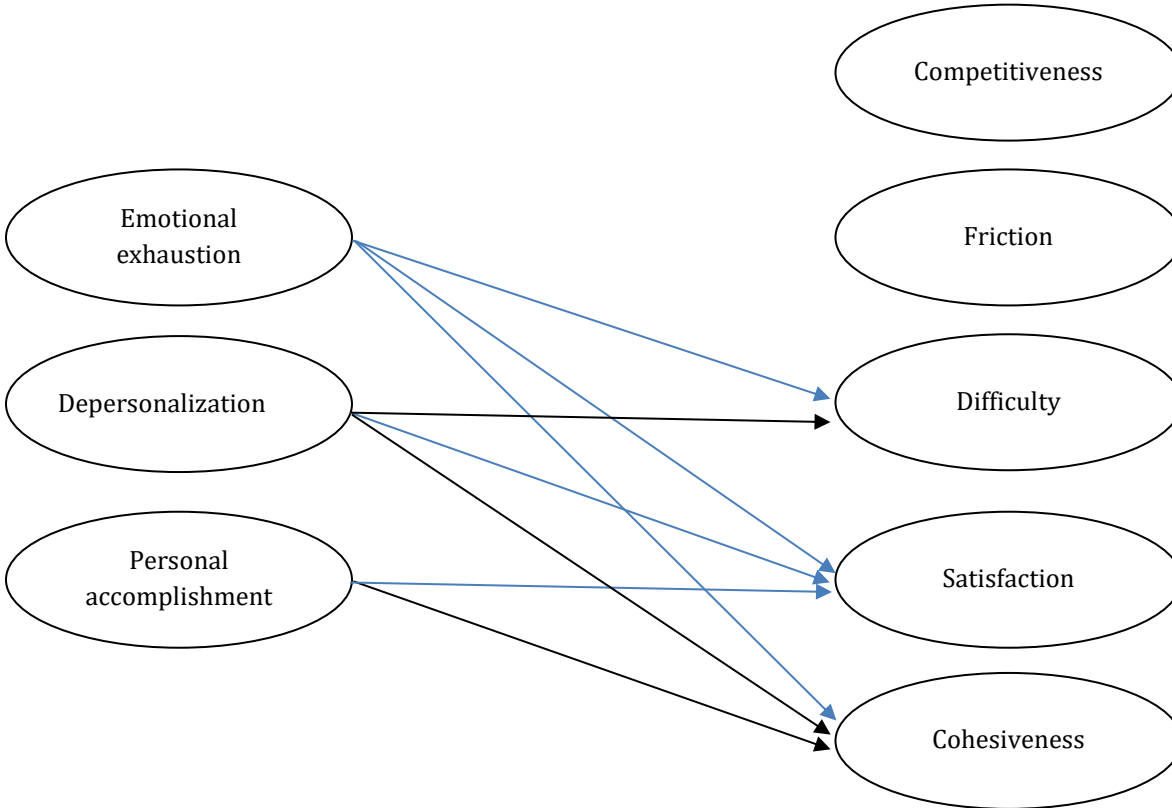

Figure 2. Regression analyses dimensions of burnout as predictors (beta) of classroom climate.

Table 4. Results of regression analyses for the burnout scale predicting the classroom climate

Burnout	Classroom Climate	B	SE B	β
Emotional exhaustion				
R²=.392,F=319.380,p= .000	Satisfaction	38.41	.122	-2.19
R²=.425,F=121.685,p= .002	Difficulty	35.85	.138	.430
R²=.414,F=174.593,p= .000	Cohesiveness	40.79	.107	-.462
Depersonalization				
R²=.340,F=255.975,p= .000	Satisfaction	17.55	.063	-1.01
R²=.355,F=136.071,p= .000	Difficulty	15.67	.071	. 234
R²=.363,F=93.250 , p= .000	Cohesiveness	16.26	.057	-.146
Personal accomplishment				
R²=.349,F=267.457,p= .000	Satisfaction	13.53	.099	1.61
R²=.355,F=137.973,p= .006	Cohesiveness	12.13	.087	.212

Summarizing, Figure 2 shows clearly that emotional exhaustion and depersonalization predict positively difficulty and negatively satisfaction and cohesiveness. Interestingly, emotional exhaustion is a very strong negative predictor of satisfaction. Moreover, personal accomplishment is a positive predictor of satisfaction and cohesiveness.

Comparing figure 1 and figure 2 we can see that five (emotional exhaustion ⇔ difficulty, emotional exhaustion ⇔ satisfaction, emotional exhaustion ⇔ cohesiveness, depersonalization ⇔ satisfaction, personal accomplishment ⇔ satisfaction) of the associations (presented in blue lines) between burnout and classroom climate are reciprocal with dimensions of burnout to be stronger predictors of aspects of the classroom climate than the opposite.

