



## The Association of Coping Styles with Automatic Thoughts, Burnout and Self-efficacy in Three High Schools

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### Abstract

*The employees' coping methods that they use when facing stressors, as well as their perception of self-efficacy and the level of burnout in three high schools were investigated during the periodic medical check-up, through a questionnaire that included: Brief COPE (SC Carver), Oldenburg burnout inventory, perceived self-efficacy scale, Automatic Thoughts Questionnaire (ATQ), as well as demographic data (age, duration as an employee in the unit, gender, type of residence, level of education). The Brief COPE scores various ways of coping with stressors as follows: Planning, Active Coping, Use of Emotional Support, Use of Instrumental Support, Positive Reframing, Humor, Acceptance, Religion, Self-Distraction, Denial, Substance Use, Venting, Behavioral disengagement and self-blame. ATQ correlates in all three school units, positively with self-blame (in high school no. 1  $p < 0.001$ ; in high school no. 2  $p = 0.015$ ; in high school no. 3  $p = 0.010$ ), with burnout. (in high school no. 1  $p < 0.001$ ; in high school no. 2  $p < 0.001$ ; in high school no. 3  $p < 0.001$ ) and negative with self-efficacy (in high school no. 1  $p = 0.017$ ; in high school no. 2  $p = 0.010$ ; in high school no. 3  $p = 0.037$ ). In addition, burnout correlates in all three school units, positively with behavioral disengagement (in high school no. 1  $p = 0.017$ ; in high school no. 2  $p < 0.001$ ; in high school no. 3  $p = 0.001$ ), with self-blame (in high school no. 1  $p = 0.001$ ; in high school no. 2  $p = 0.002$ ; in high school no. 3  $p < 0.001$ ) and negative with self-efficacy (in high school no. 1  $p < 0.001$ ; in high school no. 2  $p = 0.002$ ; in high school no. 3  $p < 0.001$ ). Active coping correlates positively with Self-distraction (respectively  $p = 0.027$ ;  $p = 0.011$ ;  $p < 0.001$ ) and in all three units (with  $p < 0.001$ ) with Planning and positive reframing. The use of emotional support is positively correlated with the use of instrumental support ( $p < 0.001$  in all three units).*

*The importance of images and verbalizations that appear spontaneously during everyday life, their association with burnout and self-blame as well as the particular association of coping styles, are aspects that show both the possibility and the importance of automatic thoughts approach through cognitive-behavioral therapy for education employees.*

**Keywords:** coping styles, automatic thoughts, burnout, self-efficacy, school

### 1. Introduction

For an individual, self-efficacy follows a succession of experiences of successfully managing stressors and is at the same time a protective resource against stressors. A low level of self-efficacy can be associated with increased levels of stress factors, burnout. Automatic thoughts, maladaptive, inflexible cognitive sequences, by their persistence, can diminish the resistance of adaptation to stressors and can favor their wider manifestation. They can also lead to a decrease in perceived self-efficacy. Through the prism of these considerations, the possibility of mutual interconditioning between burnout, perceived self-efficacy and automatic thoughts emerges. The coping methods used by workers and the assessment of their association with burnout, automatic thoughts and self-efficacy are important aspects for cognitive-behavioral therapy both for the prevention and treatment of harmful, maladaptive manifestations..

### 2. Material and Method

The employees perception of level of burnout and self-efficacy as well as their ways of coping that uses when facing stressors was investigated in three high schools, during periodic medical checkup, through a questionnaire. The questionnaire used contained the following components:

-socio-demographic indicators: age, duration as an employee in the unit, gender, type of residence, level of education (scored on a 4-point Likert scale from 1-pre-high school, high school, post-high school, to 4 -university);



