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Self-efficacy and burnout in teaching: the importance of interpersonal-relations efficacy

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Abstract. This study investigated the association between perceived self-efficacy and burnout among teachers. Self-efficacy has been defined operationally based on a three-dimensional conceptualization: task, relations and organization. Efficacy variables were three classroom efficacy factors: instruction (task), discipline control (task), and consideration (relations), and two organizational efficacy factors: inclusion (task) and influence (relations). Burnout was measured as both a three-dimensional measure comprised of exhaustion, unaccomplishment and depersonalization, and as a single dimension (a composite score including all three dimensions). A sample of 322 Israeli teachers completed a self-report questionnaire. Multiple analysis of variance (MANOVA) and multiple regression analysis were used. It was found that perceived sense of self-efficacy was inversely correlated with perceived burnout: the lower the sense of self-efficacy, the higher the perceived burnout. The salience of organizational influence efficacy, and consideration efficacy (both are relations efficacies) were noted as important variables in predicting exhaustion, unaccomplishment and depersonalization. Task efficacies (e.g., instruction, discipline control, and inclusion) had no significant or meaningful weight in statistically predicting burnout beyond the relations efficacies. The importance of the organizational self-efficacy (teachers' beliefs in their ability to influence social and political forces within the organization, involvement in planning and executing important activities, as well as ability to draw upon the organization's resources to provide support and assistance) was discussed.

1. Introduction

Practitioners and scholars commonly classify the teaching profession as a highly stressful occupation (Farber, 1991). Teachers often find themselves beleaguered by disruptive and non-achieving students, are held accountable for their students' attainments and wellbeing, and depend on others, for example, parents, colleagues and the principal, to accomplish things. They are also affected by various psychological and social factors, and must function under conflicting expectations, pressures and demands (Chan, 1998).

Research suggests strong links between perceived self-efficacy and stress, and in particular, links between coping, efficacy and stress (Leland, 1983; Krampen,

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1988; Miller & Seltzer, 1991). Perceived self-efficacy refers to the person's belief in his or her ability to organize and execute the courses of action required to achieve goals (Bandura, 1997). That self-efficacy belief is a vital personal resource has been amply documented in the meta-analyses of findings relating to different spheres of functioning, achieved under laboratory and natural conditions (Bandura, 2000). Individuals with a stronger sense of perceived self-efficacy experience low stress in threatening or taxing situations, and experience situations as less stressful owing to their belief in their ability to cope (Bandura, 1997). It was documented that perceived self-efficacy predicts the level of stress and anxiety experienced and manifested in interpersonal transactions (Alden, 1986). Exposure to chronic occupational stressors, with low sense of efficacy to manage job demands and to enlist social support in times of difficulty, increases vulnerability to burnout (Leiter, 1992; Schmitz, 2000).

Unmediated stress, overload, inadequate support, and absence of buffers, usually lead to burnout. Burnout stems from the individual's perception of a significant discrepancy between expectations or dreams of impeccable professional performance, and actual results or rewards (Friedman, 1999a, 2000). Burnout encompasses a syndrome of reactions including physical and emotional exhaustion, depersonalization of service recipients, or powerful negative feelings towards them, and sense of personal unaccomplishment (Maslach & Jackson, 1981; Jackson, Schawb, & Schuler, 1986).

The purpose of the present research was to study the link between sense of professional self-efficacy and burnout, and to assess the relative importance of certain self-efficacy cognitions in understanding teacher burnout.

1.1. THE CONCEPT OF TEACHER SELF-EFFICACY

Teacher efficacy is defined as the extent to which a teacher believes that she or he can influence student behavior and academic achievements, especially students with difficulties or those with especially low learning motivation (Berman et al., 1977). Gibson and Dembo (1984) argue that teachers with a high sense of instruction efficacy believe that unmotivated students can be taught, given the extra effort and appropriate techniques; that family support can be enlisted; and that negative community influences can be overcome through effective teaching. In contrast, teachers with a low sense of instruction efficacy think that there is little they can do if students are poorly motivated, and that the influence teachers can exert on their students' intellectual development is severely limited by non-supportive or opposing influences from the home and the community in which the student lives.

In the last decade, definitions of teacher self-efficacy that are more complex in terms of the scope and the facets they embrace have appeared in the literature. For example, Cherniss (1993) has suggested that teacher efficacy should consist of three domains: task (the level of the teacher's skill in teaching, disciplining and motivating students), interpersonal (the teacher's ability to work harmoniously

with others, particularly service recipients, colleagues and direct supervisors) and organization (the teacher's ability to influence the social and political powers of the organization). Tschannen-Moran and Woolfolk-Hoy (2001) offered a measure of teacher efficacy comprising three sub-scales: (1) efficacy for instructional strategies, (2) efficacy for classroom management, and (3) efficacy for student engagement. Friedman and Kass (2002) devised a conceptual model of teacher self-efficacy, named the 'Classroom and School Context (CSC)' model of teacher efficacy. According to the CSC conceptualization, the teacher's functioning within the school is comprised of two basic domains: (a) the classroom, where the teacher works with students, and (b) the school, where the teacher functions as a member of an organization. In both contexts, the teacher has to perform professional tasks and be involved in interpersonal relations.

The CSC model describes the general array of professional tasks performed by the teacher, and the contacts with school staff relevant to the teacher's sense of efficacy. According to this model, the concept of teacher self-efficacy embraces both social systems in which the teacher functions (the classroom and the organization), and should relate to the people inside these systems (students, colleagues and management). In the classroom, the teacher imparts knowledge, functions as an educator, and handles both formal and informal aspects of his or her relationships with the students. The student-related tasks are, for example, good teaching, generating change in the student's life, flexibility within the classroom and nurturing social relations among the students themselves. Relationships on the classroom level are expressions of an assertive relationship with students. This is achieved by dealing effectively and confidently with real threats within the environment, for example, discipline problems, classroom disruption, and maintaining clear student–teacher boundaries. As an 'organizational person' the teacher may possibly seek influence and active involvement in performing organization-related tasks (involvement in decision making, membership of the 'inner circles', confidence in maneuvering around the organizational maze, and ascending the school hierarchy), as well as establishing positive relations with colleagues and members of the administration, assertiveness and social integration, and affording a sense of belonging and security.

