RESEARCH ARTICLE

ACTA Vol. 21, No. 1, 2023, 1-20
NEUROPSYCHOLOGICA

Received: 18.11.2022
Accepted: 08.03.2022

A – Study Design
B – Data Collection
C – Statistical Analysis
D – Data Interpretation
E – Manuscript Preparation
F – Literature Search
G – Funds Collection

DOI: 10.5604/01.3001.0016.2973

LEVEL OF OCCUPATIONAL BURNOUT, PERCEIVED STRESS AND LIFE SATISFACTION AMONGST UNIVERSITY TEACHERS

Ewa Wilczek-Rużyczka[1][A,B,C,D,E,F,G], **Justyna Wyszyńska-Michalec**[2] [A,B,C,D,E,F]

[1] The Andrzej Frycz Modrzewski Krakow University, Department of Health Psychology, Kraków, Poland
[2] The Pedagogical University of Kraków, Department of Neurocognitive Psychology, Poland

SUMMARY

Background: The aim of the research was to determine the level of professional burnout amongst academic teachers and to demonstrate its relationships with perceived stress and the sense of life satisfaction, as well as selected socio-demographic variables – such as age, gender, marital status and work experience; the title or degree held was an important element of the above analysis.

Material/ Methods: The study included 67 persons (researchers and didactic employees) of one of the faculties at the Andrzej Frycz Modrzewski Krakow University. Employed were the authors' self-designed socio-demographic questionnaire, Maslach Burnout Inventory-Human Services (MBI-HSS), Perceived Stress Scale test (PSS-10) and Satisfaction with Life Scale test (SWLS). As a result of the research conducted, it was found that almost two-thirds of the surveyed research and teaching employees had a high level of having lost a sense of personal accomplishment, and not more than one-third also the same in the case of the other two dimensions of professional burnout according to MBI. A significant relationship was found between the self-reported burnout score and the level of the three dimensions of burnout according to the MBI.

Results: It was found that the higher the score on the PSS-10, the higher the level of all three dimensions of professional burnout according to MBI in the surveyed research and teaching staff. It was shown that the higher the score on the SWLS, the lower the level of all three dimensions of professional burnout according to MBI in the surveyed research and teaching staff. Almost two-thirds (62.69%) of the surveyed research and teaching staff had a high level of having lost a sense of personal accomplishment, and no more than one in three of the respondents in the case of the other two dimensions of occupational burnout according to the MBI.

Conclusions: It might be concluded that the researchers have a significant percentage of professional burnout. A significant relationship was found between the self-reported burnout score and the level of the three dimensions of burnout according to the MBI among the research and teaching staff surveyed. We also confirmed the relationship between perceived stress and life satisfaction with all three dimensions of job burnout.

Key words: emotional exhaustion, depersonalization, personal accomplishment, stress, life satisfaction

INTRODUCTION

Teachers are one of the professional groups at risk of professional burnout, being listed together with doctors, nurses and psychotherapists (Maslach et al., 1996). In the Polish literature on professional burnout in university teachers, attention is drawn to the insufficiency, or limited number of studies and published research findings on occupational burnout in this professional group (e.g. Świętochowski, 2011; Walczyna et al., 2017).

There are many more studies and reports connected with this issue in the available scientific literature on academic staff burnout. These numerous papers present research findings on the following areas of occupational burnout: measurement of stress and burnout among university teachers (Slišković & Maslić, 2011; Lin & Huan, 2013; Chen et al, 2014; Ishak & Mahmood, 2017; Shaiful et al, 2017; Khan et al, 2019; Navarro & Mas, 2010), the correlation of job satisfaction with occupational burnout (Bilge, 2006; Fadlelmula, 2014; Demirbatır & Engür, 2018), and the study of burnout among university employees and its relationship with job satisfaction and psychological stress (Mohamed et al, 2021), the influence of psychological strain on job burnout (Akca & Küçükoğlu, 2020), the relationship of emotional intelligence and work life factors on professional burnout (Woyessa & Gelaw, 2020), the study of self-efficacy as a moderating variable of university teachers' psychological distress (Ishak & Mahmood, 2017), and the influence of demographic factors on university teachers' burnout (Toker, 2011; Chen et al, 2014; Fadlelmula, 2014; Khan et al, 2015; Khan et al, 2019; Manzoor et al. 2019; Akca & Küçükoğlu, 2020).

