

ORIGINAL PAPER

ENGAGEMENT AND BURNOUT AMONG NURSING AND PSYCHOLOGY STUDENTS IN SLOVAKIA

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Abstract

Aim: The aim of the study was to examine the differences in engagement and burnout syndrome in students of nursing/midwifery and psychology in Slovakia. **Design:** A cross-sectional design was used. **Methods:** 171 university students on a baccalaureate program participated in the research (90.9% females; age 20.6 ± 1.3 ; 80 psychology students, 91 nursing/midwifery students). The School Burnout Inventory (SBI) and Utrecht Work Engagement Scale (UWES) were employed as measurement methods. **Results:** A significant negative association between levels of burnout and engagement ($R = 0.42$; $p < 0.01$) was found. A linear regression model showed a significant effect of engagement on burnout ($\beta = -0.34$; 95% CI: -0.50 ; -0.19). However, the total explained variance was only 19.4%. Students of psychology scored higher in engagement compared to nursing and midwifery students ($t = 6.89$; $p < 0.001$). Conversely, midwifery and nursing students had higher levels of burnout compared to the group of psychology students ($t = -4.55$; $p < 0.001$). **Conclusion:** Nursing is considered to be a high risk profession in terms of development of burnout, which was demonstrated in this study by the higher burnout, and lower engagement levels in nursing and midwifery students. Higher attention to coping mechanisms for stress and burnout symptoms among students of healthcare professions is required in the school curriculum, especially in nursing programs.

Keywords: burnout syndrome, engagement, students of nursing, midwifery, students of psychology, School Burnout Inventory (SBI), Utrecht Work Engagement Scale (UWES).

Introduction

Work engagement is a concept of a positive, fulfilling state of mind that is characterized by vigor, dedication, and absorption related to work. "Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly, and one has difficulties with detaching oneself from work" (Schaufelli, Bakker, Salanova, 2006). In conclusion, high levels of energy, enthusiasm, and perceived meaningfulness at work are the main characteristics of highly engaged people.

Work engagement is significantly related to higher job satisfaction, lower intentions of leaving a job, and a proactive attitude toward the demands of work. Engaged people also cope better with work demands when tired, and perceive fatigue as less troubling because they can associate it with positive achievements at work (García-Sierra, Fernández-Castro, 2016). Work engagement is often defined as the counterpart to burnout syndrome. However, these two concepts are not exact opposites. More likely, both of these characteristics have unique ways of influencing work related characteristics, as well as subjective well-being. This means, that burnout and engagement may be characterized as opposing, yet distinct, factors (Hakanen, Schaufelli, 2012).

The level of work engagement among healthcare professionals is a result of the interaction between personal predispositions and the characteristics of the work environment, such as positive work climate, social support from the organization, and the influence of supervisors through leadership styles (García-Sierra, Fernández-Castro, Martínez-Zaragoza, 2016). In a study focusing on facilitators of work engagement among nurses (Freeney, Tiernan,

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2009), the most significant barriers to engagement were centered around the following six key areas: high workload, lack of control over work conditions and low participation in the decision-making process, insufficient reward and recognition, low perceived fairness, lack of social support at work, and the conflict between the organization's and individual's values. The same six factors are recognized as the key risk factors for the development of burnout syndrome (Maslach, Leiter, 1997; Bria, Băban, Dumitrașcu, 2012).

On the other hand, protective factors related to burnout include: optimism, self-esteem, internal locus of control (Alarcon, Eschleman, Bowling, 2009), resilience, and a sense of coherence (van der Colff, Rothmann, 2009). Based on a review of available literature, García-Sierra, Fernández-Castro, Martínez-Zaragoza (2016) concluded that engagement has a significant impact on quality of healthcare provided through influencing the performance of healthcare personnel at work. Similarly, Bargagliotti (2012) pointed out that the outcome of nurse engagement are higher levels of personal initiative, decreased hospital mortality rates, and significantly higher financial profitability of organizations. Moreover, work engagement has positive effects not only at an organizational level, but also individual level. In a longitudinal study by Hakanen and Schaufelli (2012), work engagement had a negative effect on depressive symptoms, and a positive effect on life satisfaction. On the other hand, burnout levels significantly predicted depressive symptoms in their study.