The importance of the classroom and school conceptualization suggested by Friedman and Kass (2002) is even further underscored due to the contemporary changes characterizing the teaching profession. Since the early 1980s, the teaching profession has been the focus of marked social, political and professional changes (Miller, 1999; Farber, 2000). Among other things, these changes signal a shift from individualism to a professional community, from control to accountability, from controlled functioning to leadership, and in particular, from a focus on the classroom to a view of the school as the teachers' work-domain. Teachers' roles in the school have expanded, as new roles, like those of school counselors, training staff, and others, were created (Woods, 1999). Schools have become work-organizations, facilitating professionalism, cultivating collegial

relations, ensuring that the teacher's voice is heard in the decisions affecting student learning (Sleegers, 1999).

The organizational domain of the teacher functioning at school has a markable effect on the teacher as an employee (Cherniss, 1993). For example, the extent to which teachers are involved in school-based decisions determines the scope in which they sense control over expressing their values through their work. Preventing teachers from participating in decisions on teacher-related issues will result in declining employee morale, dissatisfaction and professional esteem (Smylie, 1999). Eventually, these cumulative affects will manifest themselves in professional stress and burnout (Byrne, 1994). A lack of organizational and social support can reduce the amount of feedback required for teachers to assess their attainments and evaluate the link between effort and achievement, and the links between their own work and the broader goals of the organization (Smylie, 1999). On the other hand, an organizational policy that treats teachers as dependable professionals, who initiate and experiment with new teaching methods, raise problems and provide solutions, can reduce stress. Social support within the organization and organizational support in general can serve as a buffer between stress and burnout (Friedman, 2000).

1.2. TEACHER SELF-EFFICACY AND BURNOUT

In recent years, an increasing number of burnout researchers have been drawing upon self-efficacy theory in their studies (Leiter, 1992; Cherniss, 1993; Friedman, 1999b, 2002; Brouwers & Tomic, 2000). Following Cherniss's (1993) classification of professional self-efficacy, Friedman (2002) argued that environmental or role stressors can be classified as task, organization, and relation stressors, with each pertaining to a different proportion of the variation in the professional's perceived burnout. He found that common environmental stressors may be categorized as task stressors, organization stressors, and relation stressors, and that organizational stressors were the best predicting variables for distinguishing between high- and low-burnout school principals.

Grau, Salanova and Peirò (2001) found that self-efficacy could moderate work-related stress, in the sense that low levels of self-efficacy are related to high levels of occupational stress. Professional self-efficacy was found to be positively associated with personal accomplishment, and negatively with depersonalization and emotional exhaustion. Individuals with lower levels of generalized self-efficacy showed greater emotional exhaustion, while those with lower levels of professional self-efficacy displayed greater cynicism and lower levels of organizational commitment. Increased levels of stress were not associated with strain for workers reporting high levels of self-efficacy. Generalized self-efficacy was found to be a stronger moderator of the relationship between stressors and the experience of burnout. Brouwers and Tomic (2000) examined the direction and period of the relationship between perceived self-efficacy in classroom management and the three

dimensions of burnout for school teachers. They found that self-efficacy beliefs regarding classroom management were significantly related to levels of teacher burnout. Teacher efficacy had a longitudinal effect on depersonalization, and synchronous effect on personal accomplishment. The direction was reversed in the case of perceived self-efficacy and emotional exhaustion (the time frame was synchronous). Evers, Brouwers and Tomic (2002) found that self-efficacy beliefs were significantly and negatively related to depersonalization and emotional exhaustion, and significantly and positively related to personal accomplishment. It is important however to note that in their study, although correlations were generally low to moderate, they were nevertheless statistically significant.

Chwalisz, Altmaier and Russell (1992) examined the extent to which teachers' causal attributions of their sense of job stress and perceived efficacy to manage stressors affected their style of coping, and the different types of burnout reactions. They found that perceived occupational inefficacy was an important mediator of burnout. Self-efficacy allegedly is playing a central etiological role in burnout, without minimizing the contribution of environmental conditions. When faced with academic stressors, teachers with high-perceived efficacy direct their efforts to solving problems. In contrast, teachers who distrust their efficacy try to avoid dealing with academic problems and, instead, turn their efforts inward to relieve their emotional distress. The pattern of coping by withdrawal heightens emotional exhaustion, depersonalization, and leads to a growing sense of futility. A crisis in professional efficacy can be an essential contributing factor in burnout. Thus, burnout may be considered a breakdown in the occupational domain of a person's sense of his or her own efficacy. It was noted that the emotional exhaustion component of the burnout syndrome implying depletion of energy, and diminished personal accomplishment is a direct measure of efficacy in that both assess perceptions of the impact of the work on the individual (Leiter, 1992).

Educator endurance, efficacy and humanitarian discipline relate negatively to stress, burnout and illness, but positively to health and personal accomplishment (Delaney, Newcomb, & Dembo, 1997). Path analyses have found that the influence of perceived inefficacy on punitive classroom management and devaluation of student ability or willingness to learn is mediated through stress and anger (Kipnis, 1974). Teachers with a low sense of instruction efficacy tend to become mired in classroom problems, are stressed and angered by student misbehavior, pessimistic about student potential to improve, and focus more on subject matter than student development (Melby, 1995).

Finally, correlational analysis revealed differences between types of professional self-efficacy, the more specific the self-efficacy beliefs, the more predictive they are. For example, Salanova, Peirò and Schaufeli (2002) used two levels of self-efficacy beliefs (generalized and computer self-efficacy). They found that the more specific level of self-efficacy (computer self-efficacy) moderated the relationship between job demands and control, and levels of burnout dimensions.

1.3. A MULTI-FACET APPROACH TO THE STUDY OF SELF-EFFICACY AND BURNOUT

In trying to meta-analyze recent studies on the link between self-efficacy and burnout, we find that these studies use different perceptions of self-efficacy, and different operational definitions of the term, which is reflected in different measures used to assess it. For example, Evers, Brouwers and Tomic (2002) used three types of efficacy: (1) self-efficacy toward guiding groups, (2) self-efficacy toward using tasks and (3) self-efficacy toward using innovations. The statistical link between the three types of self-efficacy and emotional exhaustion for example was $r = -0.28$, $r = -0.20$, and $r = -0.61$. Other studies used different measures of teacher self-efficacy (Delaney, Newcomb, & Dembo, 1997). Another important issue arising from surveying the literature on the link between teacher efficacy and burnout is that most, if not all, measures of teacher self-efficacy regard it as a single-facet concept, usually focusing on the classroom as the teacher's sole domain of functioning.

