

## ESPERIENZE E STRUMENTI

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*Psychometric characteristics of the Teacher Stress Questionnaire by Travers and Cooper. Preliminary study*

*Caratteristiche psicometriche del Teacher Stress Questionnaire di Travers e Cooper. Studio preliminare*

### Introduction

In recent years research conducted to explore occupational stress has tried to deepen the mechanisms which, by regulating the interactions between the person and his/her job-environment, are able to modulate individual stress perception (Dewe, Leiter & Cox, 2000; Lazarus, 1999).

With particular reference to stress in teaching most research has tried to identify the negative effects on health caused by some potential stressors, and, also, to analyse how they interact with individual and situational facets, which are conceived to act as moderating factors within the stress process (Guglielmi & Tatrow, 1998; Zurlo, Pes & Cooper, 2007).

Research in this particular field has identified role conflict, role ambiguity, work overload, poor school climate, perceived lack of decision, perceived lack of support by fellow-teachers and superiors as the sources of stress most reported by teachers (Cunningham, 1982, 1983; Kyriacou, 1987; Kyriacou & Sutcliffe, 1977).

The analysis of the direct influence of these dimensions has highlighted that teaching stress is not a simple function of exposure to these sources of difficulty, and that the process of subjective appraisal of the situation can hesitate in teachers perceiving stress from specific situational facets and not from others.

In this perspective, some individual factors have been identified which can influence the cognitive appraisal of stressful events and, moreover, the type and level of the sources of stress perceived by teachers: locus of control, self-esteem, and Type A behaviour. This behavioural pattern involves characteristics such as hurriedness, hostility, aggressiveness, competitiveness, a sense of guilt or unease when not working or when relaxing and, moreover, a generally impatient disposition and a sense of time urgency (Travers & Cooper, 1996).

Moreover, several studies has highlighted the role of demographics and situational factors (age, gender, level of teaching, number of age spent in teaching, etc.) on perceived individual and organisational stress (Cooper & Marshall, 1976; Farber, 1991; Iwanicki, 1983; Lavanco, 1997; Pedrabissi, Rolland & Santinello, 1993; Perlman & Hartman, 1982). The multidimensional nature of stress in teaching has been spread accepted. Nevertheless, a permanent difficulty in this field is due to the absence of a single theoretical framework which summarises the research findings and takes into account the whole different articulating factors.

In this perspective the model of occupational stress elaborated by C.L Cooper (Odoardi & Giannini, 2000; Sutherland & Cooper, 1988) constitutes a relevant theoretical and descriptive effort. This model takes into account

the hypotheses on occupational stress formulated by Kyriacou & Sutcliffe (1978) and by French, Caplan & Harrison (1982), articulating the influence exerted by the interaction between individual and situational characteristics on the process of person-environment fit and on the subjective experience of stress.

This model of occupational stress is consistent with an interactive perspective which is the basis also for a specific model of stress in teaching elaborated by Cooper & Travers (1996). The underlying premise of this approach to teacher stress is that undesirable responses (e.g. psychological strain, alcohol consumption and intention to leave the profession) to the pressure in the working environment (e.g. the sources of pressure in the teaching profession) result from a lack of fit between the dispositional characteristics of the individual teacher and the situational aspects of the job that he or she performs.

According to Travers & Cooper's approach, stress is considered a dynamic relational concept, which depends on the constant interplay between different factors that influence each other: 1) *individual facets*, e.g. age, gender, Type A behaviour (Friedman & Rosenman, 1959); 2) *situational facets*, e.g. level of teaching, age of teaching, number of pupils taught, number of hours worked, sources of pressure in teaching; 3) *factors which moderate the interaction between individual and situational facets*, e.g. perceived job satisfaction, coping strategies; 4) *effects of teacher stress*, e.g. psychological strain (anxiety and depression) and teachers' health-related behavioural responses to stress (smoking, drinking and intention to leave the profession). In order to operationalise and measure the mutual influence existing between the main stressors and strain factors intro-

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duced within their model of teacher stress, Travers & Cooper (1996) designed the *Teacher Stress Questionnaire (TSQ)*.

### *The Teacher Stress Questionnaire*

The TSQ is divided into six sections:

1. demographic measures regarding the respondent's personal and job demographics concerning *biographical items* (e.g. sex and age), *professional and career* (e.g. years in teaching, school type), *school* (e.g. number of pupils) and *job details* (e.g. number of hours worked). Additional measures are also obtained on health-related behaviours (e.g. smoking, drinking) and on intention to leave the profession;
2. a measure of perceived mental ill-health, which is the *Crown-Crisp Experiential Index* (Crown & Crisp, 1979);
3. a measure of Type A behavioural style, which is the *Type A Behavioural Style Inventory* (Bortner, 1969);
4. a measure of job satisfaction, which is the *Job Satisfaction Scale* (Warr, Cook & Wall, 1979);
5. a sources of job pressure measure, which is the *Sources of Pressure in Teaching Scale* (Travers & Cooper, 1996);
6. a measure of coping style, which is the *Coping Style Inventory* (Cooper, Sloan & Williams, 1988; adapted in Italy by Sirigatti & Stefanile, 2002).

The *Crown-Crisp Experiential Index* (formerly the *Middlesex Hospital Questionnaire*) (Crown & Crisp, 1979) measures psychological well-being and mental health. This inventory is composed of six subscales measuring *Free-floating anxiety*, *Somatic concomitants of anxiety*, *Depression*, *Phobic anxiety*, *Obsessionality* and *Hysteria*. Within the TSQ only the former three scales are used, plus a total overall score, i.e. a total of 24 items. For this study, reliability values

(Cronbach alpha coefficient) are as follows: *Overall mental ill-health*,  $\alpha = .87$ ; *Free-floating anxiety*,  $\alpha = .73$ ; *Somatic anxiety*,  $\alpha = .64$ ; *Depression*,  $\alpha = .70$ .

The Bortner's *Type A Behavioural Style Inventory* (Bortner, 1969) is employed as a measure of behavioural style. The scale consists of 14 bipolar adjectival items measured on an 11-point Likert-type continual rating scale. This yields a single score ranging from 14 to 154 (i.e. low to high type A behaviour). The presence of this scale within the TSQ is consistent with the underlying premise made by Travers & Cooper that Type A behaviour influences teacher stress.

The *Job satisfaction scale* (Warr, Cook & Wall, 1979) is used in order to measure job satisfaction. This scale consists of 15 items, measured on a seven-point Likert-type rating scale for each item, assessing the degree of job satisfaction from being "extremely dissatisfied" at one end of the scale to "extremely satisfied" at the other. As stated earlier, according to the model elaborated by Travers & Cooper, job satisfaction constitutes one of the factors which moderate the stress originated by the interaction between individual facets and situational facets.