DISCUSSION

The present study explored the reciprocal relationship between LESS perceptions of the burnout and the classroom climate. It is suggested that students can give valid information about teachers' burnout. The associations between their perceptions of burnout and classroom climate similar to previous findings with older students. Furthermore, the findings show that five out of eight relationships were reciprocal between perceptions of LESS about their teachers' burnout and the classroom climate. Interestingly, the LESS perceptions of teacher's burnout appeared stronger predictors of classroom climate than the opposite.

The existing theoretical framework and Dorman's (2003) view that classroom climate predicts professional burnout led the hypothesis that classroom climate is a predictor of LESS perceptions of their teachers' burnout, and that hypothesis was confirmed by the findings of this research. This finding is consistent with previous studies (Evers et al., 2004; Tatar, & Yahav, 1999; Yao, 2015) which indicate classroom climate as a predictive factor of high and secondary school students' perceptions of their teachers' burnout. In particular, we found that any single aspect of the classroom climate predicts aspects of LESS perceptions of teachers' burnout with satisfaction to be a strong negative predictor.

Although previous research (Dorman, 2003; Grayson, & Alvarez, 2008) investigated only the influence of classroom climate on teachers' burnout, the present study explored the impact of late elementary school students' perceptions of teachers' burnout on their perceptions for classroom climate. We found that difficulty, satisfaction and cohesiveness of classroom were predicted by all of the burnout dimensions (emotional exhaustion, depersonalization, personal achievement). According to Rey, Extremera and Pena (2016), the school classroom climate is influenced by teachers' stress (Cobb, 1976; Cohen, & Wills, 1985). Teachers' stress, psychology and general behavior affects school climate, creating a positive or negative climate respectively. The failure of students' perceptions of teachers' burnout to predict competitiveness and friction is in line with Dorman (2003) suggestion that the quality of student relationships are not related to teachers' emotional exhaustion.

The investigation of the relationship between burnout and classroom climate has shown that most of the regression relationships are reciprocal only two relationships were not reciprocal. LESS perceptions of teachers' burnout appeared to have stronger influence on classroom climate than the opposite. The validity of

students' perceptions of teachers' burnout is supported by the Cronbach a coefficients of the three dimensions of the scale which similar to previous studies. Depersonalization positively predicts difficulty and is positively predicted by competitiveness and friction. Possibly, teachers' detachment and feeling of failure while teaching, seem to affect difficulty in the classroom and disrupt cooperation among students, while teachers' detachment is affected by tensions, frictions and disputes prevailing in the classroom. Such a suggestion is consistent with previous studies indicating that the feeling of failure experienced by teachers affects students' behavior and causes difficulties in their school work (Chan, & Hui, 1995). On contrary, conflicts and disputes in the classroom lead to their detachment from teaching and other students (Dorman, 2003). Also, personal achievement, positively predicts cohesiveness and satisfaction.

In summary, results of the study show that emotional exhaustion predicts and, at the same time, is predicted by difficulty, satisfaction and cohesiveness. Furthermore, depersonalization and personal accomplishment predict and are predicted by satisfaction. The importance of investigating the effect of perceptions of teachers' burnout on students' perceptions for classroom climate is highlighted by the high prediction coefficients. The three dimensions of professional burnout appeared stronger predictor variables of classroom climate instead of the opposite. Probably teachers' stress and burnout lead to inappropriate classroom management directly affecting classroom climate. This finding contributes to the literature demonstrating the importance of investigating the effect of students' perceptions of burnout on the perceptions of classroom climate (Evers et al., 2004; Grayson, & Alvarez, 2008). In particular, results of the study concerning the correlation between students' perceptions of burnout and classroom climate lend support to previous studies which suggested that the classroom climate correlated with teachers' burnout according both to teachers' (Dorman, 2003; Grayson, & Alvarez, 2008) and secondary/high school students' perceptions of their teachers' burnout (Evers et al., 2004; Tatar, & Yahav, 1999).

Further research on association between students' perceptions of burnout and perceptions of classroom climate will shed light on aspects of mutuality and reciprocity (involving empathy) underlying students-teachers relationships that possibly have an effect on students' performance (Karagiannopoulou, & Entwistle, 2017). Advanced statistical analysis on such associations will possibly identify through path analysis a best fit model for students' perceptions of burnout, perceptions of classroom climate and students' performance as an outcome. Besides, the exploration of developmental variables will contribute to a comprehensive picture of such associations.

The findings of the present study could be used by teachers to at least consider self-examination of their relationship to the LESS. Finally, based on Evers et al., (2004) results, the present study embraces the idea that pupils and students can help clarify and understand the process of teaching. Educating young people is not a unilateral, but an interactional process involving teachers and students. The participants' views of this process, their interests and worries should be given equal attention in study programs and everyday school life, for education can only thrive in an environment of mutual respect and interests, in an environment that is not troubled by conflicts or harassment.

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