The specificity of the academic teaching profession is related to the difference in their professional situation compared to the non-academic teaching profession. This dissimilarity consists of several factors (Walczyna et al., 2017): most of them combine teaching work with academic work, the recipients of educational services provided by them are usually young people, yet already adults; moreover, the legal framework of their activity is regulated by separate legal acts. These dissimilarities suggest, according to Walczyna et al. (2017) that they should be treated as a separate category, which, in addition to the sources of burnout typical for teachers, may experience specific causes of mismatch between the individual and the working environment. Burnout syndrome, according to many researchers, affects both the teachers who are weakly committed to the role and those who are the most committed (Strzelecki, 2013). Those poorly committed are tired of their role and are fully aware of the poorly chosen profession or its incompatibility with their personality and the resulting responsibilities or norms. On the other hand, pedagogues who are most absorbed in their profession are passionate teachers, completely dedicated to their work, who cannot cope with the barriers and obstacles that stand in their way of professional self-realisation.

The risk of academic teachers' burnout is related to the stress resulting from the need to accomplish achievements in three scopes of their activity: a) academic, b) teaching and c) organisational, as well as to enhance their professional

competences, which results from Article 115, paragraph 1 and paragraph 2 of the Act on Higher Education and Science (Journal of Laws 2018, item 1668). The performance of tasks within these three scopes of activity is subject to the periodic evaluation of the individual employed in the groups of academic, research and teaching and didactic employees, while in the latter group the scope of academic activity is not evaluated. In addition to the stress associated with the need to obtain achievements within the activities listed and subject to assessment, there are also risk factors involved in the work of academic staff, including stress associated with the performance of tasks within the assessed areas of activity.

The aim of the research was to determine the level of occupational burnout in academic teachers from a group of research and teaching employees of one of the faculties at a university in Kraków and to demonstrate its relationships with perceived stress and the sense of life satisfaction, as well as selected socio-demographic variables such as age, gender, marital status and work experience, with and an important element of the above analysis being the title or degree held. Therefore, the following research hypotheses were formulated:

- H1: Research and teaching staff surveyed have high levels of the three dimensions of burnout according to the MBI.
- H2: There is a relationship between the burnout self-assessment score and the level of the three dimensions of burnout according to the MBI in the research and teaching staff surveyed.
- H3: There are differences in the level of the three dimensions of burnout according to the MBI between the studied groups of research and teaching staff holding different degrees/titles.
- H4: The higher the score on the Perceived Stress Scale according to the PSS-10, the higher the level of the three dimensions of burnout according to the MBI in the research and teaching staff surveyed.
- H5: The higher the score on the Life Satisfaction Scale according to the SWLS, the lower the level of the three dimensions of job burnout according to the MBI in the research and teaching staff surveyed.
- H6: There is a relationship between age and the level of the three dimensions of burnout in the research and teaching staff studied.
- H7: There are differences in the level of the three dimensions of burnout in the surveyed research and teaching staff of different gender.
- H8: There are differences in the level of the three dimensions of job burnout in the studied research and teaching staff of different marital statuses.
- H9: The greater the length of service the higher the level of the three dimensions of burnout in the research and teaching staff surveyed.

METHOD

Respondents profile and procedure of research

The research was conducted in 2020 among academic teachers, belonging to the group of research and teaching staff, in accordance with Article 114 of the

current Act on Higher Education and Science (Journal of Laws 2018, item 1668), employed at one of the faculties of a Kraków-based university. Selected for the study was a group of research and teaching staff carrying out their research and educating students in the disciplines of engineering and technical sciences. The employees surveyed held positions ranging from assistant, through assistant professor and university professor to professor, and held academic degrees of doctor, post-doctoral and titular professor. There were 70 participants in the study - the age of the respondents ranged from 29 to 67 years (M = 45.03 years, SD = 8.92 years), but due to mistakes made by 3 of the respondents in the questionnaire and test forms, their answers were not qualified for the study due to their unreliability. The analyses included 67 people – only engineering graduates, although this was not a preconceived condition - of whom 34 were women and 43 were men.

Research tools

The author's socio-demographic questionnaire made it possible to collect basic information such as: age, gender, actual marital status, degree/title, number of years of work experience at university/colleges, type of employment (full-time job, additional employment). The survey included the following forms of actual marital status: single, married, divorced, widowed, partner and separated. The survey also included one closed-ended question regarding the respondent's subjective assessment of feelings of burnout, in the form of: "Do you consider yourself to be professionally burned out?". In response to this question, one of the five answers is marked: definitely yes (5 points), rather yes (4 points), hard to say (3 points), rather not (2 points), definitely not (1 point).