Aim

Aim of this study was to examine the levels of engagement among students in different fields of the caring professions (nursing and midwifery, psychology). Both psychology and nursing, resp., midwifery are considered to be caring professions. However, the scope of study, school curriculum, and the amount of the practical training are quite different in both fields. Another objective was to examine the interrelationships between key variables in the study: engagement and burnout symptoms in students of the caring professions. The following hypotheses were formulated: 1.) Significant differences in the engagement and burnout levels among students in different fields are expected, 2.) Significant interrelationships between engagement and burnout symptoms among students of caring professions are expected to be found.

Methods

Design

Non experimental, cross-sectional, correlational research design was used in this research.

Sample

The research sample included 171 university students on a baccalaureate study program in the fields of nursing/midwifery, and psychology. Study is based at the academic setting, it was conducted at two Slovak universities providing baccalaureate study in the fields of nursing and midwifery (Martin); and psychology, nursing and midwifery (Ružomberok). Most of the participants were women (90.9% of respondents in the research group), with an average age of 20.6 (SD = 1.3).

Data collection

Convenient sampling method was used. The response rate was 78.6%. All participants were provided with information about the study aims, and ethical approval was obtained from the university ethics committee. Research instruments were translated from the English original into Slovak by two independent experts using a reverse translation procedure.

The School Burnout Inventory (SBI) (Salmela-Aro et al., 2009), which was 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 a higher level of burnout. The authors of the questionnaire proposed three subscales for the questionnaire: common exhaustion while completing schoolwork, cynicism about the meaning of school, and a 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 0.85.

The 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 the work environment. For the purposes of this study, all questions were modified in such a way that their meaning was related to study. The short version of UWES contains nine items, with answers scored on a seven-point Likert scale. The scale comprises three subscales, each measuring one of the three dimensions of engagement: vigor (three items), dedication (three items), and absorption (three items). The highest

possible score is 54 points, a higher score indicating a higher level of engagement (Schaufelli, Bakker, Salanova, 2006). Reliability (Cronbach alpha) in the current study was 0.88. Results of a study by Cadime et al. (2016) supported the original three-factor structure (vigor, dedication and absorption) of the UWES in a sample of secondary school and university students, thus demonstrating that the UWES can be used with university students as a relevant measuring tool.

Data analysis

For statistical analysis, Student's t-test for independent samples, Pearson's correlation analysis, and a linear regression model were used. All statistical analyses were performed using free PSPP software.

Results

Table 1 shows basic demographic and personality characteristics of participants in the research study. The majority of students were female, and the study sample was highly homogeneous with regard to age. 80 were psychology students, and 91 were from the field of nursing, resp. midwifery. Average scores in burnout and engagement in both groups of students, as well as in the whole sample, are shown in Table 1.

Table 1 Descriptive characteristics of participants

Variable	Field of study	n	mean (SD) or %
Gender	Psychology	80	83.5% females
	Nursing/midwifery	91	96.9% females
	Total	171	90.9% females
Age	Psychology	80	20.99 ± 0.81
	Nursing/midwifery	91	20.20 ± 1.50
	Total	171	20.55 ± 1.26
Burnout	Psychology	80	24.54 ± 8.49
	Nursing/midwifery	91	30.19 ± 7.86
	Total	171	27.58 ± 8.61
Engagement	Psychology	80	32.42 ± 7.89
	Nursing/midwifery	91	24.59 ± 7.15
	Total	171	28.11 ± 8.43

SD – standard deviation

Table 2 shows results of correlation analysis. Significant associations were found between the two key variables in our study: burnout syndrome and engagement. Higher scores in burnout syndrome correlated to lower levels of burnout ($R = -0.42$), results were significant at the p level < 0.01 . In addition, the findings of the analysis showed that engagement levels positively correlated to age in our sample ($R = 0.23$). Results were significant at the p level < 0.01 .