The *Sources of Pressure in Teaching Scale* (Travers & Cooper, 1996) is adopted to explore the particular kinds of job pressure experienced by teachers, that is to say the situational features which influence teacher stress. This scale consists of 98 items referring to sources of pressure which, on the one hand, originated on the basis of the content analysis made upon 40 transcribed semi-structured interviews conducted in seven British school, and which, on the other hand, has been identified as most reported by teachers in international stud-

ies. The items are measured on a six-point Likert-type scale ranging from "strongly disagree is a source of pressure" to "strongly agree is a source of pressure".

The *Coping Style Inventory* is employed to measure teachers' strategies for coping with job stress and derives from the *Occupational Stress Indicator (OSI)* (Cooper, Sloan & Williams, 1988; Sirigatti & Stefanile, 2002). The scale consists of 28 items rated on a six-point Likert scale ranging from "never used by me" to "very extensively used by me". As stated earlier, according to the model elaborated by Travers & Cooper, coping style is considered to be a second factor which moderates the stress originated by the interaction between individual facets and situational facets.

### *Aims*

The present study aims at presenting a preliminary analysis of the psychometric characteristics as well as the factorial structure of an Italian version of the TSQ (Travers & Cooper, 1996). In particular our purposes are: 1) analysing the TSQ reliability by means of item analysis and by measuring the internal consistency of its single scales; 2) analysing the factorial structure of the questionnaire by means of the factor analysis of its single scales; 3) exploring the differences emerging in the dimensions evaluated by the TSQ with respect to age and level of teaching; 4) exploring the job pressure factors, the relevant person-facet variables and the moderating factors most correlated to negative stress outcomes.

The TSQ has been translated into Italian by three independent translators. These translators agreed on a common version of the questionnaire which was back-translated by an English

native speaker which was also an expert in psychological vocabulary. These two versions of the questionnaire were compared and, after further adjustments, an experimental version of the TSQ originated. Prof. Cooper kindly supplied us with relevant clarifications concerning the questionnaire single item content, which enabled us to get a translation as accurate and adequate as possible. This version was preliminary submitted to a small sample of teachers which are different for age, gender and level of teaching with the aim of verifying that a correct understanding of the single items and a full comprehension of the instruction for completing the different scales could be obtained. Once these characteristics had been verified, and after other slightly changes had been implemented, the version of the TSQ used in this preliminary study originated.

## Methods

### Subjects

The questionnaire was individually submitted to 320 teachers employed within schools in the city of Naples and its outskirts. Eighty-nine per cent ( $n = 284$ ) of the teachers were female and the ages ranged from 23 to 67 years ( $M = 46.35$ ;  $SD = 8.98$ ). The teachers were equally distributed in 4 levels of teaching and so they were assigned to 4 groups: I) Nursery School; II) Primary School; III) Junior High School; IV) High School. Moreover, the teachers were assigned to 3 groups by age: I) 23-35 years; II) 36-50 years; III) 51-67 years. The data were treated to 4 types of analyses using SPSS-X: 1) inter-item correlations, item-total correlations, index of accuracy, Cronbach's alpha, skewness and kurtosis for each scale;

2) factor analysis (Package SPSS, Extraction Method: Principal Axis Factoring Analysis, Rotation Method: Varimax with Kaiser Normalization) of the single scales; 3) analysis of variance by age and level of teaching (dependent variables: factor scores, total and subscale scores of each scale); 4) multiple regression analysis (*Stepwise* method; dependent variable: *Crown-Crisp Experiential Index* total and subscale scores).

## Results

### Analysis of the TSQ reliability

With respect to the first aim of the present study, this section will present the findings of item analysis (mean, standard deviation, skewness and kurtosis, index of accuracy) as well as the test for the internal consistency of TSQ single scales (Cronbach alpha coefficient).

*A. The Type A Behavioural Style Inventory.* For this scale, the mean score for the single items varied from a maximum score of 9.35 (item 10: "hard driving") to a minimum score of 5.25 (item 11: "hide feelings"), and the mean was 6.80. Standard deviation for the single items varied from 1.73 to 2.79. The skewness and kurtosis varied from  $-1/+1$ , and so can they indicated a normal distribution of the scores; for the only item 10 ("hard driving") the skewness and kurtosis are  $> 1.5$ : in fact, this item showed the highest mean. These analysis accounts for a substantial symmetrical and normal distribution of the items with respect to the Italian translation of the scale, and this characteristic is the most important premise for the multiple regression analysis. Item-total correlation is high significant for all the items ( $r > .30$ ;  $p < .01$ ); only two items showed a lower  $r$  coefficient

(item 1: "never late",  $r = .28$ ; and item 14: "eager to get things done",  $r = .20$ ); in no case the  $r$  coefficient is higher than .80. This finding accounts for a fundamental item adequacy and consistency with respect to the construct of the whole scale. The mean inter-item correlation is .17 which indicates a high items discriminatory ability. Cronbach's alpha reaches the satisfactory value of .75. The accuracy index (item-total correlation  $\times$  item standard deviation) has been also calculated for each item. Nearly all of the items of the inventory showed a high accuracy index ( $> .70$ ), except for item 1: "never late" (accuracy index = .29); and item 14: "eager to get things done" (accuracy index = .48). The whole findings account for a basic adequacy and reliability of the Italian version of the *Type A Behavioural Style Inventory*.

*B. The Job Satisfaction Scale.* For this scale, the mean score for the single items varied from a maximum score of 5.47 (item 2: "The freedom to choose my method of working") to a minimum score of 3.15 (item 7: "My rate of pay"), and the mean was 4.54. Standard deviation for the single items varied from 1.32 to 1.62. The skewness and kurtosis varied from  $-1/+1$ , and so can they indicated a normal distribution of the scores; for the only item 2 ("The freedom to choose my method of working") the skewness and kurtosis are  $> 1.5$ : in fact, this item showed the highest mean. Item-total correlation is high significant for all the items ( $r > .30$ ;  $p < .01$ ); in no case the  $r$  coefficient is higher than .80. The mean inter-item correlation is .36 which indicates a satisfactory items discriminatory ability. Cronbach's alpha reaches the high value of .89. All of the items of the scale showed a high accuracy index ( $> .70$ ),

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except for the item 15: "My job security" (accuracy index = .51). Some items refer to satisfaction with "The attention paid to suggestions I make" (accuracy index = .99), "The amount of variety in my job" (accuracy index = .89), "My opportunity to use my abilities" (accuracy index = .86), and "my hours of work" (accuracy index = .86). The whole findings account for a high adequacy and reliability of the Italian version of the *Job Satisfaction Scale*.