Christina Maslach's burnout questionnaire (MBI) – MBI-HSS (Maslach Burnout Inventory-Human Services) version, regardless of the MBI-HSS or MBI-ES version, contains 22 feeling-related statements. The scoring of the individual dimensions of burnout is the same, regardless of the version of the MBI sheet, according to which the three dimensions of burnout are assessed, whereby: 9 statements refer to emotional exhaustion (EEX), 5 to depersonalization (DEP) and 8 to the assessment of the loss of a sense of personal accomplishment (PAR). Answers are given according to a 7-point scale of frequency of occurrence of a given feeling, from "never" to "every day". The Polish adaptation of the MBI questionnaire was developed by Pasikowski (2011), who based on his own research determined the α-Cronbach's coefficients for the individual MBI subscales, these being: 0.85 (EEX), 0.60 (DEP) and 0.76 (PAR).

While interpreting the results of the tests, it should be borne in mind that the questions diagnosing the dimensions of emotional exhaustion (EEX) and depersonalization (DEP) concern the assessment of negative feelings, the higher scores of which in the evaluation of responses correspond to higher levels of each of these dimensions. On the other hand, questions diagnosing the personal accomplishment dimension (PAR) are constructed in such a way that they concern the respondent's assessment of his/her positive feelings. Thus, the total

score of the eight questions of the PAR dimension relates to the positive feeling of personal accomplishment. The higher the sum of the points received for these questions, the higher the recognition of the personal achievements of the respondent. Thus, on the inverted scale of this dimension, a higher sum of points indicates a lower level of a loss of the sense of personal accomplishment. Therefore, in this study, when evaluating and commenting on the results describing this dimension of burnout, the generally accepted symbol for describing this dimension, i.e. PAR, will be used, but it will be interpreted appropriately depending on the context of the study.

The PSS-10 test – Perceived Stress Scale is part of the collection of "Tools for measuring stress and coping with stress" by Juczyński and Ogińska-Bulik (2009). The test contains 10 questions about different subjective feelings related to personal problems and events, behaviours and ways of coping. For each question, one of five answers is given, which are assigned numerical values from "0" (never) to "4" (very often). The α-Cronbach's index of 0.86 was obtained in Juczyński and Ogińska-Bulik's (2009) assessment of an internal consistency tested in a study of 120 adults.

The SWLS test – Satisfaction with Life Scale is part of the collection "MTHPP (NPPPZ in Polish) - Measurement tools in health promotion and psychology" developed by Juczynski (2012). The SWLS test scale contains five statements. The respondent assesses the extent to which each statement relates to his or her life to date. The result of the measurement is a total score of life satisfaction. For each of the five questions, one of seven answers is given, with a numerical value from "1" (completely disagree) to "7" (completely agree). The reliability of the SWLS - Life Satisfaction Scale test was determined by Juczynski (2012) through the assessment of the *α*-Cronbach's reliability index, which for the SWLS test was determined in a study of 371 people and was found to be satisfactory (0.81).

RESEARCH RESULTS

Characteristic of the study group

The study group of 67 research and teaching employees consisted of 24 women and 43 men (Table 1), who represented 35.8 and 64.2% of the respondents respectively. In terms of marital status, the study group is dominated by married people – 77.6% overall - with 66.7% among women and 83.7% for men.

Although there are 112 workers employed by the studied faculty, the research – as already mentioned – covered 67 people, which means the participation of less than 60% of the research and didactic staff of the faculty selected for the research - either because the respondent did not give their consent or because they could not be contacted during the research period. If the population of research and teaching staff at the faculty was limited to 98 engineers, because only from among them came the respondents, then it can be assumed that more than ¾ of them were surveyed, i.e. 68.4%.