As mentioned above, a new conceptualization of teacher self-efficacy has been recently developed (Friedman & Kass, 2002). It is multi-faceted and detailed, and relates to a wide range of teacher functioning. The importance of the Friedman and Kass (2002) model for our purposes is that it contains an organizational efficacy component, which was not found in other definitions of teacher efficacy. The multi-faceted approach to the study of the link between teacher self-efficacy and burnout seems promising for two reasons. First, it contains several aspects of efficacy beliefs, thus providing a higher resolution of this concept. Secondly, it contains an organizational aspect of teacher functioning, which was found to be an important factor in explaining burnout (Cherniss, 1993).

The measure of teacher self-efficacy in the present study is based on the CSC model of efficacy (Friedman & Kass, 2002), which sees teacher efficacy as comprising the following facets (see also Appendix A):

(A) Classroom efficacy beliefs
   1. Classroom instruction efficacy
      Classroom instruction efficacy is the teacher's belief in his or her capability to teach well, give an interesting class, be spontaneous, be able to improvise when necessary and enhance student motivation.
   2. Classroom discipline control efficacy
      The ability to control discipline or student behavior problems calmly and effectively.
   3. Classroom consideration efficacy
      Classroom consideration (or heedfulness) is the teacher's ability to be alert, attentive and responsive to student problems, difficulties, subtle as they are sometimes, show concern and care for their emotional and cognitive needs within the classroom. A high level of classroom consideration efficacy means being able to encourage students to express their feelings and

opinions in the classroom, to be adaptable in their interrelations, and to be able to reach even the least motivated students.

(B) Organizational efficacy beliefs

1. Organizational influence: interpersonal relations in the organization
   Organizational influence is the employees' sense of being socially accepted, assertive and influential, particularly where relations with people in power positions within the organization are involved. It also means being able to handle informal organization situations well.
2. Organizational inclusion efficacy
   The individual's sense of being able to be active in accomplishing school tasks is defined in this study as organizational inclusion efficacy (in short: inclusion). Inclusion is one of the three dimensions in Schein's (1971) Career Movement Model. It focuses on the specific types of job movements that people make in organizations. According to Schein (1971), the inclusion dimension involves movement toward the inner core of the organization, from the organization's 'periphery' towards its center. Greater inclusion is signaled by more important responsibilities, sharing organization secrets and high policy decision-making processes, and greater trust from powerful members of the organization.

Organizational inclusion efficacy stresses the task-performance aspect, while organizational interrelations efficacy stresses the relations aspects of being an organization person (Whyte, 1961).

1.4. PURPOSES

The basic premise of the present study was that the multi-facet approach to the study of the link between teacher self-efficacy and teacher burnout could provide a better analytical instrument for statistically predicting burnout with the help of the self-efficacy components. The study raised several issues to be examined, and tested three main hypotheses, as follows:

1. The link between teacher burnout and self-efficacy
   Teacher efficacy in the area of relations would better predict teacher burnout than teacher efficacy in the tasks sphere. The basis for this hypothesis is that teachers are chiefly trained to function with regard to the task-professional sphere (Kass, 1998). Since burnout is an expression of professional failure (Friedman, 2000), the relations aspect of their functioning is therefore much more vulnerable, susceptible of burnout.
2. Differences in levels of self-efficacy
   The level of organizational self-efficacy would be lower on average than the level of classroom efficacy, due to the emphasis given in training the teacher to function in the classroom, compared with the emphasis on the teacher's functioning as an organizational person (Kass, 1998).

3. The link between the teacher's demographic and organizational background variables and self-efficacy
   (a) Young teachers (in terms of their teaching experience and age) will have a higher level of classroom efficacy than organizational efficacy since, at the start of their career, most of the teacher's experience is gained in the classroom (Kass, 1998).
   (b) Teachers with an academic educational background will have a lower level of classroom efficacy than certified or senior teachers due to the scant emphasis placed on classroom instruction during the academic education stages (Gavish, 1998).

2. Method

2.1. SAMPLE

Twenty-one elementary schools (out of approximately 1500 schools in Israel) were sampled at random. All teachers in the sampled schools received the research questionnaire, of whom 322 returned completed (anonymous) forms (63% return rate). The average age of the teachers in the sample was 37.62 years (SD = 0.50), (median = 38.00 years), and their average years of experience in teaching was 12.90 years (SD = 0.51), (median = 11.00 years). The sample consisted of 276 female teachers (85.7%), 20 male teachers (6.2%), and 26 teachers (8.19%) who failed to disclose their gender. Seventy five percent of the teachers taught in state-secular schools and 25% in state-religious schools. Certified teachers were 8.1%, 37.6% senior teachers, 35.7% had a bachelor's degree, 8.4% had a master's degree, and 10.3% had another academic degree or omitted to report their level of education. For further information regarding the sample distribution and categories, see Table I.

Relevant data for the country's teacher population are as follows: median age = 39.5 years; median teaching experience = 12.9 years; certified and senior teachers = 46.2%; 47.5% with academic degrees. The sample was therefore representative, at least with regard to the parameters measured.

2.2. INSTRUMENTATION AND MEASURES

An anonymous self-report questionnaire, comprising two scales and demographic background information, served as the research tool in this study. The two scales measured perceived sense of self-efficacy, and teacher burnout. Background information was requested on gender, years of teaching experience, teaching position at school (homeroom teacher, teaching specific subjects only, etc.), level of education and academic degree. The measures will be described here in some detail.

