

## ORIGINAL PAPER

## IMPACT OF PSYCHOSOCIAL TRAINING ON BURNOUT, ENGAGEMENT AND RESILIENCE AMONG STUDENTS

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**Abstract**

*Aim:* The objective of the study was to investigate the effect of psychosocial training, with a focus on increasing social and coping skills, on the levels of burnout and engagement in students in various healthcare professions. *Design:* A quasi-experimental design was used in the present study. *Methods:* 97 students ( $20.2 \pm 1.49$ ; 95.9% female) of psychology, nursing and midwifery participated in the research (50 students in an experimental group receiving psychosocial training, and 47 students in a control group). To measure burnout, the School Burnout Inventory (SBI), Antonovski Sense of Coherence Scale (SOC), Utrecht Work Engagement Scale (UWES) and Baruth Protective Factors Inventory (BPF) were employed. Data were statistically analyzed using correlation analysis, Student's t-test, and the ANOVA with LSD post hoc tests. *Results:* A statistically significant decrease in burnout syndrome (95 % CI: 5.26; 11.94), and an increased sense of coherence (95 % CI: -11.48; -3.37) and resilience (95 % CI: -7.92; -1.70) were found in the experimental group of students after psychosocial training, while no significant changes were observed in the control group. Research assumptions regarding engagement were not confirmed. *Conclusion:* The research study has shown that psychosocial training as a method has a positive effect on burnout syndrome and related personality characteristics among students of the healthcare professions, and is thus a relevant and appropriate method of burnout prevention.

**Keywords:** burnout syndrome, psychosocial training, engagement, prevention, students of healthcare professions.

**Introduction**

The environment and management practices at work are significant risk factors for burnout syndrome. A systematic review of research studies (Bria et al., 2012) showed that high workload, emotional demands, work – family interference and role stress were associated with an elevated risk of burnout. Similarly, low perceived job control, values incongruence, organizational injustice, low social support at work and effort-reward imbalance have been linked to increased risk of the development of burnout (Bria et al., 2012). Burnout also significantly affects overall job satisfaction (Vargas et al., 2014). Significant factors for subjective job satisfaction in nurses were stability, job security (Gurková et al., 2013), and good relationships at the workplace (Haroková, Gurková, 2013).

Individual factors contribute to burnout syndrome etiology to a significant, albeit lesser, extent. In particular, certain personality traits (Alarcon et al., 2009), and quality of social support were identified as potential risk factors for burnout (Mutkins et al., 2011). Lack of coping strategies (in terms of ability to handle stressful situations and cope with stress in an adaptive manner) also contributes to the development of burnout (Montero-Marin et al., 2014). Social support was reported to be the most significant coping resource among Czech and Slovak nurses in research studies by Sováriová Soósová et al. (2013) and Pavelková, Bužgová (2015).

Several studies suggest that there is a significant relationship between specific personality traits and levels of burnout. In this context, the following personality traits are often discussed in terms of their protective effect against burnout: optimism, self-esteem, and internal locus of control (Alarcon et al., 2009). Resilience (understood as the personal ability to withstand highly adverse life circumstances), and sense of coherence, characterized by a tendency to see the world as consistent, relatively predictable, understandable and manageable, are also considered

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to be protective personality characteristics against burnout syndrome (van der Colff, Rothmann, 2009). On the other hand, Type D personality is negatively associated with burnout resistance. This personality trait is characterized by the frequent experience of negative emotions, and higher social inhibition, which is associated with a higher tendency to apply maladaptive coping strategies when managing stressful situations (Polman, 2010). Work engagement can be considered as a positive counterpart to burnout syndrome. Unlike individuals suffering from burnout, high levels of energy, enthusiasm, and meaningfulness related to work are characteristic of people with high engagement (Maslach, 2011). Moreover, work engagement has been proven to be an important factor affecting the quality of care in the health sector (van Bogaert et al., 2014).

Burnout is perceived to be a negative factor, especially in terms of quality of healthcare. However, its adverse impact on the health status of medical professionals is of equal importance. Research studies show the negative effect of chronic feelings of exhaustion and burnout on a number of health problems, such as: increased risk of hypertension and coronary heart disease, sleep disorders, systemic inflammation or immune disorders (Melamed et al., 2006), as well as on total mortality (Ahola et al., 2010).

Burnout syndrome appears to be relevant not only in health care professionals. Attention has also been given to burnout risk among students of the health professions. A study by Dyrbye et al. (2010) showed that 63.4% of medical students were at risk of burnout. Lower quality of life, increased risk of depression, lower social support, higher fatigue and more stressful experiences were also found among students with elevated burnout scores in this study.