Table 1. Demographic characteristics of the study group

Variable		Sample			Women			Men		
		N	M	SD	*N*	M	SD	*N*	M	SD
Age		67	45	8.92	24	42.6	8.69	43	46.4	8.85
Job seniority		-	18	9.31	-	15.8	9.43	-	19.2	9.12
		N	%		*N*	%		*N*	%	
Marital status	single	9	13.4		5	20.8		4	9.3	
	married	52	77.6		16	66.7		36	83.7	
	partner	2	3.0		1	4.2		1	2.3	
	widow/widower	0	0.0		0	0.0		0	0.0	
	divorced	4	6.0		2	8.3		2	4.7	
	separated	0	0.0		0	0.0		0	0.0	
Degree /title	BEng. PhD. DSc. Prof	4	6.0		0	0.0		4	9.3	
	BEng. PhD. DSc. Assist. Prof	16	23.9		5	20.8		11	25.6	
	BEng. PhD. DSc	14	20.9		3	12.5		11	25.6	
	BEng. PhD	33	49.3		16	66.7		17	39.5	
Answer to the question: Do you consider yourself to be professionally burned out?	definitely yes – 5 points	2	3.0		0	0.0		2	4.7	
	rather yes – 4 points	10	14.9		5	20.8		5	11.6	
	hard to say – 3 points	20	29.9		8	33.3		12	27.9	
	rather not– 2 points	19	28.4		7	29.2		12	27.9	
	definitely not – 1 points	16	23.9		4	16.7		12	27.9	

Level of occupational burnout

Based on the calculated sum of the points awarded in the answers to the given question corresponding to the individual dimensions of burnout, the allocation of these values to one of the following three categories was determined: low, medium and high score, thus determining the level of occupational burnout in the dimensions under consideration - according to the MBI. The results obtained (Table 2) show that emotional exhaustion (EEX) concerns, in a comparable percentage, both low, medium and high levels of this dimension of burnout.

What is more, the analysis of the level of depersonalization (DEP) confirmed in the largest part of the studied group, i.e. in more than 43%, its low level, while a high level of depersonalization was found in only less than 21% of the surveyed research and teaching staff. The last of the stages of burnout, i.e. the dimension of the loss of a sense of personal accomplishment (PAR), was found to occur at

Table 2. Overall characteristics of burnout in the research and teaching staff surveyed

Level	Emotional exhaustion (EEX)		Depersonalization (DEP)		Personal Accomplishment (PAR)	
	Number of people	Percentage [%]	Number of people	Percentage [%]	Number of people	Percentage [%]
Low	23	34.33	29	43.28	8	11.94
medium	22	32.84	24	35.82	17	25.37
High	22	32.84	14	20.90	42	62.69

a high level in a surprisingly large proportion of the respondents, over 62%. Summing up the above, it can be said that the first hypothesis was partially confirmed, as a high level of professional burnout was shown in the majority of respondents (62.69%) in the dimension of the loss of a sense of personal accomplishment (PAR), in almost a third of respondents (32.84%) in the case of emotional exhaustion (EEX), and in every fifth of them (20.90%) if we consider depersonalization (DEP).

Relationship between the self-assessment burnout score and the level of the three dimensions of burnout according to the MBI

In the context of the obtained results of the level of the dimensions of professional burnout with the use of the MBI Scale, it is important to get to know subjects' self-assessment, namely their opinion on the perceived professional burnout and to verify the relationship between this subjective perception and the objective results of the standarised tool, i.e. the MBI (second hypothesis). To do this, the respondents' answers to the question in the socio-demographic questionnaire were analysed: "Do you consider yourself professionally burned out?", select one of the following: definitely yes (5 points), rather yes (4 points), hard to say (3 points), rather not (2 points), definitely not (1 point). On the basis of the obtained self-assessment results, the correlations of these results with particular levels of professional burnout, determined according to the MBI test, were developed for the members of the research group (Table 3). All correlations of self-assessment with emotional exhaustion ($R = 0.630$, $p < 0.001$), depersonalization ($R = 0.437$, $p = 0.002$) and recognition of personal achievements ($R = 0.340$, $p = 0.003$) proved statistically significant.

Differences in the level of three dimensions of occupational burnout according to MBI between the studied groups of research and teaching staff holding different degrees/titles

In the study of differences in the level of professional burnout in the groups of research and teaching staff with different academic degrees/titles (second hypothesis), four groups of research and teaching staff were distinguished, irrespective of gender, i.e. employees with the academic title of professor (Group I),

Table 3. Significance of linear correlations of the relationship between self-reported burnout (S), perceived stress (PSS-10), life satisfaction (SWLS), age (A) and seniority of scientific status (SS) of research and teaching staff and teaching employees and their reported level of burnout dimensions according to MBI