Table 2 Spearman's correlation coefficients (R) for the study variables

	Age	Gender	Field of study	SBI	UWES
Age	1	-0.13	-0.31**	-0.09	0.23**
Gender		1	0.23**	0.13	-0.86
Field of study			1	0.33**	-0.46**
SBI				1	-0.42**
UWES					1

**Correlation significant at $p \leq 0.01$

Differences between levels of burnout and engagement were expected to be found in the sample of students in our study. This hypothesis was tested with the Student t-test for independent samples (Table 3 and Figure 1), which revealed significant differences in the levels of burnout syndrome and engagement, according to the field of study. Students

of psychology scored significantly higher in engagement compared to students of nursing and midwifery ($t = 6.89$; $p < 0.001$). Conversely, midwifery and nursing students had higher levels of burnout syndrome in comparison to the group of students from the field of psychology ($t = -4.55$; $p < 0.001$).

Table 3 Differences in burnout and engagement levels in students from different fields

	mean (SD) Psychology	mean (SD) Nursing/Midwifery	t	p level
Burnout	24.54 ± 8.49	30.19 ± 7.86	-4.55	0.001
Engagement	32.42 ± 7.89	24.59 ± 7.15	6.89	0.001

Statistically significant effects are in **bold** ($p \leq 0.001$)

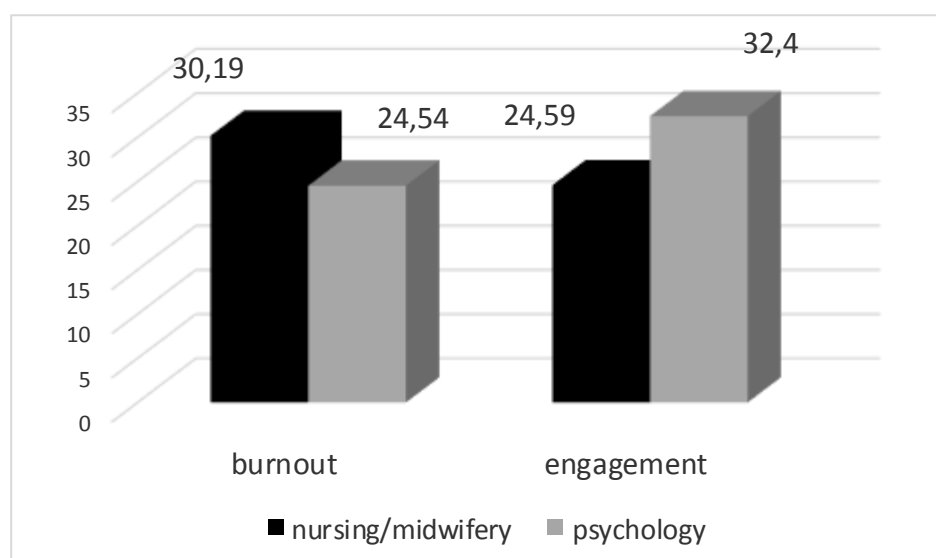


Figure 1 Mean burnout and engagement levels in students of nursing/midwifery and psychology

A linear regression model was used to examine the effect of engagement scores on the burnout syndrome levels in students of caring professions. Age, gender and field of study were entered as possible confounding variables in the linear regression model. Engagement score was treated as an independent variable, while burnout score was entered as a dependent variable in the regression model. The results of this analysis demonstrated that the effect of engagement on burnout syndrome was statistically significant ($\beta = -0.34$; 95% CI: -0.50; -0.19). Age, gender, and field of study were not found to be significant factors influencing the burnout level in this model. The total explained variance in the linear regression model was 19.4% (Table 4)

Table 4 Linear regression model showing the effect of engagement on burnout syndrome in the study sample

	β coefficient	95% CI
Engagement	-0.34	-0.50; -0.19
Age	0.06	-0.57; 1.40
Gender	0.06	-2.26; 5.99
Field of study	0.19	0.51; 6.08
Total explained variance	19.4 %	

Statistically significant effects are in **bold**; CI= Confidence Interval

Discussion

The results of this study confirmed a significant negative association between burnout and engagement. Such a relationship has been reported in other studies involving healthcare professionals (Garrosa et al., 2011; Hakanen, Schaufelli, 2012) and other caring professions (Poulsen et al., 2014; Mojsa-

Kaja, Golonka, Marek, 2015). The present study also confirmed the negative association of these two variables in students of caring professions. A similar relationship was found in a study by Çapri, Gündüz, Akbay (2013) involving high school students. However, in the linear regression model examining the effect of engagement on burnout levels in students, the total explained variance was quite low. Together with the lower correlational coefficient, these results indicate that burnout and engagement are quite different concepts. This is in line with a number of recent studies suggesting that burnout syndrome and engagement are more distinct as factors than originally assumed. A study of Finnish high school students by Wang et al. (2015) showed that emotional engagement and school burnout had distinct trajectories over time, in this sample; and that they influence academic results and psychological wellbeing in different ways.