**C. The Sources of Pressure in Teaching Scale.** For this scale, the mean score for the single items varied from a maximum score of 4.66 (item 29: "Lack of support from the government") to a minimum score of 1.76 (item 92: "Parental attitudes toward my adherence to union policies, e.g. strikes"), and the mean was 3.41. Standard deviation for the single items varied from 1.23 to 1.99. The skewness and kurtosis varied from  $-1/+1$ , except for the only item 31 ("Physical aggression from pupils") for which the kurtosis is  $< 1.5$ : in fact, this item showed the highest standard deviation. Item-total correlation is high significant for all the items ( $r > .30$ ;  $p < .01$ ). Only four items showed a lower  $r$  coefficient (item 10: "Knowing that my absence will create problems for other staff",  $r = .22$ ; item 37: "Duration of the summer holidays",  $r = .20$ ; item 63: "The use of school bells",  $r = .29$ ; and item 92: "Parental attitudes toward my adherence to union policies, e.g. strikes",  $r = .26$ ); in no case the  $r$  coefficient is higher than .80. The mean inter-item correlation is .28 which indicates a good items discriminatory ability. Cronbach's alpha reaches the very high value of .97. Most of the items of the scale showed an high accuracy index ( $> .70$ ). Some refer to stress connected to "The number of supervisory activities

I have to perform at school" (item 88: accuracy index = .95), "The lack of clarity concerning my role within the school" (item 27: accuracy index = .91), "Lack of parental "back-up" on matters of discipline" (item 32: accuracy index = .91). Also in this case the whole findings highlight a basic adequacy and reliability of the Italian version of the *Sources of Pressure in Teaching Scale*.

**D. The Coping Style Inventory.** For this scale, the mean score for the single items varied from a maximum score of 5.19 (item 4: "Look for ways to make the work more interesting") to a minimum score of 2.04 (item 24: "Delegation"), and the mean was 4.20. Standard deviation for the single items varied from .84 to 1.65. The skewness and kurtosis varied from  $-1/+1$ . Item-total correlation is high significant for all the items ( $r > .30$ ;  $p < .01$ ). Seven items showed a lower  $r$  coefficient (item 1: "Deal with the problems immediately as they occur",  $r = .29$ ; item 2: "Try to recognise my own limitations",  $r = .23$ ; item 7: "Resort to hobbies and pastimes",  $r = .29$ ; item 11: "Having a home that is a refuge",  $r = .28$ ; item 13: "Deliberately separate home and work",  $r = .28$ ; item 24 "Delegation",  $r = .20$ ; item 26 "Accept the situation and learn to live with it",  $r = .28$ ). In no case the  $r$  coefficient is higher than .80. The mean inter-item correlation is .14 which indicates a high items discriminatory ability. Cronbach's alpha reaches the high value of .80. Most of the items of the inventory showed a not very high accuracy index ( $< .70$ ). The following items showed the highest levels: item 6 "Seek support and advice from my superiors" (accuracy index = .67); item 23 "Resort to rules and regulations" (accuracy index = .62); item 17 "Expand interest and activities outside work" (accuracy index = .61). The

analyses conducted with respect to the *Coping Style Inventory* highlighted a basic adequacy and reliability of the Italian version of the scale.

### Preliminary analysis of the construct validity

With respect to the second aim of the present study, this section will present the findings of the factor analyses conducted for each scale of the questionnaire and the Cronbach's alpha calculated for each of the factors extracted.

We decided to run an exploratory factor analysis (extraction method: Principal Axis Factoring Analysis, rotation method: Varimax with Kaiser normalization) because it enabled us to test the psychometric characteristics and the validity of the TSQ, to reduce the vast amount of data available, and to obtain a basic synthesis of the variables measured in the questionnaire, which account for TSQ adequacy.

**A) The Type A Behavioural Style Inventory.** The inventory consists of 14 item which, in the study reported by Travers & Cooper (1996), referred to 4 factors: 1) *Time conscious behaviour*; 2) *Ambitious/competitive behaviour*; 3) *Efficient behaviour*; 4) *Emotionally suppressive behaviour*.

In the present study, from the factor analysis of the scale 4 factors were identified which account for 52.8 per cent of the total variance (see Table 1). Factor 1 (explained variance = 26%, eigenvalue = 3.6; alpha = .75) is loaded by items regarding the perception to be always under the pressure of time and responsibility. Consequently, we have considered it as an indicator of *Time conscious behaviour*. Factor 2 (explained variance = 10%, eigenvalue = 1.4; alpha = .68) is loaded by some items regarding a tendency towards ambitious behaviour, the hiding of feelings

**Table 1**

Factor analysis of the Bortner's Type A Behavioural Style Inventory: loading factors.  
Total variance explained 52.8%. Cronbach's  $\alpha = .75$

Item	Time conscious behaviour (factor 1)	Ambition and control of emotions (factor 2)	Conscientiousness and need for social recognition (factor 3)	Competitive behaviour (factor 4)
Try to do many things at a time	.67			
Fast (eating, walking)	.63			
Impatient while waiting	.54			
Always rushed	.52			
Eager to get things done	.46			
Hide feelings		.54		
Emphatic in speech, fast and forceful		.53		
Ambitious		.47		
Few interests outside work/home		.46		
Anticipate what others are going to say		.34		
Hard driving			.67	
Want good job recognised by others			.35	
Very competitive				.53
<b>Eigenvalue</b>	3.6	1.4	1.3	1.0
<b>Percentage of variance</b>	26%	10%	9.4%	7.5%

and the use of emotion in emphatic or fast speech. Consequently, we considered it as an indicator of *Ambition and control of emotions*. Factor 3 (explained variance = 9.4%, eigenvalue = 1.3;  $\alpha = .28$ ) is loaded by some items indicating, on the one hand, tendencies towards conscientious behaviour and, on the other hand, a will for social recognition. Consequently, we considered it as an indicator of *Conscientiousness and need for social recognition*. Finally, factor 4 (explained variance = 7.5%, eigenvalue = 1.00) is loaded by only one item indicating *Competitive behaviour*.