Table I. Independent variable groupings in the MANOVA data processing

Independent variable	Grouping description
Age	Range: 23–55+ years, in six groups: 23–39 ($n = 70$); 30–34 ($n = 49$); 35–39 ($n = 47$); 40–44 ($n = 55$); 45–49 ($n = 47$); 50+ ($n = 27$).
Years of teaching experience	Range: 1–35 years, in six groups: 1–4 ($n = 70$); 5–9 ($n = 66$); 10–14 ($n = 37$); 15–19 ($n = 38$); 20–24 ($n = 56$); 25+ ($n = 34$).
Educational background	Two groups: (1) certified teachers (teacher-training seminary only) and senior teachers ($n = 74$); (2) academic degree (BA, MA, or other academic degree) ($n = 142$).
Religious orientation	Two groups: (1) state secular ($n = 241$) and (2) religious orientation ($n = 81$).
Type of students taught	Two groups: (1) regular students ($n = 276$); and (2) special education ($n = 31$).
Class grade	Four groups: (1) grades 1–3 ($n = 83$); (2) grades 4–6 ($n = 115$); (3) grades 7–9 ($n = 55$); (4) grades 10–12 ($n = 36$).
Teaching role	Two groups: (1) homeroom teachers ($n = 168$); (2) teachers for specific subjects ($n = 125$).

Teacher perceived self-efficacy is a measure based on Friedman and Kass (2002), containing two main scales: classroom efficacy and organization efficacy. Each scale included several subscales as follows (see Appendix A):

(A) Classroom efficacy
Classroom efficacy comprised three scales (teacher's sense of instruction efficacy, of human relations efficacy, and of discipline control efficacy), as follows:
1. *Instruction*: a 7-item scale measuring teacher sense of being an effective instructor, for example, the ability to be creative and interesting, and to be able to improvise where needed; the capacity to learn from mistakes and to improve in response to constructive comments from colleagues, parents, and others.
2. *Discipline control*: a 3-item scale measuring the teacher's ability to monitor, control, and overcome classroom discipline issues and problems.
3. *Consideration*: a 7-item scale for measuring the ability to maintain open communication between teacher and students, mutual trust and respect, care for students' need of support, and interpersonal warmth.

(B) Organization efficacy
We defined organization efficacy as the employee's ability to become an 'organization person', namely, being able to use the organization's resources effectively and being able to have a considerable impact on its culture, policies and activities. Organization efficacy comprised two scales, as follows:

4. *Influence* (*interpersonal relations efficacy*): an 8-item scale for measuring teacher's ability to communicate assertively with colleagues, the principal and parents, and maintain good relations with them.
5. *Inclusion* (*organizational task efficacy*): a 5-item scale for measuring the teacher's sense of being able to be involved in the school's activities, to influence its activities, to make a difference, and being able to use the organization's resources effectively.

Reliability estimates for subscales were $\alpha = 0.62$ for instruction efficacy; $\alpha = 0.74$ for discipline control efficacy, and for consideration efficacy; $\alpha = 0.79$ for involvement efficacy; and $\alpha = 0.82$ for interpersonal relations efficacy.

Burnout: An adaptation of the Maslach burnout inventory (Maslach & Jackson, 1981), containing 14 items comprising three subscales: exhaustion, unaccomplishment, and depersonalization (See Appendix B). The adapted version of the MBI was developed by Friedman (1999c) and used in several previous studies (e.g., Friedman & Farber, 1992). Reliability estimates for subscales were $\alpha = 0.90$ for exhaustion; $\alpha = 0.82$ for unaccomplishment; $\alpha = 0.79$ for depersonalization; and $\alpha = 0.90$ for the whole scale.

Responses for both self-efficacy and burnout scales were rated on a 6-point frequency scale ranging from 'never' (1) through 'always' (6). A high score on this scale meant a high sense of self-efficacy, or a high level of perceived burnout.

2.3. PROCEDURE

Questionnaires were mailed to the teachers along with a cover letter signed by the Research Director, and by a Senior Inspector for the Ministry of Education, explaining the purpose and the significance of the study. The teachers were asked to fill out the forms and return them to the School Administrative Secretary. The forms were then mailed to the Research Coordinators.

2.4. STATISTICAL ANALYSES

Three initial statistical procedures were carried out: (1) handling missing values, (2) checking for normality, and (3) detecting outliers. Three of the questionnaires in which most of the responses were found to be missing, were eliminated from the processing. For the remaining questionnaires, missing values were replaced by the mean scores. Item score normality was assessed by examining skewness and kurtosis values for each item. It was found that all item scores were unskewed, so that no score transformation was needed. Outlier scores were identified by calculating Mahalanobis distance ($p < 0.001$). Three cases were defined as statistical outliers and were excluded from further data processing.

Data processing was carried out using SPSS-X software. The main statistical procedures used in this study were multiple analysis of variance (MANOVA) and multiple regression analysis.

3. Results

3.1. TEACHER BACKGROUND VARIABLES AND SENSE OF SELF-EFFICACY

A between-subjects multivariate analysis of variance (MANOVA) was performed on the five self-efficacy variables as combined dependent variables: organizational efficacy: (1) influence and (2) inclusion; classroom efficacy: (3) discipline control, (4) consideration, and (5) instruction. The independent variables were: (1) age, (2) years of teaching experience, (3) teacher educational background, (4) religious orientation of schools, (5) type of students (mainstream, special education), (6) class grade, and (7) role at school (homeroom teacher, specific subject teacher) (see Table I for breakdown of groups). SPSS-X MANOVA was applied. With the use of Wilks' criterion, it was found that the combined dependent variable was significantly affected by both teaching role at school [$F(5,280) = 7.22$, $p < 0.01$; multivariate effect size $= 0.11$], and teacher's educational background [$F(5,280) = 3.45$, $p < 0.01$, multivariate effect size $= 0.06$].

For teaching role at school, univariate tests for significance indicated that homeroom teachers were higher on all three classroom efficacy components (consideration, instruction and discipline control) and lower on organization efficacy (influence and inclusion) than teachers for specific subjects, with univariate effect size ranging from 0.01 through 0.05 (see Table II). As can be seen in Table II, the most salient difference in efficacy scores was found in consideration efficacy ($M = 4.76$ for homeroom teachers and $M = 4.51$ for specific subject teachers). On the other hand, on average, homeroom teachers reported lower levels of influence efficacy ($M = 4.04$), than specific subject teachers ($M = 4.28$) (see Table II).