Relationship	Correlation	Statistics	*df*	*p*	*R*	$R^2_{adj.}$	*a*	*b*
S - EEX	r-Pearson	*F* = 44.333	1.65	0.000	0.630	0.396	6.879	4.519
S - DEP	r-Pearson	*F* = 10.025	1.65	0.002	0.437	0.120	1.843	3.475
S - PAR	r-Pearson	*F* = 9.653	1.65	0.003	0.340	0.116	-3.176	34.804
PSS-10 - EEX	r-Pearson	*F* = 89.442	1.65	0.000	0.757	0.573	1.273	-1.274
PSS-10 - DEP	r-Pearson	*F* = 43.701	1.65	0.000	0.627	0.393	0.495	0.813
PSS-10 - PAR	r-Pearson	*F* = 28.159	1.65	0.000	0.540	0.292	-0.752	40.40
SWLS - EEX	r-Pearson	F = 20.093	1.65	0.000	0.474	0.224	-0.907	40.467
SWLS - DEP	r-Pearson	F = 31.611	1.65	0.000	0.563	0.317	-0.498	18.480
SWLS - PAR	r-Pearson	F = 19.235	1.65	0.000	0.465	0.217	0.729	11.666
A - EEX	r-Pearson	*F* = 0.0755	1.65	0.784	0.119	0.014	0.045	19.305
A - DEP	rho-Spearman	*t* = -0.7774	65	0.440	-0.096	-	-	-
A - PAR	r-Pearson	*F* = 0.0146	1.65	0.904	0.123	0.015	0.016	29.292
SS - EEX	r-Pearson	*F* = 0.5511	1.5	0.461	0.094	0.0088	0.1392	20.637
SS - DEP	rho-Spearman	*t* = 0.6175	50	0.540	0.087	-	-	-
SS - PAR	r-Pearson	*F* = 2.2689	1.5	0.138	0.156	0.0242	-0.2216	29.593

where: EEX – emotional exhaustion, DEP - depersonalization, PAR – personal accomplishment, *df* – degrees of freedom, *p* – empirical probability, *R* – correlation coefficient, $R^2_{adj.}$ – adjusted coefficient of determination, *a* – slope, *b* – absolute term

employees with the degree of habilitated doctor holding the position of university professor (Group II), employees with the degree of habilitated doctor (Group III) and those with the degree of doctor (Group IV). The normality of the distributions was checked with the Shapiro-Wilk test of variables for individual groups by dimensions of professional burnout (Table 4). All distributions, except for the dimension of depersonalization (DEP) in Group I and Group IV - turned out to be normal distributions, as the p value in the test of their distributions were found to be greater than α= 0.05.

The application of ANOVA analysis revealed the significance of differences between the means of only one dimension of job burnout according to MBI, that is the loss of the sense of personal accomplishment (PAR). The indication of which in the compared groups is responsible for the rejection of the null hypothesis stating the equality of the means of these groups was possible thanks to the post-hoc test – the NIR test (least significant differences) was applied, and on the basis of the results of this test (see Table 5) it was found that:

Table 4. Mean values of the level of occupational burnout dimension according to MBI for groups of research and teaching staff and the results of fitting the histograms of the variables to a normal distribution

Dimension	Groups of research and teaching staff							
	I Group BEng. PhD. DSc. Prof (4 persons)		II Group BEng. PhD. DSc. Assist. Prof (16 persons)		III Group BEng. PhD. DSc (14 persons)		IV Group BEng. PhD (33 persons)	
	M	Shapiro-Wilk	M	Shapiro-Wilk	M	Shapiro-Wilk	M	Shapiro-Wilk
EEX	11.0	$W = 0.785$ $P = 0.079$	19.3	$W = 0.918$ $p = 0.159$	27.5	$W = 0.968$ $p = 0.843$	21.0	$W = 0.971$ $p = 0.508$
DEP	3.8	$W = 0.725$ $p = 0.022$	7.9	$W = 0.920$ $p = 0.170$	9.9	W = 0.940 $p = 0.715$	7.7	$W = 0.927$ $p = 0.028$
PAR	29.5	$W = 0.954$ $p = 0.740$	32.5	$W = 0.924$ $p = 0.198$	20.6	$W = 0.943$ $p = 0.461$	26.8	$W = 0.980$ $p = 0.790$

where: M – mean value of the burnout dimension, other symbols as in Table 3

Table 5. Summary of NIR test results for the degree/title grouping variable for the dependent variable lack of one's sense of personal accomplishment (PAR)

Group of employees	IV M = 26.877	III M = 26.877	II M = 26.877	I M = 26.877
IV	-	0.031	0.043	0.575
III	0.038	-	0.001	0.091
II	0.043	0.001	-	0.557
I	0.575	0.090	0.557	-

– subjects in Group IV are characterised by a higher mean PAR value than those in Group III and this value is statistically significant ($p = 0.038$). Also, people in Group IV are characterized by a lower mean value of PAR than people in Group II - this is also a statistically significant result ($p = 0.043$),
– subjects in Group III are characterised by a lower mean value of PAR than subjects in Group II - this is also statistically significant ($p< 0.001$).