- perceived self-efficacy scale [1], which is a global construct meaning a good sense of personal competence and which is a result and a continuous source of motivation and accomplishments for workers [2],
  - Oldenburg Burnout Inventory, scores emotional exhaustion and disengagement as being the two components of burnout [3]. The questionnaire, adapted for different languages and cultures can be obtained without a license, being the result of an international project [4]
  - Brief COPE questionnaire, scores various ways of coping with stressors as follows: Planning, Active coping, Use of emotional support, the Use of instrumental support, Positive reframing, Humour, Acceptance, Religion, Self-distraction, Denial, Substance use, Venting, Behavioral disengagement and Self-blame [5]
  - Automatic Thoughts Questionnaire (ATQ), measures depression associated with with maladaptive cognition, automatic thoughts [6].
- . For data analysis (software) we used Epi Info (TM) 3.5, SPSS v 16.0. Statistical tests used: ANOVA, Kruskal-Wallis test for two groups (Mann-Whitney/Wilcoxon Two-Sample Test) and Spearman correlation coefficient. p value was significant at the 0.05.

### 3. Results

In all 3 schools the majority of workers completed the questionnaires received (Table 1).

Table 1. The number of workers and number of respondents in each school

	the number of workers	the number of respondents
high school no.1	158	94
high school no.2	96	74
high school no.3	97	57

The distribution in the 3 schools shows an increased proportion of female workers compared to male workers. (Fig.1.).

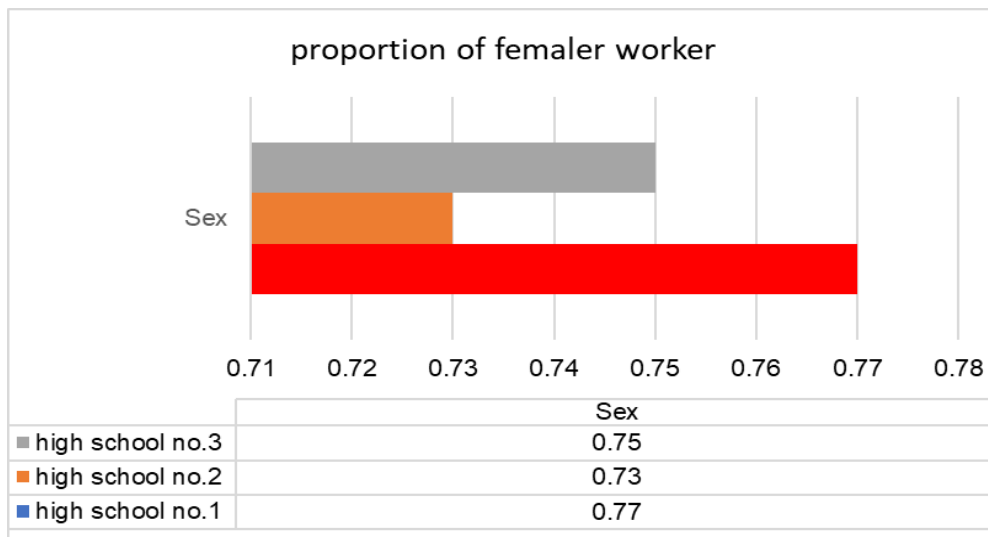


Fig.1 . The proportion of the number of female workers among the total number of workers, by school

The vast majority of workers live in urban areas ( Fig.2 ).