*B) The Job Satisfaction Scale.* It consists of 15 items which, in the original study (Travers & Cooper, 1996), referred to five factors: 1) *Intrinsic job satisfaction*; 2) *Extrinsic job satisfaction*; 3) *Job itself intrinsic satisfaction*; 4) *Working conditions satisfaction*; 5) *Employee relations satisfaction*. In the present study, from the factor analysis of the *Job Satisfaction Scale* 3 factors were obtained which summarise the dimensions emerged in the original study and which account for 57.2 per cent of the total variance explained (see Table 2). Factor 1 (explained variance = 40.5%, eigenvalue = 6.1;  $\alpha = .86$ ) is

loaded by items which indicate satisfaction with extrinsic aspects of the job, as well as satisfaction with employee relations. Consequently, in our opinion, this factor merges factor 2 and 5 of the British study and, then, constitutes an indicator of *Extrinsic and employee relations job satisfaction*. Factor 2 (explained variance = 9.3%, eigenvalue = 1.4;  $\alpha = .74$ ) is loaded by items which refer to satisfaction with intrinsic aspects of the job, as well as satisfaction with the job itself. Consequently, in our opinion, this factor merges factor 1 and 3 of the British study, and then we consider it to be an

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**Table 2**

Factor analysis of Job Satisfaction Scale: loadings on factors.  
Total variance explained 57.2%. Cronbach's  $\alpha = .89$

<i>Item</i>	<i>Extrinsic and employee relations job satisfaction (factor 1)</i>	<i>Intrinsic and job itself satisfaction (factor 2)</i>	<i>Satisfaction with general working conditions (factor 3)</i>
<i>The relations between management and staff in your school</i>	.82		
<i>Your director</i>	.79		
<i>The way your school is managed</i>	.74		
<i>The attention paid to suggestions you make</i>	.45		
<i>Your fellow teachers</i>	.40		
<i>The freedom to choose your own method of working</i>		.70	
<i>The amount of responsibility you are given</i>		.50	
<i>Your job security</i>		.48	
<i>The recognition you get for good working</i>		.47	
<i>Your opportunity to use your abilities</i>		.40	
<i>The amount of variety in your job</i>			.55
<i>Your rate of pay</i>			.53
<i>Your chance of promotion</i>			.53
<i>Your hours of work</i>			.52
<i>The physical working conditions</i>			.39
<b>Eigenvalue</b>	6.1	1.4	1.1
<b>Percentage of variance</b>	40.5%	9.3%	7.5%

indicator of *Intrinsic and job itself satisfaction*. Factor 3 (explained variance = 7.5%, eigenvalue = 1.1;  $\alpha = .68$ ) is loaded by items which regard satisfaction with working conditions. For this reason, we consider it to be an indicator of *Satisfaction with general working conditions*.

Thus, in the present study, extrinsic job satisfaction showed to be strictly connected to satisfaction with employee relations with fellow-teachers and with the director; moreover, these joined dimensions constitute the

most relevant facets of perceived job satisfaction.

C) *The Sources of Pressure in Teaching Scale*. It consists of 98 item which, in the original study, referred to 10 factors: 1) *Pupil/teacher interaction*; 2) *Management/structure of the school*; 3) *Class sizes/overcrowding*; 4) *Changes taking place within education*; 5) *Appraisal of teachers*; 6) *Concerns of management*; 7) *Lack of status/promotion opportunities*; 8) *"Cover" and staff shortages*; 9) *Job insecurity*; 10) *Ambiguity of the teacher's role*.

In the present study, from the factor analysis of the *Sources of Pressure in Teaching Scale* 17 reliable factors were obtained which explained 70.9% of the variance (see Table 3). Factor 1 (explained variance = 29.9%, eigenvalue = 29.0;  $\alpha = .91$ ) is described by items which regard teachers' perception of lack of status, the feeling that pupils do not positively value education and the perceived absence of professional support. Consequently we considered this factor as indicator of stress linked to *Lack of*

**Table 3**

Factor analysis of the Sources of Pressure in Teaching Scale: loading factors.  
Total variance explained 70.9%. Cronbach's  $\alpha = .97$

	<i>Loading on factors</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>
<b>Factor 1: Lack of status/professional support</b>			
<i>Lack of support from the government</i>	.83	29.0	29.9%
<i>Society's diminishing respect for my profession</i>	.75		
<i>The lack of value placed on actual "teaching" itself</i>	.75		
<i>Lack of support from the school governors</i>	.69		
<i>The lack of information as to how the changes are to be implemented</i>	.61		
<i>Lack of time to resolve problems with individual pupils</i>	.53		
<i>The constant changes taking place within the profession</i>	.49		
<i>Having to be a "Jack of all trades master of none"</i>	.49		
<i>Administrative tasks</i>	.48		
<i>A salary that is out of proportion to workload</i>	.47		
<i>Increasing pressures from school governors</i>	.45		
<i>Lack of clerical assistance</i>	.43		
<i>Lack of support from the Local Authority</i>	.42		
<b>Factor 2: Pupils' aggressive behaviour and lack of support</b>			
<i>Physical aggression from pupils</i>	.81	5.4	5.5%
<i>Verbal aggression from pupils</i>	.77		
<i>The constant "answering back" from pupils</i>	.74		
<i>Witnessing increasing aggression between pupils</i>	.73		
<i>Lack of parental "back-up" on matters of discipline</i>	.64		
<i>The number of daily confrontations in the class</i>	.63		
<i>Vandalism of the school premises</i>	.54		
<i>The number of interruptions in class</i>	.48		
<i>Lack of auxiliary support</i>	.43		
<i>No recourse to sanctions in the school</i>	.37		
<i>The neighbourhood in which my school is based</i>	.36		
<b>Factor 3: Management/structure of the school and lack of decision latitude/control</b>			
<i>The "hierarchical" nature of structure of my school</i>	.72	4.8	4.9%
<i>Teachers can have little influence over school decision as a whole</i>	.70		
<i>Lack of participation in decision-making in the school</i>	.70		
<i>Lack of "social support" from fellow teachers in my school</i>	.57		
<i>Conflicts between the needs of my department/class and the views of senior management</i>	.55		
<i>Lack of support from my union</i>	.52		
<i>Conflict between my department and others for resources</i>	.48		
<i>The lack of clarity concerning my role within the school</i>	.48		
<i>Lack of support from the Head teacher</i>	.46		
<i>The need for constant decision-making in the classroom</i>	.38		
<i>Increasing involvement with "pastoral" issues</i>	.32		
<b>Factor 4: Feelings of inadequacy and insecurity</b>			
<i>Too little responsibility within the school</i>	.64	4.0	4.1%
<i>Reacting too personally to pupils criticism</i>	.62		
<i>Feeling that my training is not appropriate</i>	.62		
<i>My school is too "traditional" and is slow to move with the times</i>	.58		

(table continues)

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Table 3 (continued)