The interpretation of the PAR results obtained indicates that habilitated doctors in the position of university professor (Group II) value their achievements most, as they have the lowest level of a loss of the sense of personal accomplishment (PAR). Perhaps this is facilitated by the achievement of the promotion associated with the award of the position of university professor. In contrast, those with a doctoral degree (Group IV), who are at the beginning of their academic career, are characterized by a higher level of a loss of the sense of personal accomplishment. The level turns out to be higher after obtaining the habilitation, but with no appointment as a university professor or obtaining the title of profes-

sor (Group III), where not only the mean value of this dimension is within the range of high PAR level values (0-31), but also – on the basis of the analysis of raw results - none of the people in this group had a value indicating other than a high PAR level, while among university professors (Group II) only one in four had this level of burnout (PAR) defined as high. This may also be due to a critical self-assessment of one's academic output, which would make it possible to obtain the position of university professor or the title of professor.

To sum up the above considerations, the second hypothesis formulated was only partially confirmed and only in relation to the third dimension of professional burnout, namely the level of a lack of a sense of personal accomplishment (PAR) on account of academic rank. No results were obtained in this dimension (PAR) indicating statistically significant differences as per professor doctor habilitated title, namely the differences in the results of the level of a lack of a sense of personal accomplishment (PAR) for Group I in relation to any of the other groups - that is, II, III and IV.

Perceived stress level and life satisfaction of research and teaching staff

In order to determine the relationship between perceived stress as well as life satisfaction among research and teaching staff and their level of professional burnout in three dimensions according to MBI – assumed in hypothesis 4 and hypothesis 5 respectively, these variables were tested using the Perceived Stress Scale (PSS-10) and the Life Satisfaction Scale (SWLS). The validity of this analysis was further supported by the results obtained according to the MBI, testifying to the predominant feeling of the surveyed research and teaching staff that their personal achievements are not sufficient, which in people pursuing an academic career can be very important and may affect the perceived stress and satisfaction, both professional and, consequently, personal. Also, as in the case of the level of professional burnout, the sum values of the responses of individual respondents were calculated for these scales, and then the stens were determined and the final descriptive score was obtained according to the key for these tests – stating whether the given state of perceived stress and life satisfaction is at a high, moderate, or low level, and the percentages of respondents according to the structure of these levels is summarised in Table 6.

Table 6. Summary of the number of research and teaching staff surveyed with different levels of perceived stress (PSS-10) and life satisfaction (SWLS)

Level	Scale of Perceived Stress (PSS-10)		Scale of Life Satisfaction (SWLS)	
	Number of people	Percentage [%]	Number of people	Percentage [%]
low	28	41.79	26	38.81
moderate/medium	19	28.36	24	35.82
high	20	29.85	17	25.37

As a result of the study of the level of perceived stress, it was found that in the sample there were fewer than 30% of individuals whose perceived stress was determined as high. However, the most numerous group, namely nearly 42%, consisted of respondents with low levels of perceived stress. It turns out that the expected relationship between low perceived stress and high life satisfaction is not confirmed by the figures in Table 6, because although the largest proportion of the respondents were those with low levels of stress, accounting for nearly 42% of the respondents, the smallest proportion of them, only slightly more than 25% of the total, described their life satisfaction as high. However, this observation is not crucial for the further analyses of the verification of hypotheses 4 and 5, as these factors may independently be of importance when examining their relationships with the level of professional burnout of the surveyed group of research and teaching staff.

Relationship between perceived stress and the level of occupational burnout in research and teaching staff

As a result of the analysis (Table 3) of the relationship between perceived stress of the surveyed research and teaching staff and the level of their occupational burnout (fourth hypothesis), the relationship between perceived stress, the level of which was determined using the PSS-10 test, and the levels of professional burnout dimensions according to MBI was found to be significant, with the levels of professional burnout dimensions according to MBI - as the level of perceived stress increases, emotional exhaustion ($R = 0.757$, $p < 0.001$) and depersonalization ($R = 0.627$, $p < 0.001$) increase, as well as there occurring a decrease in the sense of personal accomplishment ($R = 0.540$, $p < 0.001$).