Similarly, García-Sierra, Fernández-Castro, Martínez-Zaragoza (2016) in their review study pointed out that a significant decrease in emotional exhaustion (burnout subscale) was not accompanied by significant changes in work engagement. Schaufelli, Bakker, Salanova (2006) specified that while vigor and dedication might be considered direct opposites of exhaustion and cynicism (burnout subscales), professional efficacy (burnout dimension) and absorption (dimension of engagement) are a distinct concepts, not direct opposites.

In the present study, students of psychology scored higher in engagement compared to students of nursing and midwifery. On the other hand,

midwifery and nursing students had higher levels of burnout compared to the group of students from the field of psychology. One possible explanation for these differences might be higher number of hours spent in practice in the nursing study curriculum, in comparison to the psychology study program. Nursing is considered to be a high-risk profession regarding the development of burnout. A number of studies have reported the prevalent risk of burnout syndrome in nurses, especially in highly demanding specializations, such as oncology or palliative care (Lupo et al., 2013; Henry, 2014; Ribeiro et al., 2014). Although being a student is quite different to being a professional nurse, study requires a number of mandatory structured activities and fulfilling the number of duties (Salmela-Aro et al., 2009), which together with the high number of practice hours, might create stress levels similar to those of work.

The results of this study indicate that higher attention to coping mechanisms of stress and burnout symptoms in students is required. Stress-related coping strategies during study may be associated with the same coping strategies that are later applied in the workplace; and it is possible to assume that improving stress management competences among students will be useful in the prevention of later burnout syndrome (Skodova, Lajciakova, 2013).

García-Sierra, Fernández-Castro, Martínez-Zaragoza (2016) suggest that similarly to burnout, engagement depends, to a great extent, on nurses' work environment and organization of work (for instance value congruence between company and employees, nursing practice environment, reward, ward climate, social context, work fairness, workload, perceived control at work, and quality of leadership). All of these organizational factors are changeable, and their improvement is an important determination of engagement and positive attitudes toward work. However, previous studies have shown that personality factors such as optimism, self-efficacy, resilience, and empathy also play a supportive role in high engagement at work. It has been found that intensive training programs are able to induce positive changes to these characteristics (Breso et al., 2011; Super et al., 2015). Therefore, engagement might be also able to improve over time rather than being a permanent condition (García-Sierra, Fernández-Castro, Martínez-Zaragoza 2016). However, future research studies in this area are necessary to confirm this assumption.

There are some methodological limitations to the present study, including the selection process and sample size, as well as the fact that students of only

two universities were included in the study. Thus the general validity of the observed data is limited.

Conclusion

The study revealed a significant association of engagement and burnout in students in a selected sample of caring professions. Nursing is considered to be a high-risk profession regarding development of burnout, which was indicated by the higher burnout and lower engagement levels in nursing and midwifery students in this study. Similar to other countries in Central Eastern Europe, university education in nursing and midwifery in Slovakia is strongly practically oriented; a significant part of the undergraduate program in nursing and midwifery consists of practical training. Thus students' attitudes toward their profession are formed during their study. Higher attention to coping mechanisms for stress and burnout symptoms among students of healthcare professions is required in the school curriculum, especially in nursing and midwifery programs, as the prevention of burnout syndrome might be more effective if it begins during study. A number of studies in this area have shown that coping mechanisms for stressful situations can be improved through training programs which are specifically targeted at improvement of stress management, communication and interpersonal skills, cooperation and group decision making, and other soft skills. Training programs in this area should be included in the education process in the healthcare professions.

Ethical aspects and conflict of interest

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

Author contribution

Design and research concept (ZS, PL); data collection and analysis (ZS, PL, LB), manuscript (ZS).

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