For teachers' educational background level, univariate tests for significance indicated that statistically significant differences in mean efficacy scores for teachers

Table II. Differences in efficacy levels between homeroom and specific subject teachers

Efficacy component	Homeroom teachers ($n = 167$)		Teachers for specific subjects ($n = 124$)		$F(1,289)$	η^2
	M	SD	M	SD		
Classroom efficacy						
Consideration	4.76	0.53	4.51	0.55	15.76**	0.05
Instruction	4.71	0.47	4.56	0.48	6.76**	0.02
Discipline control	4.56	0.72	4.39	0.73	3.93*	0.01
Organizational efficacy						
Influence	4.04	0.78	4.28	0.74	7.50**	0.02
Inclusion	3.90	0.76	3.97	0.85	0.50	0.00

* $p < 0.05$.
** $p < 0.01$.

with different educational backgrounds were found for instruction and influence efficacy. For instruction efficacy, certified and senior teachers had a higher score ($M = 4.72$, SD $= 0.48$) than teachers with an academic degree ($M = 4.58$, SD $= 0.49$) [$F(1,284) = 6.38$, $p < 0.01$; $\eta^2 = 0.02$]. However, for involvement efficacy, certified and senior teachers ($n = 145$) had lower scores ($M = 4.06$, SD $= 0.75$) than teachers with an academic degree ($M = 4.25$, SD $= 0.77$), [$F(1,284) = 4.55$, $p < 0.01$; $\eta^2 = 0.02$].

It is important to note here that these two background variables (role at school, and educational level) were statistically linked. Cross-tabulation showed a statistically significant association between the teacher's level of education and role at school [$\chi^2(1) = 8.67$, $p < 0.01$]. Certified (and senior) teachers constitute 65% of the homeroom teachers group, and only 35% of the specific subject teachers group.

3.2. CLASSROOM AND ORGANIZATIONAL EFFICACIES LEVEL

Table III shows the means, standard deviations and intercorrelations among variables. Here we see that the mean scores for organization efficacy variables are lower than the mean scores for classroom efficacy: influence efficacy ($M = 4.16$) is lower than consideration efficacy ($M = 4.68$) (Cohen's $d = 0.78$). Both are 'relations' efficacies. Inclusion efficacy ($M = 3.95$) is lower than instruction efficacy ($M = 4.66$) (Cohen's $d = 1.06$), and discipline control efficacy ($M = 4.51$) (Cohen's $d = 0.72$). Both pairs are 'task' efficacies.

3.3. SELF-EFFICACY AND BURNOUT

Pearson product–moment correlations were calculated for burnout and self-efficacy variables. An important finding in Table III is the relatively low to moderate correlations between the self-efficacy and burnout variables, which range from $r = -0.12$ to $r = -0.38$. Nevertheless, all correlations are in the anticipated (negative) direction, showing that the lower the sense of self-efficacy, the higher the perceived sense of burnout (or vice versa). The correlation between consideration (ability to care for student's personal, informal needs) and depersonalization ($r = -0.38$), burnout and consideration ($r = -0.29$), and burnout and influence ($r = -0.27$), are of some salience (see Table III).

A standard multiple regression was performed in order to probe for the cumulative effect of self-efficacy variables on burnout variables. SPSS-X Regression was used for the analysis. R for regression was significantly different from zero for burnout: $R = 0.39$ (adj. $R^2 = 0.14$) $F(5,304) = 10.84$, $p < 0.01$; for exhaustion: $R = 0.26$ (adj. $R^2 = 0.05$), $F(5,304) = 4.42$, $p < 0.01$; for unaccomplishment: $R = 0.31$ (adj. $R^2 = 0.08$), $F(5,304) = 6.35$, $p < 0.01$ and for depersonalization: $R = 0.46$ (adj. $R^2 = 0.20$), $F(5,303) = 15.98$, $p < 0.01$.

Only two of the independent variables contributed significantly to the prediction of burnout, exhaustion, and unaccomplishment in the regression equation. They

Table III. Means, standard deviations, and intercorrelations between burnout and self-efficacy measures

Measure	*M*	SD	1	2	3	4	5	6	7	8	9
Burnout variables											
1. Burnout (total score)	2.91	0.76	–	0.83**	0.86**	0.69**	−0.27**	−0.16**	−0.21**	−0.29**	−0.20**
2. Exhaustion	3.02	0.96		–	0.56**	0.36**	−0.21**	−0.08	−0.12*	−0.15**	−0.10*
3. Unaccomplishment	2.78	0.98			–	0.44**	−0.24**	−0.14**	−0.18**	−0.21**	−0.17**
4. Depersonalization	2.93	0.84				–	−0.21**	−0.20**	−0.26**	−0.38**	−0.24**
Self-efficacy variables											
Organizational efficacy											
5. Influence	4.16	0.77					–	−0.52**	0.37**	0.27**	0.29**
6. Inclusion	3.95	0.82						–	0.36**	0.38**	0.28**
Classroom efficacy											
7. Discipline control	4.51	0.73							–	0.50**	0.42**
8. Consideration	4.68	0.56								–	0.58**
9. Instruction	4.66	0.49									–

* $p < 0.05$.
** $p < 0.01$.

Table IV. Regression analysis summary for self-efficacy variables predicting burnout, exhaustion, unaccomplishment and depersonalization ($n = 322$)

Variable	R	B	SEB	β	t
Dependent variable					
Burnout (total score)	0.39				
Independent variables					
Instruction		−0.08	0.10	−0.05	−0.76
Inclusion		0.04	0.06	0.04	0.66
Discipline control		−0.02	0.07	−0.02	−0.39
Influence		−0.20	0.06	−0.20	−3.62**
Consideration		−0.35	0.10	−0.25	−3.62**
Dependent variable					
Exhaustion	0.26				
Independent variable					
Instruction		−0.05	0.13	−0.02	−0.36
Inclusion		0.06	0.08	0.06	0.82
Discipline control		0.01	0.09	−0.01	−0.09
Influence		−0.24	0.08	−0.20	−2.94**
Consideration		−0.25	0.13	−0.14	−2.00*
Dependent variable					
Unaccomplishment	0.31				
Independent variables					
Instruction		−0.09	0.14	−0.04	−0.63
Inclusion		0.05	0.08	0.04	0.58
Discipline control		−0.04	0.09	−0.03	−0.47
Influence		−0.26	−0.09	−0.20	−2.99**
Consideration		−0.28	0.13	−0.15	−2.14*
Dependent variable					
Depersonalization	0.46				
Independent variables					
Instruction		−0.12	0.11	−0.07	−1.06
Inclusion		−0.02	0.07	−0.02	−0.26
Discipline control		−0.06	0.07	−0.05	−0.85
Influence		−0.06	0.07	−0.05	−0.83
Consideration		−0.55	0.10	−0.36	−5.25**

* $p < 0.05$.
** $p < 0.01$.

were influence and consideration. Consideration was the only variable that contributed statistically significantly to depersonalization (see Table IV). It is worth noting here that consideration and inclusion, which were the sole, major contributors to the statistical prediction of burnout and its components, constitute the 'relations' aspect of teacher self-efficacy. Neither variable belonging to the task aspect of teacher self-efficacy was found to predict burnout in teachers, above and beyond the remaining variables.