	<i>Loading on factors</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>
<i>Teaching those who take things for granted</i>	.56		
<i>Parental attitudes toward my adherence to union policies e.g. strikes</i>	.52		
<i>Lack of job security within the profession</i>	.50		
<i>Promotion has lead to too few class contacts with pupils</i>	.47		
<i>Not enough opportunity to make my own decision</i>	.46		
<i>Racial tension within the school</i>	.45		
<i>Feeling that apart from teaching I have no other employable skills</i>	.39		
<i>Having to work through breaks and lunch times</i>	.33		
<b>Factor 5: Relations with fellow teachers linked to poor working conditions</b>		3.4	3.5%
<i>Poor staff communications</i>	.78		
<i>Lack of consensus among staff on matter of discipline</i>	.64		
<i>Intra-staff rivalry i.e. within the school</i>	.55		
<i>Having to manage a school on a tight budget</i>	.53		
<i>Poor working conditions</i>	.53		
<i>The unfamiliarity of the demands that I face</i>	.43		
<b>Factor 6: Education workload</b>		2.9	3.0%
<i>Dealing with children who demand immediate attention</i>	.72		
<i>Maintaining discipline</i>	.68		
<i>Continually having to form new relationships</i>	.60		
<i>When pupils try to test you all the time</i>	.53		
<i>Teaching to exam standard</i>	.51		
<i>Teaching those who do not value education</i>	.40		
<b>Factor 7: Ambiguity and overload of the teacher's role</b>		2.3	2.4%
<i>Unrealistically high expectations of others concerning my role</i>	.60		
<i>The number of supervisory activities I have to perform at school</i>	.55		
<i>Uncertainty about the degree or area of my responsibility</i>	.55		
<i>Taking work home interferes with family life</i>	.54		
<i>The inadequate implementation of change in my school</i>	.32		
<b>Factor 8: Emotional involvement with pupils</b>		2.2	2.25%
<i>Building and mantaining relationships with pupils</i>	.78		
<i>Lack of "non-contact" time</i>	.69		
<i>Over-emotional involvement with the pupils</i>	.46		
<i>Dealing with basic behavioural problems</i>	.45		
<b>Factor 9: "Cover" and staff shortages</b>		2.0	2.1%
<i>The unpredictability of "cover periods"</i>	.77		
<i>Having to "cover" in unfamiliar areas of the curriculum</i>	.73		
<i>When cover for absent colleagues leads to "large" classes</i>	.62		
<b>Factor 10: Appraisal of teachers</b>		1.9	1.95%
<i>The likely introduction of "teacher appraisal"</i>	.75		
<i>When my performance is assessed by others</i>	.67		
<i>The move towards a "National Curriculum"</i>	.43		
<i>The advent of Local Management of Schools</i>	.36		
<b>Factor 11: Special educational needs of pupils</b>		1.8	1.87%
<i>The integration of pupils with special educational needs</i>	.57		
<i>Truancy</i>	.47		
<i>Awareness of pupils social and financial deprivation</i>	.46		

(table continues)

Table 3 (continued)

	<i>Loading on factors</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>
<b>Factor 12: School-Parents relationships</b>			
<i>Having to produce "assessments" of pupils</i>	.60	1.68	1.73%
<i>Having to attend parents' evening</i>	.58		
<i>Relationships with pupils' parents</i>	.38		
<b>Factor 13: Poor working conditions</b>			
<i>Poor staff-student ratios</i>	.66	1.6	1.6%
<i>Poorly defined schemes of work</i>	.41		
<b>Factor 14: Lack of promotion</b>			
<i>Lack of chances for promotion</i>	.70	1.51	1.55%
<i>Being a good teacher does not necessarily mean promotion</i>	.44		
<b>Factor 15: Work-home interface</b>			
<i>The hours spent marking at home</i>	.74	1.47	1.51%
<b>Factor 16: Activity/release rhythm at school</b>			
<i>Duration of the summer holidays</i>	.55	1.42	1.46%
<i>The use of school bells</i>	.53		
<b>Factor 17: Class sizes/Overcrowding</b>			
<i>Having to teach in overcrowded classrooms</i>	.50	1.35	1.4%
<i>The treat of redeployment</i>	.48		
<i>The size of the classes that I teach</i>	.41		

status/professional support. Factor 2 (explained variance = 5.5%, eigenvalue = 5.4; alpha = .91) is described by items which regard both physical and verbal aggressiveness from pupils toward the teachers, and, also, their perception of lack of support by fellow teachers and the pupils' families. Consequently we considered this factor as indicator of stress linked to *Pupils' aggressive behaviour and lack of support*. Factor 3 (explained variance = 4.9%, eigenvalue = 4.8; alpha = .88) is described by items concerning school management, lack of support from fellow teachers and Union, and teachers' perception that their levels of control and influence in decision making are limited. Consequently we considered this factor as indicator of stress linked to *Management/structure of the school and lack of decision latitude/control*. Factor 4 (explained variance = 4.1%, eigenvalue = 4.0; alpha = .86) is

described by items concerning teachers' perception that their levels of responsibility, training, skills and job security are inadequate. Consequently we considered this factor as indicator of stress linked to *Feeling of inadequacy and insecurity*. Factor 5 (explained variance = 3.5%, eigenvalue = 3.4; alpha = .86) is described by items concerning, on the one hand, teachers' relationships with fellow teachers characterised, in particular, by lack of consensus, and, on the other hand, the perception to have to face with unfamiliar job demands and with poor working conditions. Consequently we considered this factor as indicator of stress linked to *Relations with fellow-teachers linked to poor working conditions*. Factor 6 (explained variance = 3.0%, eigenvalue = 2.9; alpha = .86) is described by items concerning pupils' lack of discipline and workload due to teaching. Con-

sequently we considered this factor as indicator of stress linked to *Educational workload*. Factor 7 (explained variance = 2.4%, eigenvalue = 2.3; alpha = .84) is described by items concerning perceived teacher's role ambiguity and overload. Consequently we considered this factor as indicator of stress linked to *Ambiguity and overload of the teacher's role*. Factor 8 (explained variance = 2.25%, eigenvalue = 2.2; alpha = .78) is described by items concerning emotional involvement of teachers in the relationship with pupils. Consequently we considered this factor as indicator of stress linked to *Emotional involvement with pupils*. Factor 9 (explained variance = 2.1%, eigenvalue = 2.0; alpha = .84) is described by items concerning difficulties due to cover for absent teachers, and, consequently, we considered this factor as indicator of stress linked to *"Cover" and staff shortages*. Factor