## **Aim**

The aim of this research study was to explore whether psychosocial training focused on the improvement of communication, social and coping skills has a positive effect on feelings of burnout and study engagement in students of the healthcare professions. It was hypothesized, that students in the experimental group would show lower levels of burnout and higher study engagement after training compared to students in the control group without training. The possible effect of psychosocial training on resilience and sense of coherence levels was also explored.

## **Methods**

### **Design**

A quasi-experimental pre-test/post-test design with experimental and control groups was used to evaluate the effect of psychosocial training. The experimental group participated in training consisting of two phases. In the first phase, the training spanned three months, with an eight-hour session every three weeks. After a three-month break, the second phase of the training followed the same format. Psychosocial training was included in the university curriculum as a regular course. Participation in the research (i.e. filling out the questionnaires) was voluntary.

The psychosocial training focused on improving skills to support effective social interaction and communication. A positive change in interpersonal skills is mediated by participation in group activities that are facilitated by a trained psychologist. The following subjects were incorporated into the training: self-perception, non-verbal communication, social skills (active listening, assertiveness, conflict management, handling of criticism, and aggressiveness in communication), the decision-making process, cooperation, stress management and coping techniques, burnout and burnout prevention, professional identity, and relaxation techniques. Group activities included specific techniques based on using group dynamics, and activities that imitate real-life situations (role-playing), as well as experience-based learning (Škodová, Paceková, 2012).

### **Sample**

A total of 97 university students from various healthcare professions (psychology, nursing, midwifery) participated in the research study. The experimental group consisted of 50 psychology students in their second or third year of study who received psychosocial training. 47 nursing and midwifery students in their second year of study were enrolled in the control group without receiving training (mean age in the total sample:  $20.2 \pm 1.49$ ; 95.9% female).

### **Data collection**

Respondents from both the experimental and control groups filled out the questionnaires at two time points: before and after training. The response rate after training was 81.3%. All participants were provided with information about the study aims, and ethical approval was obtained from the university ethics committee.

The School Burnout Inventory (SBI) (Salmela-Aro et al., 2009), developed specifically for school environments, was used to assess burnout levels. The SBI is a short, nine-item questionnaire that focuses on self-evaluation of the most common burnout symptoms; higher scores indicate higher levels of burnout. The authors of the questionnaire proposed three subscales of the measure: common exhaustion while completing schoolwork, scepticism regarding the value of schooling, and sense of inadequacy at school. In the context of depressive symptoms, school engagement, and academic achievement, the SBI questionnaire showed high structural, item and scale reliabilities, and good concurrent validity (Salmela-Aro et al., 2009). In the present study, Cronbach's alpha for the SBI was 0.84.

A short version of the Utrecht Work Engagement Scale (UWES) was used in order to measure engagement with study. Originally, this scale was designed for research use in a work environment. For the purposes of this study, all the questions were modified in order that they be related to study, for example, work which is necessary to fulfill study requirements. The short version of the UWES contains nine items, with answers scored on a seven-point Likert scale, with a highest possible score of 54 points. A higher score indicates a higher level of engagement (Schaufelli et al., 2006). Reliability in the current study was 0.88 (Cronbach alpha).

A 13-item version of Antonovsky's (1993) Sense of Coherence (SOC) questionnaire was used to measure the 'sense of coherence' concept. This relatively stable personality trait refers to a person's ability to cope with stressful situations; people with a high sense of coherence tend to perceive life as comprehensible, manageable and meaningful. A higher score on the questionnaire indicates a higher sense of coherence and a better ability to cope with stressful situations. The scale has been widely used and has good psychometric properties (Eriksson, Lindstrom, 2005). Responses are measured on a seven-point scale and a total score calculated that ranges from 13 to 91. In the present study, Cronbach's alpha for the SOC questionnaire was 0.77.

The concept of resilience was measured by the Baruth Protective Factor Inventory (BPF). This measure is designed to identify positive protective factors regarding stress, which are understood to be the key factors of resilience. A total of 16 items, scored on a five-point Likert scale, are divided into four subscales of resilience as defined by the authors of the questionnaire: a) adaptable personality, b) a supportive environment, c) lower level of stress, d)

compensating experiences. The total score is between 16-80, with higher scores indicating a higher level of resilience, that is, a more resilient personality (Baruth, Carroll, 2002). Reliability in the current study was 0.84 (Cronbach alpha).

The research instruments were translated using a back translation procedure by two independent experts from the English original into Slovak and subsequently used in the research.

### Data analysis

Descriptive statistical procedures were used in order to characterize the research sample. Student's t-test for independent samples was employed to assess the statistical relevance of differences in key research variables between the experimental and control groups. Spearman correlation analysis was used to explore the associations between study variables. One way analysis of variance (ANOVA) and LSD post hoc tests were used for confirmation of statistically significant differences between pre- test and post- test levels in both the experimental and control groups. The research findings were analyzed using the statistical software IBM SPSS, version 22.0.