Following the results obtained, as shown in Table IV, two additional standard multiple regressions were performed, where burnout served as the dependent variable, and the items comprising the influence and consideration scales served as the independent variables. The purpose of the two additional analyses was to find out which type of influence and consideration efficacies behaviors affect burnout most. It was found that two influence scale items (organizational relations efficacy) contributed statistically significantly to the prediction of burnout. These items were 'When facing too many difficulties in my relations with colleagues or the administration, I tend to give up' ($\beta = -0.19$, $t = -2.80$, $p < 0.01$), and 'I feel powerless to influence the organization I work for' ($\beta = -0.20$, $t = -2.72$, $p < 0.01$) (Items 25 and 23, see Appendix B). It was also found that two items in the consideration items scale (classroom relations efficacy) contributed statistically significantly to predicting burnout above and beyond the remaining scale items. These items were 'I believe I am flexible and adaptive in my relations with my students' ($\beta = -0.14$, $t = -2.24$, $p < 0.05$), and 'I believe I can help all my students to choose and experience a variety of activities while at school' (Items 27 and 33, see Appendix A).

Separate regression equations were calculated for homeroom teachers, specific subject teachers, certified and senior teachers, and teachers with an academic educational background. Results are shown in Table V.

Table V. Regression analysis summary for self-efficacy variables predicting burnout in teachers with different roles at school and educational background

Teachers group	R	adj. R^2	F	Significant predictor	β	t
Homeroom	0.34	0.09	4.19**	Influence	−0.32	−3.52**
				Consideration	−0.25	−2.20*
Specific subjects	0.47	0.19	6.46**	Influence	−0.22	−2.00*
				Consideration	−0.20	−1.93*
Certified and senior	0.36	0.10	4.03**	Influence	−0.20	−2.08*
				Consideration	−0.27	−2.26*
Academic background	0.45	0.17	6.71**	Influence	−0.26	−2.62**
				Consideration	−0.21	−2.12*

* $p < 0.05$.
** $p < 0.01$.

In Table V two points are worth noting. First, for homeroom teachers as well as for certified (and senior) teachers, the five independent efficacy variables explain 9 and 10% of the variance in burnout, whereas these variables explain 19 and 17% of the variance in burnout for specific subject teachers and teachers with an academic background. Influence and consideration efficacies are the most salient variables in predicting burnout (see Table V for details).

3.4. SUMMARY OF THE MAJOR FINDINGS

1. Self-efficacy and burnout
   (a) Correlations between burnout and self-efficacy variables were generally statistically significant – in the predicted (negative) direction (the lower the self-efficacy belief, the higher the burnout) – although moderate, ranging from $r = -0.12$ to $r = -0.38$ (exhaustion and inclusion were not statistically correlated).
   (b) Only two of the self-efficacy scales contributed significantly to predicting burnout in the regression equation. They were influence and consideration (both are relations efficacy). All five efficacy scales variables in the regression equation explained 14% of the variance in burnout ($R = 0.39$), 20% of the variance in depersonalization ($R = 0.46$), 8% of the variance in unaccomplishment ($R = 0.31$), and 5% of the variance in exhaustion ($R = 0.26$).
   (c) Efficacy beliefs affected burnout in specific subject teachers and teachers with an academic educational background more than they affected homeroom and certified and senior teachers (with no academic educational background).
2. Levels of reported self-efficacy beliefs
   (a) For all teachers in the sample, reported mean scores for organization efficacy were lower than mean scores for classroom efficacy.
   (b) Teaching role and teacher educational background were the only background variables associated with perceived self-efficacy. Homeroom teachers scored higher on all three classroom efficacy components and lower on organizational efficacy (influence). Certified and senior teachers scored higher on Instruction efficacy and lower on involvement efficacy than teachers with an academic background.

4. Discussion

The main aim of the study was to empirically examine the link, expressly discussed in the literature of recent years, between perceived self-efficacy and burnout. The findings for the entire sample of teachers regarding this link pointed to a generally very moderate relation between the two phenomena. A relatively strong link

between self-efficacy beliefs was found with depersonalization (a component of burnout), which was mainly affected by consideration (a component of classroom efficacy). This association can be referred to as attribution of responsibility. Responsibility for an action or for feelings tends to be attributed when there is an identifiable source of an action (i.e., a particular person), and the belief is that this person should have been able to foresee the outcome, along with the perception that this person's actions were not justified by the situation, and the perception that the person operated under conditions of free choice. Thus, attribution of responsibility presupposes a judgment of causality (McGraw, 1987). It is argued therefore that teachers sensing a low level of consideration efficacy (a low ability to encourage students to express their thoughts and feelings in class, to involve even the least motivated of students in learning, etc.), hold their students responsible for their sensed weakness.

Another noteworthy finding in this study concerns the importance of both influence efficacy (organizational interpersonal relations) and consideration efficacy (classroom interpersonal relations) in predicting unaccomplishment and exhaustion. Influence and consideration both represent the relations efficacies. Organizational interpersonal relations comprises perceived ability to be an involved member of the organization, and the ability to communicate with fluency and assertiveness with colleagues and the administration, thus being able to rely on the organization as a source of support and assistance where and when necessary. Consideration efficacy in the classroom concerns teachers' sense of ability to perceive students as people, not merely as performing a function (of studying and amassing knowledge), to appreciate students' psychological and social needs and to respond to them appropriately. Teachers' efficacy beliefs regarding interpersonal relations with colleagues carried no small weight in predicting burnout, and in affecting it. Over the years, the many studies on burnout in general, and specifically on teacher burnout, have pointed to what happens in the classroom, both in terms of the teacher's tasks and the reciprocity between teachers and students, as the principal factors affecting burnout. This study points to the importance of the relations aspect of burnout antecedents, as was found in previous studies, and introduces the organizational factor into the burnout equation, indicating its important role in affecting burnout. The organization can be an important source of support, offering the professional (employed in an organizational context) a feeling of job security and professionalism. Conversely, a professional can feel overly burdened if he or she cannot rely on the organization and those who work there for routine professional support. This finding corroborates previous findings in the literature (Cherniss, 1993; Smylie, 1999).