Relationship between life satisfaction and the level of occupational burnout in research and teaching staff

The relationship between the life satisfaction of research and teaching staff and the level of the three dimensions of job burnout (Table 3) was examined using the results of the SWLS and MBI tests (fifth hypothesis). The results of Pearson's correlation analysis of the relationship between life satisfaction and the particular dimensions were found to be statistically significant. With the increase in life satisfaction, described by the results of the SWLS test, the levels of both emotional exhaustion ($R = 0.474$, $p < 0.001$) and depersonalization ($R = 0.563$, $p < 0.001$) decreased, as did the loss of a sense of personal accomplishment ($R = 0.465$, $p < 0.001$), which translates into lower job burnout in all three dimensions according to the MBI of research and teaching staff experiencing higher life satisfaction.

Relationship between the selected socio-demographic variables and the level of occupational burnout

As a result of examining the relationship between the variable age (A) (sixth hypothesis) and occupational burnout, it was found that there was no correla-

tional relationship between the age of the respondents and its individual dimensions (Table 3). The age of scientific employees has no effect on emotional exhaustion (R = 0.119, p = 0.784), depersonalization (R = -0.096, p = 0.440), or a sense of a lack of personal accomplishment (R = 0.123, p = 0.904), as the results obtained are not statistically significant (p> 0.05).

There were also no differences in the level of professional burnout among research and teaching staff of different genders (seventh hypothesis). The obtained differences in the means of two samples: the women's group (K) and the men's group (M) for the variables of dimensions of emotional exhaustion (T = 0.801, p = 0.404) and depersonalization (U = 0.387, p = 0.699), as well as personal accomplishment (T = -0.650, p = 0.523), turned out to be statistically insignificant (Table 7).

The analysis of the existing differences in the level of burnout amongst research and teaching employees depending on their actual marital status (eighth hypothesis) was carried out by means of the analysis of variance performed separately for each dimension of burnout in the studied groups of those married, single and divorced. Of the three dimensions of burnout according to MBI, only for the dependent variable – emotional exhaustion (EEX) did the one-way analysis of variance show the significance of differences between the variables considered, i.e. the study groups, and the verification of which of the compared groups is responsible for rejecting the accepted null hypothesis of equality of all averages was performed using the NIR test (Table 8). It turned out that significant

Table 7. Results of significance analyses of the difference in the mean level of professional burnout dimensions according to MBI for two samples: a group of women (K) and a group of men (M) – research and teaching employees

Burnout dimension	Groups (samples)	Mean		*df*	Test value	*p*	Leven's Test	
		K	M				Test value	*p*
EEX	K vs. M	23.0	20.4	65	T = 0.801	0.404	F = 0.871	0.354
DEP	K vs. M	7.7	8.2	-	U = 0.387	0.699	-	-
PAR	K vs. M	26.0	27.6	65	T = -0.650	0.523	F = 0.186	0.668

where: T – t-Student test, U – Mann-Whitney U test, other symbols as in Table 3

Table 8. Summary of NIR test results for the marital status grouping variable for the dependent variable emotional exhaustion (EEX)

Marital status	married M = 19.481	single M = 27.779	divorced M = 31.750
married	-	0.051	0.044
single	0.051	-	0.568
divorced	0.044	0.568	-

differences in the mean values of the EEX dimension occur in the comparison of married and divorced groups (p = 0.044). Thus, it was shown that divorced people (M=31.8) are characterised by greater emotional exhaustion than married people (M=19.5). For the remaining group pairs, the differences were not statistically significant. Since no statistically significant differences were found in the mean values of the depersonalization dimension (DEP) and the mean values of the personal accomplishment loss dimension (PAR) in the tested groups, the third hypothesis cannot be fully confirmed.

There was also no correlation between the status of seniority (SS) (period of employment) of research and teaching employees and higher levels of professional burnout (ninth hypothesis). Statistically insignificant correlations of the length of seniority were obtained (Table 3), indicating that the association with emotional exhaustion (R = 0.094, p = 0.461), depersonalization (R = 0.087, p = 0.540) and personal accomplishment (R = 0.156, p = 0.138) was not confirmed.