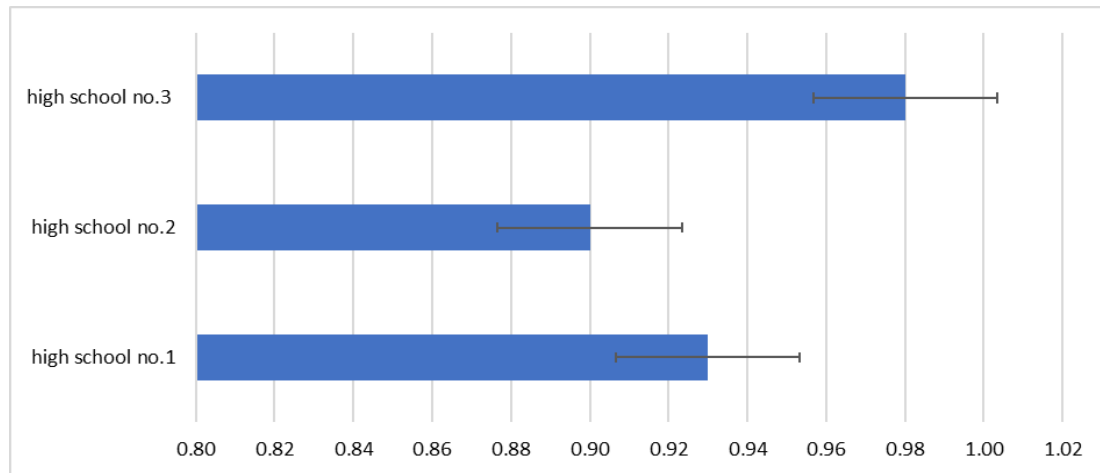


Fig.2 . The proportion of the number workers living in an urban environment out of the total number of respondents, by school

Both age and duration as an employee in school units show that school workers are mature adults with good work experience with a high level of education, average emotional exhaustion and relatively low ATQ scores (Table 2.).

Table 2. The average values of some variables by school unit

		Age (years)	duration as an employee (years)	self-efficacy	ATQ	level of education	Burnout
RESULTS by school	high school no.1	43.01	15.04	33.09	18.55	3.95	40.28
	high school no.2	45.24	13.81	30.95	21.52	3.64	44.43
	high school no.3	42.46	14.83	32.04	19.68	3.94	45.87
	maximum possible value			40	75	4	64

There are significant differences in some variables between the 3 schools. ATQ score has the highest values in school 2 and the lowest values in school 1 (Kruskal-Wallis test,  $p=0.0008$ ). Both Self-blame ( $p=0.0109$ ) and Burnout score ( $p=0.0007$ ) have the highest values in school no.3 and the lowest values in school no. 1 (ANOVA). Both self-efficacy ( $p=0.0013$ ) and level of studies ( $p=0.0058$ ) have the highest values in school no.1 and the lowest values in school no. 2 (Kruskal-Wallis test). Denial score has the highest values in school 3 and the lowest values in school 2 (Kruskal-Wallis test,  $p=0.0062$ ). Humour has the highest values in school 1 and the lowest values in school 3 (ANOVA,  $p=0.0044$ ), (Table 3.).

There are numerous correlations between the tracked variables of which a few will be mentioned.

#### In high school no.1:

Active coping correlates negatively with Behavioral disengagement ( $p<0.001$ ) and with Burnout ( $p=0.001$ ). Furthermore, Active coping correlates positively with Positive reframing ( $p<0.001$ ), Planning ( $p<0.001$ ), Acceptance ( $p<0.001$ ), Self-distraction ( $p=0.027$ ) and self efficacy ( $p=0.001$ ).

Positive reframing correlates negatively with Behavioral disengagement ( $p=0.013$ ) and with Burnout ( $p=0.002$ ). Besides, Positive reframing correlates negatively with Planning ( $p=0.001$ ), Humour ( $p=0.005$ ), Acceptance ( $p=0.003$ ) and Religion ( $p=0.050$ ).

Planning correlates negatively with Behavioral disengagement ( $p=0.001$ ) and with Burnout ( $p=0.006$ ) as well as correlates positively with the following: Active coping ( $p<0.001$ ), Self-distraction ( $p=0.010$ ) and Acceptance ( $p<0.001$ ).

Table 3. Mean scores of the scales of coping methods, by school unit

		Active coping	Self-distraction	Denial	Substance use	Use of emotional support	Use of instrumental support	Behavioral disengagement	Venting	Positive reframing	Planning	Humour	Self-blame	Acceptance	Religion
RESULTS by school	high school no.1	6.5	4.7	2.8	2.1	3.9	4.4	2.4	3.9	6.3	6.3	4.8	2.9	5.8	4.4
	high school no.2	6.1	4.8	2.5	2.1	3.9	4.4	2.4	4.2	5.8	6.0	4.5	3.2	5.6	4.3
	high school no.3	6.4	4.8	3.0	2.0	3.8	4.4	2.4	3.9	5.9	6.1	3.9	3.3	5.5	4.5
maximum possible value		8	8	8	8	8	8	8	8	8	8	8	8	8	8