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10 (explained variance = 1.95%, eigenvalue = 1.9;  $\alpha = .76$ ) is described by items concerning teaching and teachers' appraisal, connected to the introduction of the local management of the school. Consequently we considered this factor as indicator of stress linked to *Appraisal of teachers*. Factor 11 (explained variance = 1.87%, eigenvalue = 1.8;  $\alpha = .75$ ) is described by items concerning the integration of pupils with special needs, pupils' truancy and social-financial deprivation. Consequently we considered this factor as indicator of stress linked to *Special educational needs of pupils*. Factor 12 (explained variance = 1.73%, eigenvalue = 1.68;  $\alpha = .68$ ) is described by items concerning the time spent for pupils's assessments and for managing parents-teachers relationships. Consequently we considered this factor as indicator of stress linked to *School-Parents relationships*. Factor 13 (explained variance = 1.6%, eigenvalue = 1.6;  $\alpha = .57$ ) is described by items concerning poor staff-students ratios and poorly defined schemes of work. Consequently we considered this factor as indicator of stress linked to *Poor working conditions*. Factor 14 (explained variance = 1.55%, eigenvalue = 1.51;  $\alpha = .53$ ) is described by items concerning lack of chances for promotion within the teaching profession and, consequently, we considered this factor as indicator of stress linked to *Lack of promotion*. Factor 15 (explained variance = 1.51%, eigenvalue = 1.47) is described by only one item concerning the feeling that job demands interfere with family life. Consequently we considered this factor as indicator of stress linked to *Work-home interface*. Factor 16 (explained variance = 1.43%, eigenvalue = 1.42;  $\alpha = .53$ ) is described by items concerning indicators of activi-

ty/release rhythm at school. Consequently we considered this factor as indicator of stress linked to *Activity/release rhythm at school*. Factor 17 (explained variance = 1.4%, eigenvalue = 1.;  $\alpha = .54$ ) is described by items concerning perceived overcrowded classes and the related increased workload. Consequently we considered this factor as indicator of stress linked to *Class sizes/overcrowding*.

D) *The Coping Style Inventory*. It consists of 28 item which, in the original study, referred to 8 factors: 1) *Prioritise/objective coping*; 2) *Hobbies and pastimes*; 3) *Mobilised social support*; 4) *Time measures*; 5) *Innovation*; 6) *Suppression of stress*; 7) *Non-confrontive of the situation*; 8) *Non-involvement and delegation*. In the present study, from the factor analysis of the *Coping Style Inventory* 9 reliable factors were obtained which explained 62.5% of the variance (see Table 4). Factor 1 (explained variance = 19.0%, eigenvalue = 5.3;  $\alpha = .73$ ) is described by items concerning tendencies toward problem focusing, rumination avoiding and emotional states regulating. Consequently we considered this factor as indicator of *Coping focused on the problem and on emotional regulation*. Factor 2 (explained variance = 9.15%, eigenvalue = 2.6;  $\alpha = .74$ ) is described by items concerning tendencies toward creative solutions elaboration and efficient time management. Consequently we considered this factor as indicator of coping characterised by *Innovation and time management*. Factor 3 (explained variance = 7.0%, eigenvalue = 1.95;  $\alpha = .62$ ) is described by items concerning tendencies toward distraction and psychological involvement in stable interpersonal relationships, regarded as emotional resources. Consequently we con-

sidered this factor as indicator of coping characterised by *Hobby and pastimes*. Factor 4 (explained variance = 5.5%, eigenvalue = 1.5;  $\alpha = .60$ ) is described by items concerning tendencies toward mobilising social support, delegation and stressful situation avoiding in the work environment. Consequently we considered this factor as indicator of coping characterised by *Mobilised social support and delegation at work*. Factor 5 (explained variance = 5.0%, eigenvalue = 1.4;  $\alpha = .51$ ) is described by items regarding tendencies to separate job concerns from home concerns, to regulate perceived stress and to efficient time management. Consequently we considered this factor as indicator of coping characterised by *Disengagement*. Factor 6 (explained variance = 4.6%, eigenvalue = 1.3;  $\alpha = .49$ ) is described by items concerning tendencies to stress repression and, consequently, we considered this factor as indicator of coping characterised by *Suppression of stress*. Factor 7 (explained variance = 4.3%, eigenvalue = 1.2;  $\alpha = .41$ ) is described by items concerning tendencies toward realistic acceptance of stressful situations and toward detached analysis. Consequently, we considered this factor as indicator of coping modalities *Non-confrontive of the situation*. Factor 8 (explained variance = 4.1%, eigenvalue = 1.1) is described by an item concerning a tendency toward teacher's own limitations acceptance and, consequently, we consider this factor as indicator of coping characterised by *Self-limitations recognition*. Factor 9 (explained variance = 3.8%, eigenvalue = 1.0) is described by only one item concerning tendencies toward mobilising social support. Consequently, we consider this factor as indicator of coping characterised by *Mobilised social support*.

**Table 4**

Factor analysis of the Coping Styles Inventory: loading factors.  
Total variance explained 62.5%. Cronbach's  $\alpha = .80$

	<i>Loading on factors</i>	<i>Eigenvalue</i>	<i>Percentage of variance</i>
<b>Factor 1: Coping focused on the problem and on emotional regulation</b>			
		5.3	19.0%
Use selective attention (concentrating on specific problems)	.70		
Set priorities and deal with problems accordingly	.59		
Resort to rules and regulations	.46		
Plan ahead	.45		
Use distraction (to take your mind off things)	.44		
Not "bottling things up" and being able to release energy	.43		
<b>Factor 2: Innovation and time management</b>			
		2.6	9.15%
Reorganise my work	.59		
Effective time management	.57		
Try to deal with the situation objectively in an unemotional way	.47		
Deal with the problems immediately as they occur	.42		
Look for ways to make the work more interesting	.41		
<b>Factor 3: Hobbies and pastimes</b>			
		1.95	7.0%
Expand interest and activities outside work	.72		
Resort to hobbies and pastimes	.65		
Have stable relationships	.51		
<b>Factor 4: Mobilised social support and delegation at work</b>			
		1.5	5.5%
Seek support and advice from my superiors	.58		
Seek as much social support as possible	.55		
Delegation	.47		
Try to avoid the situation	.41		
<b>Factor 5: Disengagement</b>			
		1.4	5.0%
Deliberately separate "home" and "work"	.67		
"Stay busy"	.58		
<b>Factor 6: Suppression of stress</b>			
		1.3	4.6%
Suppress emotions and try not to let the stress show	.62		
Having a home that is a refuge	.55		
<b>Factor 7: Non-confrontive of the situation</b>			
		1.2	4.3%
Try to "stand aside" and think through the situation	.58		
Accept the situation and learn to live with it	.50		
Force one's behaviour and lifestyle to slow down	.36		
<b>Factor 8: Self-limitations recognition</b>			
		1.1	4.1%
Try to recognise my own limitations	.55		
<b>Factor 9: Mobilised social support</b>			
		1.0	3.8%
Talk to understanding friends	.70		

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**Differences in the TSQ dimensions with respect to age and level of teaching**

With respect to the third aim of the present study, this section will present, for each of the scale of the TSQ, the findings of ANOVAs by age and level of teaching (dependent variables: factor scores, total and subscale scores of each scale; post-hoc comparison with Bonferroni's correction).