### Results

Table 1 shows the basic descriptive characteristics of the research sample. Results of the Student's t-test for independent samples showed that before the beginning of the psychosocial training, the experimental and control groups of students were not statistically different regarding any of the key research variables (burnout syndrome, engagement, sense of coherence, and resilience (Table 1).

Correlation analysis found statistically significant associations between study variables (Table 2). Burnout syndrome was negatively associated with the level of study engagement ( $R = -0.42$ ,  $p \leq 0.01$ ) and with level of personality traits: resilience ( $R = -0.50$ ,  $p \leq 0.01$ ), and sense of coherence ( $R = -0.52$ ,  $p \leq 0.01$ ). As expected, a higher level of study engagement was positively correlated with a higher level of sense of coherence ( $R = 0.35$ ,  $p \leq 0.01$ ) and resilience ( $R = 0.35$ ,  $p \leq 0.01$ ).

The effect of psychosocial training on the level of burnout syndrome and study engagement, as well as its effect on personality traits (resilience and sense of coherence) was analyzed using a comparison of the pre-test and post-test levels in these key variables in both the experimental and control groups. Analysis of variance and LSD post hoc tests found a statistically significant decrease of burnout levels in the experimental group of students after psychosocial training (95 % CI: 5.26; 11.94).

**Table 1** Basic descriptive characteristics of the research sample

	Experimental group n=50	Control group n=47	Total sample n=97	p*
Females	47 (94.0 %)	46 (97.9 %)	93 (95.9 %)	
Males	3 (6.0 %)	1 (2.1 %)	4 (4.1 %)	-
Age				
Mean (SD)	19.94 (± 1.42)	20.47 (± 1.44)	20.20 (± 1.49)	-
Burnout syndrome	29.3 (± 9.04)	30.47 (± 6.57)	30.19 (± 7.86)	0.74
Engagement	23.28 (± 7.56)	26.0 (± 6.47)	24.59 (± 7.15)	0.06
Resilience	60.54 (± 6.72)	61.21 (± 6.94)	60.87 (± 6.79)	0.63
Sense of coherence	55.85 (± 10.85)	59.25 (± 8.67)	57.55 (± 9.91)	0.10

\* statistical significance of differences between experimental and control group regarding key variables was tested using Student's t-test

On the other hand, no significant differences in burnout levels before or after training were found in the control group of students (Table 3). Similarly, a significant increase in the positive personality traits of sense of coherence (95% CI: -11.48; -3.37) and resilience (95% CI: -7.92; -1.70) was found in the

experimental group after training, while in the control group no significant changes in the personality variables were observed. Surprisingly, however, the level of study engagement increased in both the experimental and control groups of students when the pre-test and post-test levels were compared (Table 3).

**Table 2.** Correlation analysis of personality variables (resilience and sense of coherence) and burnout syndrome/ engagement

	Engagement	Burnout syndrome	Resilience	Sense of coherence
Engagement	1	-0.42**	0.33**	0.35**
Syndróm vyhorenia	-0.42**	1	-0.50**	-0.52**
Resilience	0.33**	-0.50**	1	0.64**
Sense of coherence	0.35**	-0.52**	0.64**	1

\*\* Correlation is significant at  $p \leq 0.01$

**Table 3.** Analysis of variance showing the differences in key variables between experimental and control group pre- and post-intervention (1 – experimental group, 2 – control group)

		Mean score pre test	Mean score post test	95 % CI
Burnout syndrome	1.	29.3 (± 9.04)	21.31 (± 7.41)	<b>(5.26; 11.94)</b>
	2.	30.47 (± 6.57)	27.92 (± 8.46)	(-0.82; 5.91)
Engagement	1.	23.28 (± 7.56)	32.40 (± 9.37)	<b>(-12.25; -5.99)</b>
	2.	26.0 (± 6.47)	32.43 (± 6.14)	<b>(-9.63; -3.24)</b>
Resilience	1.	60.54 (± 6.72)	65.00 (± 6.30)	<b>(-7.92; -1.70)</b>
	2.	61.21 (± 6.94)	63.40 (± 5.51)	(-3.99; 1.62)
Sense of coherence	1.	55.85 (± 10.85)	63.27 (± 9.18)	<b>(-11.48; -3.37)</b>
	2.	59.25 (± 8.67)	60.31 (± 9.19)	(-5.17; 3.05)

Statistical significance is in **bold** ( $p \leq 0.01$ ). The ANOVA and LSD post hoc tests were used in order to test the statistical significance between pre-test and post-test assessments.