**In high school no.2:**

Coping active correlates negatively with Behavioral disengagement ( $p=0.023$ ) and positively with the following: Self-distraction ( $p<0.001$ ), Use of emotional support ( $p=0.006$ ), Use of instrumental support ( $p=0.001$ ), Venting ( $p=0.041$ ), Positive reframing ( $p<0.001$ ), Planning ( $p<0.001$ ), Humour ( $p=0.015$ ), Acceptance ( $p<0.001$ ). Positive reframing positively with the following: Self-distraction ( $p=0.043$ ), Use of emotional support ( $p=0.041$ ), Use of instrumental support ( $p=0.017$ ), Venting ( $p=0.018$ ) and with Humour ( $p<0.001$ ). In addition to the above, Planning correlates positively with Humor ( $p=0.045$ ).

**In high school no.3:**

Active coping correlates negatively with ATQ score ( $p<0.001$ ), Self-blame ( $p=0.019$ ). In addition, Active coping correlates positively with self efficacy ( $p<0.001$ ), Self-distraction ( $p=0.011$ ), Positive reframing ( $p<0.001$ ), Planning ( $p<0.001$ ) and with Umor ( $p=0.024$ ). Positive reframing correlates negatively with ATQ score ( $p=0.004$ ) with Burnout ( $p=0.020$ ) and with ( $p=0.001$ ). Simultaneously, Positive reframing correlates positively with the following: self efficacy ( $p=0.005$ ), Self-distraction ( $p=0.014$ ), Planning ( $p<0.001$ ) and with Active coping (as mentioned). Planning correlates negatively with ATQ score ( $p=0.001$ ) and with Burnout ( $p=0.011$ ). At the same time, Planning correlates positively with the following self efficacy ( $p<0.001$ ), Active coping (as mentioned), Self-distraction ( $p<0.001$ ), Venting ( $p=0.040$ ), Humour ( $p=0.005$ ).

ATQ score corelates in all three school units, negatively, with self-efficacy (in high school no.1  $p=0,017$ ; in high school no.2  $p=0,010$ ; in high school no.3  $p=0,037$ ) and furthermore, positively, with burnout (in high school no.1  $p<0,001$ ; in high school no.2  $p<0,001$ ; in high school no.3  $p<0,001$ ) and with Self-blame (in high school no.1  $p<0,001$ ; in high school no.2  $p=0,015$ ; in high school no.3  $p=0,010$ ). Burnout corelates in all three school units, negatively with self-efficacy (in high school no.1  $p<0,001$ ; in high school no.2  $p=0,002$ ; in high school no.3  $p<0,001$ ) and simultaneously, positively, with Behavioral disengagement (in high school no.1  $p=0,017$ ; in high school no.2  $p<0,001$ ; in high school no.3  $p=0,001$ ) and with Self-blame (in high school no.1  $p=0,001$ ; in high school no.2  $p=0,002$ ; in high school no.3  $p<0,001$ ). The Use of emotional support corelates positively with the Use of instrumental support ( $p<0,001$  in all three units).

**4. Conclusions**

The importance of images and verbalizations that occur spontaneously in everyday life, their association with burnout symptoms and self-blame, as well as the particular association of coping styles resulting from the present research, are aspects that show the importance of addressing automatic thoughts through cognitive-behavioral therapy for employees in education. It should be noted that Behavioral disengagement is both a component manifestation of burnout and a way of coping, which explains their association in all three schools. Also, self-blame represents both a manifestation, a consequence of automatic thoughts and emotional exhaustion, being at the same time a way of reacting that leads to maintaining and even amplifying them. Both the ways of coping through active coping, Planning and with Positive reframing and those of active coping, and Self-distraction are associated with each other. These do not seem to be associated with maladaptive



cognitive behavioral tendencies. In light of these results, cognitive behavioral therapy should target self-blame and disengagement as the main maladaptive mechanisms in mutual interconditioning with automatic thoughts and emotional exhaustion.

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