As hypothesized, differences were found between levels of perceived classroom efficacy and perceived organizational efficacy reported by the teachers in the sample, with teachers reporting higher levels of classroom efficacy than organizational efficacy. We can understand this in light of the training process that teachers undergo and their in-service training in Israel. In this country the teacher's

classroom performance is emphasized more than his or her performance in the school as an organization. As hypothesized, teachers who graduated from teacher training colleges offering academic training and degrees showed lower levels of classroom efficacy than teachers whose training focused on instruction, where academic learning was not of a primary importance. This may indicate that instruction-focused training can significantly improve professional efficacy. This indication is supported in the literature (Bandura, 1997). However, contrary to the hypothesis, teacher's age and number of years in teaching were not found linked to the reported level of efficacy.

As in previous studies, this study too identified a link between self-efficacy and burnout in the negative direction: the higher the level of reported efficacy, the lower the level of perceived burnout. Because of the cyclical nature of self-efficacy, we have no way of determining whether the relationship between self-efficacy and burnout is a uni-directional one, and the question therefore arises of whether the level of self-efficacy is a cause of burnout or if burnout affects the level of self-efficacy. The idea that burnout affects self-efficacy is not without theoretical backing. Friedman (2000) has argued that burnout is a manifestation of a sense of professional failure at work. The exposure to repeated professional failures clearly affects professional levels of efficacy (Bandura, 1997). Therefore, the general causal direction may well be from self-efficacy beliefs to burnout, with the possibility of a counter effect.

4.1. A HYPOTHESIZED CAUSAL ASSOCIATION BETWEEN SELF-EFFICACY, COPING, PERFORMANCE, AND BURNOUT

It is argued here that our understanding of the link between self-efficacy beliefs and burnout is still inconclusive. As shown above, many studies point to a statistically significant association between self-efficacy beliefs and burnout in teachers, but not a very strong one. There are quite a few studies that fail to corroborate this association. In a meta-analytic literature review of the relationship between self-efficacy and the concept of occupational adaptation and stress, only a moderate relationship between self-efficacy and stress was found, and the results indicated that most of the variance between studies was due to the presence of moderators (for example adaptation level and occupation type) (Guertin & Courcy, 1999). The link between self-efficacy and burnout was not supported in a sample of 250 school counselors (Seymour, 2001).

In addition, the link between self-efficacy beliefs and burnout is most likely more intricate than was assumed in most previous studies. Several studies have noted the cyclical nature of teacher efficacy (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998), and the cyclical nature of the relation between self-efficacy and burnout. Burnout significantly predicted personal and general teacher efficacy, while accomplishment predicted a significant amount of variance in personal teacher efficacy. Higher levels of personal accomplishment were associated with higher

levels of self-efficacy, and depersonalization variables significantly predicted general teacher efficacy (Madden-Szeszko, 2000). Teachers' perceived lack of support from colleagues and principals had a significant effect on their self-efficacy beliefs in eliciting support from them, and those efficacy beliefs predicted their level of burnout. Teacher level of burnout predicted the extent to which they felt a lack of support (Brouwers & Tomic, 1999).

It is suggested here that since it is accepted that self-efficacy beliefs play a pivotal role in perceived burnout, they do so mainly through their impact on other important determinants, and are of a cyclical nature. A hypothetical structure of a causal model is shown in Figure 1.

Teacher sense of self-efficacy relies on several complementary sources. The first is the teacher's analysis of classroom and organizational tasks and interrelations requirements. The second concerns the teacher's assessment of his or her own capabilities regarding these tasks and the interpersonal requirements (both in the classroom and within the organization). (Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). The assessment of one's own capabilities is usually based on constellations of efficacy information conveyed enactively (enactive mastery experiences), vicariously, by verbal persuasion, and by physiological and affective states. Judgments of efficacy are also based on performance attainments (Bandura, 1997).

Teachers start their teaching career at school with a high level of idealism and commitment, expecting to gain favorable outcomes through good performance (Farber, 1991). Shortly after starting to practice teaching, teachers experience stressful events both in the classroom and at school in general (Friedman, 2000). Teachers with a high sense of self-efficacy will view an event as less stressful or severe than teachers with a low sense of self-efficacy. Teachers with a high sense of self-efficacy will most likely adopt better and more effective measures for coping and solve the problems they experience more successfully (Krampen, 1988; Miller & Seltzer, 1991). In contrast, teachers with a low sense of self-efficacy will use less effective measures of coping mechanisms, and their chances of failure will be higher. Coping patterns and efforts affect performance outcomes, which may be favorable or unfavorable. Prolonged unfavorable outcomes are an important source of efficacy information, added to the 'primary' sources of information, and thereby creating a cyclical sequence of occurrences (see Figure 1). The new, performance based information, is now integrated with the primary sources additively, multiplicatively, configuratively or heuristically (Bandura, 1997).

As seen in Figure 1, self-efficacy beliefs are a key factor affecting burnout directly and indirectly. It is argued here that models for examining the relationship between self-efficacy and burnout are quite complex. Further research is recommended for constructing a conceptual model such as shown in Figure 1, and testing it empirically.