When comparing subgroups of teachers by age we observed that:

- teachers between 23 and 35 years old report significantly higher scores than the other two subgroups of teachers with respect to the *Job Satisfaction Scale's* factor 1, *Extrinsic and employee relations job satisfaction* [ $F_{(2, 304)} = 5.18, p < .01$ ], and factor 3, *Satisfaction with general working conditions* [ $F_{(2, 304)} = 3.4, p < .05$ ], and with respect to the *Sources of Pressure in Teaching Scale's* factor 17, *Class sizes/overcrowding* [ $F_{(2, 303)} = 4.3, p < .05$ ];
- teachers between 23 and 35 years old and those between 35 and 50 years old report significantly higher scores than teachers between 51 and 67 years old with respect to the *Sources of Pressure in Teaching Scale's* factor 14, *Lack of promotion* [ $F_{(2, 303)} = 6.2, p < .005$ ];
- teachers between 35 and 50 years old report significantly higher scores than teachers between 51 and 67 years old with respect to the *Crown-Crisp Experiential Index's* subscale of *Free-floating anxiety* [ $F_{(2, 304)} = 3.46, p < .05$ ];
- teachers between 51 and 67 years old report significantly higher scores than the other two subgroups with respect to the *Job Satisfaction Scale's* factor 2, *Intrinsic and job itself satisfaction* [ $F_{(2, 304)} = 3.9, p < .05$ ].

When comparing subgroups of teachers by level of teaching we observed that:

- Nursery school teachers report significantly higher scores than

Junior High School teachers and High School teachers with respect to the *Sources of Pressure in Teaching Scale's* factor 9, *"Cover" and staff shortages* [ $F_{(3, 307)} = 9.4, p < .001$ ], and factor 13, *Poor working conditions* [ $F_{(3, 307)} = 3.3, p < .05$ ];

- Primary school teachers report significantly lower scores than Nursery school teachers with respect to the *Job Satisfaction Scale's* factor 3, *Satisfaction with general working conditions* [ $F_{(3, 304)} = 3.2, p < .05$ ];

- Primary school teachers report significantly higher scores than High School teachers with respect to the whole scale of *Crown-Crisp Experiential Index* [ $F_{(3, 314)} = 3.75, p < .01$ ], and to the subscale of *Somatic anxiety* [ $F_{(3, 314)} = 4.41, p < .005$ ]; and report significantly higher scores than Nursery school teachers with respect to the subscale of *Free-floating anxiety* [ $F_{(3, 314)} = 2.75, p < .05$ ];

- Junior High School teachers report significantly higher scores than Primary School teachers and High School teachers with respect to the *Job Satisfaction Scale's* factor 1, *Extrinsic and employee relations job satisfaction* [ $F_{(3, 304)} = 4.4, p < .01$ ];

- Junior High School teachers report significantly higher scores than Nursery School teachers and High School teachers with respect to the *Sources of Pressure in Teaching Scale's* factor 2, *Pupils' aggressive behaviour and lack of support* [ $F_{(3, 307)} = 5.9, p < .005$ ], and with respect to the *Crown-Crisp Experiential Index's* subscale of *Depression* [ $F_{(3, 314)} = 2.71, p < .05$ ];

- High School teachers report significantly higher scores than Nursery School teachers with respect to the *Sources of Pressure in Teaching Scale's* factor 15, *Work-home interface* [ $F_{(3, 307)} = 3.2, p < .05$ ], and report significantly higher scores than Junior High School teachers with respect to the *Sources of Pressure in Teaching*

*Scale's* factor 4, *Feeling of inadequacy and insecurity* [ $F_{(3, 307)} = 2.9, p < .05$ ] and factor 17, *Class sizes/overcrowding* [ $F_{(3, 307)} = 3.4, p < .05$ ].

**TSQ variables most connected to psychological strain**

With respect to the fourth aim of the present study, this section will present the findings of regression analyses (Package SPSS, *Stepwise* method) of the independent variables (type A behaviour style, job stressors, coping style, demographics) against the dependent variables (*General mental ill-health, Free-floating anxiety, Somatic concomitants of anxiety* and *Depression* measured by the *Crown-Crisp Experiential Index*).

From the regression models emerged (see Table 5) it can be observed that a dispositional factor, the tendency toward *Time conscious behaviour* (factor 1 of the *Type A Behavioural Style Inventory*) is predicting higher levels of all the dimensions of psychological strain: *General mental ill-health, Free-floating anxiety, Somatic concomitants of anxiety* and *Depression*, whereas the tendency toward *Competitive behaviour* (factor 4 of the *Type A Behavioural Style Inventory*) is predicting lower levels of *General mental ill-health* and *Depression*. Moreover, the analyses highlighted some coping strategies and job satisfaction factors which are most correlated to the level and quality of perceived psychological strain, and, then, confirmed the influence exerted by these aspects within the stress process as conceived and measured by the TSQ.

**Conclusions**

In synthesis the present study showed that:

- *Satisfaction with general working conditions* (*Job Satisfaction Scale's* factor 3), as well as coping strate-

**Table 5**

*Multiple regression analysis on Total mental health, Free-floating anxiety, Somatic anxiety and Depression (n = 320)*

Step	Variable	F	p	Standardized			
				Multiple R square	beta coefficients	t	sig.
<i>Total mental ill-health</i>							
1	Type A Behaviour factor 1: Time conscious behaviour	25.8	.000	.26	.39	4.7	.000
2	Coping factor 8: Self-limitations recognition	19.7	.000	.35	-.37	-4.4	.000
3	Job Satisfaction factor 3: Satisfaction with general working conditions	16.8	.000	.41	-.34	-3.9	.000
4	Coping factor 4: Mobilised social support and delegation at work	14.8	.000	.46	.26	3.1	.003
5	Coping factor 7: Non-confrontive of the situation	14.1	.000	.51	-.24	-2.8	.007
6	Type A Behaviour factor 4: Competitive behaviour	14.0	.000	.55	-.22	-2.7	.01
<i>Free-floating anxiety</i>							
1	Type A Behaviour factor 1: Time conscious behaviour	29.8	.000	.23	.41	4.5	.000
2	Coping factor 8: Self-limitations recognition	18.0	.000	.33	-.30	-3.2	.002
3	Job Satisfaction factor 3: Satisfaction with general working conditions	15.5	.000	.39	-.25	-2.8	.007
4	Coping factor 7: Non-confrontive of the situation	14.2	.000	.45	-.20	-2.3	.024
5	Coping factor 2: Innovation and time management	12.7	.000	.48	-.22	-2.3	.024
6	Coping factor 3: Hobbies and pastimes	11.8	.000	.51	-.18	-2.0	.046
<i>Somatic anxiety</i>							
1	Type A Behaviour factor 1: Time conscious behaviour	12.1	.001	.14	.43	4.3	.000
2	Pressure factor 7: Ambiguity and overload of the teacher's role	12.3	.000	.26	.34	3.5	.001
3	Coping factor 2: Innovation and time management	10.9	.000	.31	-.25	-2.5	.01
<i>Depression</i>							
1	Type A Behaviour factor 1: Time conscious behaviour	24.8	.000	.25	.43	4.9	.000
2	Job Satisfaction factor 3: Satisfaction with general working conditions	17.7	.000	.33	-.31	-3.4	.001
3	Coping factor 8: Self-limitations recognition	13.8	.000	.37	-.30	-3.3	.001
4	Type A Behaviour factor 4: Competitive behaviour	13.3	.000	.43	-.27	-3.0	.003
5	Coping factor 4: Mobilised social support and delegation at work	12.6	.000	.48	.21	2.4	.02

gies characterised by *Self-limitations recognition* (Coping Style Inventory's factor 8), involve significantly lower levels of perceived depression feelings as measured by the *Crown-Crisp Experiential Index*, whereas the tendency toward *Mobilised social support and delegation at work* (Coping Style Inventory's factor 4) involves

significantly higher levels of perceived depression feelings;