## Discussion

The results of the present study confirm the main hypothesis regarding the positive effect of psychosocial training on reducing the level of burnout symptoms in students in the experimental group. A significant increase in resilience and sense of coherence after the training was also found in this group of students. These results are in line with other research findings about the positive effect of psychosocial interventions on burnout syndrome and other related factors. A review article by Henry (2014) found a positive impact of psychosocial intervention programs in nurses working mainly on oncology wards, not only in reducing burnout, but also in improving other variables such as overall

subjective job satisfaction. However, the author of this review points out the common methodological problem in reviewed studies: the lack of objective measurement tools and their non-experimental design, which might influenced findings of the review article.

Westermann et al. (2014), in a systematic review of articles on the effectiveness of intervention programs to reduce burnout among health professionals in the field of geriatric care, indicates that positive effects of interventions were observed in several cases, especially for programs using a combined approach. An increased sense of coherence after psychosocial group intervention aimed at reducing burnout was

reported by Kähönen et al. (2014) in a group of professionals from different job fields.

Research studies on the effectiveness of psychosocial training among students are less common. However, those that exist are similar to the present research study in that their findings show the positive impact of psychosocially-oriented interventions on burnout syndrome and related factors. A study by Bresó et al. (2011) confirms the positive effect of interventions based on socio-cognitive paradigms on reduction of burnout and increase in engagement and self-efficacy in college students. Similarly, positive results were found in research by Galbraight et al. (2011) regarding psychosocial interventions aimed at improving stress-resistance in students.

A surprising result of the present study regards the increase of engagement toward study in both groups of students, regardless of intervention. Engagement is usually considered to be the direct counterpart to burnout (van Bogaert et al., 2014), thus a negative association between changes in burnout levels and engagement levels could be expected. However, the results of this study are not consistent with this assumption. One possible explanation is that some of the factors which were affecting engagement during the research process had no influence on burnout syndrome. This would indicate a bigger difference between the concept of burnout and engagement than had been anticipated. It is also probable, that the methodological limitations of the present study might have had an influence on these findings, such as the heterogeneity of the sample (differences between the research and control groups of students). The suitability of using the UWES for measuring engagement in the study environment might also be questioned.

In addition, the research results also confirmed a statistically significant relationship between personality traits (sense of coherence, resilience) and burnout syndrome, and also engagement, in students of various healthcare professions. These findings correspond with the research study carried out by He et al. (2012), which highlighted the lower levels of stress experienced by individuals with higher levels of sense of coherence. This demonstrates the protective effect of positive personality traits against stress and burnout. The concept of resilience and sense of coherence are largely overlapping constructs. Both variables are defined in relation to the ability to cope with difficult life circumstances, enhanced resistance to stress, and their protective effects against burnout.

The methodological limits of the present research include the question of the heterogeneity of the

research and control groups, since students from different, albeit related; study fields were included in each group. This concern was partially eliminated by the fact that, before the psychosocial training, the groups were compared in terms of key variables and there were no statistically significant differences between them. The sensitivity of the UWES research instrument for measuring engagement and, in particular, its relevance in the student population is also debatable, given the fact that this questionnaire is primarily designed for use among professionals in the working environment. In addition, it would have been preferable to have had a higher number of students in both groups in order to enhance the statistical significance of the results obtained.

The reduction or elimination of the most significant risk factors for burnout (optimization of workload, adequate and fair salaries, healthy and safe work conditions) are a matter of course when tackling the problem of burnout syndrome. However, such an approach by itself may not be completely effective since it is not possible to entirely eliminate all negative factors contributing to burnout, especially in the healthcare professions. The constant contact with pain and suffering, intensely emotional situations, and the constant demands of client's increase the burden on medical professionals (Bánovčinová, 2011; Smith, 2014). Thus psychosocial training programs aimed at increasing individual ability to cope with stressful situations might well be considered beneficial, not only for practitioners, but also for students of the healthcare professions (Bresó, 2011; Burton et al., 2010).

## Conclusion

The research study has shown that psychosocial training has a positive effect on burnout syndrome and related personality characteristics among students of the healthcare professions, and is thus a relevant and appropriate method of burnout prevention.

One argument for the increased need to focus on burnout syndrome, not only in practitioners, but also in students of the healthcare professions, is that their ability to manage the stressful situations and cope with the stress associated with study requirements might significantly predict stress-management competencies later in their professional life. Basic working habits and attitudes towards work are initially formed after the first contact with practice during university study. This is even more pronounced in students of nursing and midwifery due to the high number of hours spent in practice, which are included in their study curriculum.

## Ethical aspects and conflict of interest

The research study was approved by the local ethics committee. Participants were informed of the research study aims; participation in study was fully anonymous and voluntary. Authors declare no conflict of interests.

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## Author contribution

Conception and design (ZŠ, PL); manuscript draft (ZŠ, PL), data collection and analysis (ZŠ, PL), critical revision of the manuscript (ZŠ), final approval of the manuscript (ZŠ).

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