The findings of this study contribute to our understanding of teacher burnout by stressing several of the factors responsible for exacerbating burnout or for helping in its amelioration. One major factor concerns the teacher's interpersonal

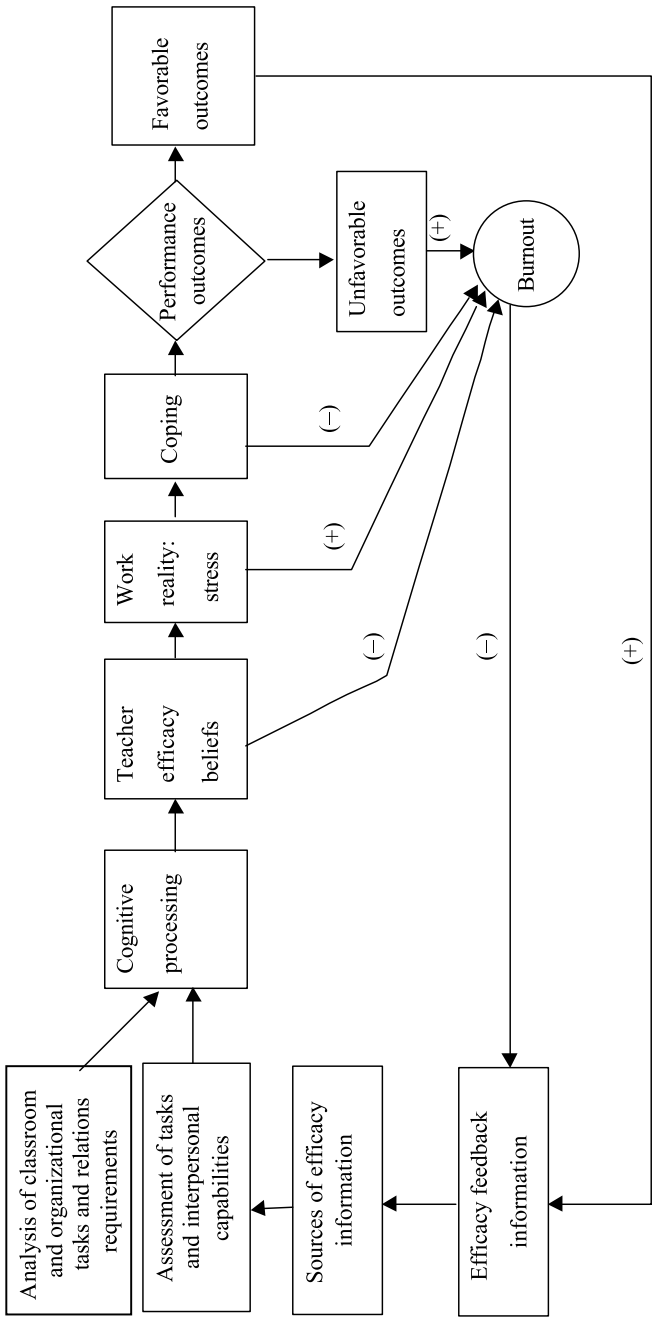

Figure 1. A hypothesized causal model of self-efficacy effect on burnout.

relations ability, and the other factor concerns the teacher's ability to function as an organizational person. It is therefore recommended that teacher training establishments should do more to enhance and strengthen the organizational aspect of school work, that is, the capacity to function as an employee receiving services, assistance and support from other staff. Teacher training schools would therefore best be advised to help boost their students' sense of interpersonal and organization efficacy, and not just strengthen their feeling of classroom efficacy.

Appendix A. Teacher efficacy scale (based on Friedman & Kass, 2002)

A. Classroom efficacy
   I. Classroom instruction
      1. I see myself as an interesting and motivating teacher.
      2. I believe I know how to improvise in response to changing circumstances when I teach.
      3. I believe I can be very creative in my work with students.
      4. I believe I know how to link what I teach to students' everyday interests.
      5. I believe that I learn easily from criticism.
      6. I believe there is little I can do to ensure that most students in my class achieve good grades.*
      7. I find it difficult to obtain good academic results from my students.*
   II. Classroom discipline control
      8. I believe I easily overcome student interruptions in class.
      9. I believe I handle classroom discipline problems quite well.*
      10. I believe I handle student unruly behavior quite well without raising my voice.
   III. Classroom consideration (showing empathy, attention and care for students)
      11. I believe I have the ability to encourage students to express their thoughts and feelings freely in my class.
      12. I believe I am flexible and adaptive in my relations with my students.
      13. I believe I maintain good relations with my students' parents for the student benefit and welfare.
      14. I believe I can involve in learning even the most unmotivated students in my class.
      15. I believe I have the ability to see the student as a whole person for whom learning is just one part.
      16. I believe I can diagnose student problems and deal with them before they deteriorate.
      17. I believe I can help all of my students to choose and experience a variety of activities while at school.

B. Organizational Efficacy
   IV. Organizational influence (being influential, persuasive, and assertive in interpersonal relations at school)
      18. I believe I am quite persuasive when communicating with my principal.
      19. I have difficulty making demands of the school administration.*
      20. I believe I can enjoy a good rapport with the school administration.*
      21. I believe I can be actively involved in important decision-making processes at school.
      22. I feel I can defend my views and opinions before the school administration.
      23. I feel powerless to influence the organization I work for.*
      24. I believe I am quite assertive where the school administration is concerned.
      25. When facing too many difficulties in my relations with colleagues or administration, I tend to give up.*
   V. Organizational inclusion (playing a pivotal role in contributing to the school)
      26. I believe I can play an important role in solving major school problems.
      27. I believe I offer the school administration constructive and innovative solutions to problems.
      28. I offer the school helpful ideas and initiatives.
      29. I believe I can play a central role in the school.
      30. I believe I could get a better position in my school if I wanted.

Appendix B. The teacher burnout scale (Friedman, 1999)

I. Exhaustion
   1. I feel exhausted from teaching.
   2. I feel burned out from teaching.
   3. I feel worn out from teaching.
   4. I feel wiped-out by the end of a day of teaching.
   5. I feel physically worn out by teaching.

II. Unaccomplishment
   6. I feel I could have better used my professional and personal capabilities in a profession other than teaching.
   7. I do not feel that I fulfill myself in teaching.
   8. I feel that I am not doing so well as a teacher.
   9. I think that if I had to choose again, I would still choose teaching.*
   10. I feel my expectations of teaching have not been met.

III. Depersonalization (having an unfavorable attitude toward students, lacking kindness or concern)
   11. I feel that my students do not really try enough.
   12. I feel that my students do not really care about being good students.

*Item scores reversed.

13. I feel that my students do not really want to learn.
14. I think that I would rather have better students than those I have now.

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