- *Satisfaction with general working conditions* (Job Satisfaction Scale's factor 3), as well as coping strategies characterised by tendencies toward *Self-limitations recognition* (factor 8) and *Innovation and time management* (factor 2), and by tendencies to be *Non-confrontive*

*of the situation* (factor 7) and to resort to *Hobbies and pastimes* (factor 3) involve significantly lower levels of perceived free-floating anxiety as measured by the *Crown-Crisp Experiential Index*;

- the stress perceived with respect to *Ambiguity and overload of the teacher's role* (*Sources of Pressure in Teaching Scale's* factor 7)

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involves significantly higher levels of perceived somatic anxiety as measured by the *Crown-Crisp Experiential Index*, whereas the coping strategy characterised by *Innovation and time management (Coping Style Inventory's factor 2)* involves significantly lower levels of perceived somatic anxiety; • *Satisfaction with general working condition (Job Satisfaction Scale's factor 3)* as well as the adoption of coping strategies characterised by *Self-limitations recognition (factor 8)* and by a tendency to be *Non-confrontive of the situation (factor 7)* involve significantly lower levels of perceived general mental ill-health as measured by the *Crown-Crisp Experiential Index*, whereas the tendency toward *Mobilised social support and delegation at work (factor 4)* involves significantly higher levels of perceived general mental ill-health.

The findings of this preliminary study conducted by means of the Italian version of the TSQ reveal adequate levels of validity and reliability of this measure for the analysis of teacher stress in Italian school settings. From the factor analysis of each of the scales of the TSQ several consistent and psychologically meaningful factors emerged which refer to the sources of pressure in the school setting, the coping strategies adopted, the perceived job satisfaction, and the level and quality of teachers' psychological strain. Moreover, the study has highlighted some dimensions of stress specific of Italian school setting, also with respect to age and level of teaching. However, from the multiple regression analyses it emerged some variables tested by the questionnaire which are able to predict the levels and quality of teachers perceived psychological strain, with particular reference to individual predisposing factors (Type A behaviour) and to moderating

factors (coping styles and job satisfaction). In this perspective, the multiple regression analyses highlighted the balance between dispositional, situational and moderating factors within Travers & Cooper's conceptualization of stress upon which the TSQ is based. Finally, reliability analysis of the questionnaire, tested by means of the internal consistency evaluation of the single scales, also revealed its basic, and often satisfactory, adequacy.

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**SUMMARY. Introduction:** This study analyses the psychometric characteristics of the Teacher Stress Questionnaire (TSQ; Travers & Cooper, 1996). The TSQ is composed of a general information section and of five scales: the Crown-Crisp Experiential Index (Crown & Crisp, 1979); the Type A Behavioural Style Inventory (Bortner, 1969); the Job Satisfaction Scale (Warr, Cook & Wall, 1979); the Sources of Pressure in Teaching Scale (Travers & Cooper, 1996); the Coping Style Inventory (Cooper, Sloan & Williams, 1988). **Methods:** The Italian version of TSQ was submitted to 320 teachers randomly drawn from a cross-section of school types. We verified the con-

struct validity of the questionnaire in the Italian setting by means of the factor analysis and by measuring the internal consistency of the single scales. All the dimensions measured by the TSQ were compared for sub-groups of sample of all levels of teachers. Some features of the teacher's personality and job which best predict those at "high risk" were highlighted. **Results:** From the factor analysis of each of the scales of the TSQ, several meaningful and reliable factors emerged. The internal consistency of each scale measured by the Cronbach's revealed that satisfactory values were found. Teachers' age and type of school were found to be determining factors with regard to all the dimensions of stress explored by the TSQ. **Conclusions:** The preliminary analysis of the reliability and validity of the Italian version of the TSQ reveals that it constitutes a useful and reliable measure to analyse stress in the Italian school setting according to the modern theories of occupational stress (Travers & Cooper, 1996). Nevertheless further studies are necessary which consider a more extensive and widespread sample in order to fully adjust the TSQ battery to the Italian school setting.

**RIASSUNTO. Introduzione:** Il presente lavoro riguarda un contributo all'adattamento italiano del Teacher Stress Questionnaire (TSQ; Travers & Cooper, 1996). La batteria si compone di una sezione informativa generale e di cinque test: il Crown-Crisp Experiential Index (Crown & Crisp, 1979); la Scala del Tipo A di personalità (Bortner, 1969), la Scala di

Soddisfazione Lavorativa (Warr, Cook & Wall, 1979), la Scala delle Fonti di Stress nell'Insegnamento (Travers & Cooper, 1996) e la Scala del Coping (Cooper, Sloan & Williams, 1988). **Metodi:** Lo studio ha valutato la validità di contenuto e l'attendibilità dello strumento in un campione di docenti appartenenti a quattro livelli d'insegnamento (N = 320). Sono state inoltre analizzate le differenze dimensioni esplorate dal TSQ in relazione all'età e al livello di insegnamento dei docenti. Infine sono stati evidenziati gli aspetti maggiormente connessi al disagio psicologico percepito dagli insegnanti. **Risultati:** Dall'analisi fattoriale delle componenti principali condotta per ciascuna scala della batteria sono emerse soluzioni coerenti e psicologicamente rilevanti. L'analisi della varianza ha evidenziato differenze statisticamente significative in relazione all'età e al livello d'insegnamento. Ciascuna delle scale ha dimostrato inoltre una coerenza interna adeguata e in alcuni casi molto soddisfacente. **Conclusioni:** L'adattamento del TSQ al contesto scolastico italiano rende disponibile uno strumento che consente di valutare l'impatto e la complessa interrelazione dei diversi fattori ipotizzati costitutivi del processo dello stress degli insegnanti secondo le più recenti prospettive teoriche (Travers & Cooper, 1996), anche se sono comunque necessarie ulteriori ricerche che considerino un campione più ampio, allo scopo di adattare completamente la batteria alla realtà scolastica italiana.

**Keywords:** Stress Reactions; Teaching; Job Satisfaction

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