DISCUSSION

In the presented study, there were no differences in the level of burnout among the studied research and teaching staff of different genders, as the obtained differences in the means for the female group and the male group in any of its three dimensions according to the MBI proved to be statistically insignificant. Similar findings were presented by Toker (2011) and Chen et al. (2014) stating that gender is not related to the level of burnout. Also, Croom (2003) through a study of agricultural college teachers showed that gender has no effect on job burnout. On the other hand, Lackritz (2004) in his study into research and teaching staff showed that women had significantly higher mean scores on emotional exhaustion than men, while men had higher scores on depersonalization. Similar results, however, not statistically significant, were obtained in the presented study – the mean level of emotional exhaustion of women was higher compared to men, while the mean level of depersonalization and personal achievement was lower. Many researchers, including Barkhuizen et al. (2004), Bilge (2006), Ghorpade et al. (2007) find higher emotional exhaustion in women in comparison to men.

Apart from gender, another variable adopted by various researchers in the analysis of the course of the professional burnout syndrome in the group of non-academic teachers was age and length of service. As a result of the research conducted, there was no statistically significant relationship between the length of service (period of employment) of research and teaching employees and the level of burnout. The results of the correlation analysis of the level of these dimensions with the number of years of employment proved to be statistically insignificant. The relationship between the level of burnout in academic and research employees and their age was not demonstrated either – although Smulczyk and Rycielska's (2013) study among teachers found that those aged 36-42 were the most burned out and dissatisfied with their jobs. Similar findings were

presented by Hoenig (2020), who found, based on a study of 77 academic staff at Edith Cowan University in Perth, Australia, that the age of these employees and the length of their service showed no relationship with the level of job burnout. Bilge (2006) also found no significant relationship between the length of employment and the burnout of university employees. Different findings are presented by other burnout researchers, including Barkhuizen and Rothman (2008), Petersen (2011), Bell et al. (2012), Khan et al. (2015) found that the age as well as the length of academic tenure were associated with any job burnout experienced among academic staff.

A number of studies have concluded that marital status does not have a significant effect on job burnout, which has also been shown in the work of, among others, Gursel et al. 2002, Evans et al. 2006, Bilge 2006, Chen et al. 2014) However, it has been shown by Toker (2011) that single academic staff have significantly higher average levels of depersonalization, and married academic teachers have higher personal achievement than single staff.

Most research papers in the field of burnout emphasize the important role of stress in the burnout process of non-academic teachers (e.g., Väisänen et al. 2018, Arias et al. 2019, Pyhältö et al. 2021). The link between stress and burnout is also confirmed by Rey et al. (2016). They report that symptoms of stress and burnout were statistically significant and positively related to emotional exhaustion and depersonalization, while negatively related to personal achievement. The sense of satisfaction with life has a large impact on the level of burnout. This was shown by the results of the research conducted by the authors of this paper, as well as by Bilge (2006), among others, who showed in a study of 194 academics the relationship of internal job satisfaction with emotional exhaustion, depersonalization and personal achievement. Many researchers confirm that higher burnout is associated with poor job satisfaction (Gursel et al. 2002, Evans et al. 2006, Ozyurt, 2006, Ogresta et al. 2008). Job satisfaction refers to one's emotions, behaviors, and preferences connected with employment (Ozyurt et al. 2006). These studies, therefore, point to the key role of job satisfaction, which, together with work-related stress, is an important determinant of professional burnout – and not only for teachers. As Wilczek-Rużyczka (2014) points out, the issues of stress and professional burnout of teachers have not yet been sufficiently empirically verified in Poland. Therefore, the results of our own research – including analyses of the relationship of the level of professional burnout of the surveyed research and teaching staff with their perceived stress and level of life satisfaction – may prove important, as some significant correlations have been found, namely, as perceived stress increases and life satisfaction decreases, exhaustion and depersonalization intensify, and a sense of personal accomplishment is lost.

When analysing the risk of professional burnout in a specific professional group, i.e. academic teachers from the group of research and teaching employees, it should be assumed that it is probably related to the stress resulting, as already mentioned, from the statutory necessity to obtain achievements in the

three areas of scientific, teaching and organisational activities, as well as improving those professional competences which are subject to periodic evaluation. The feeling of stress is associated with the necessity of accomplishing achievements in each of the above mentioned activities, but it can particularly accompany scientific work, where it is necessary for the employee to obtain better and better publications with high bibliometric indices, obtain funds for research, develop implementations as well as obtain patents or utility models. This is connected with the fact that large energy resources are needed to carry out such activities and face failures resulting, among others, from non-acceptance of the publication for print, rejection of the research funding application, etc. The teaching activity of an academic teacher also involves direct interpersonal contacts, which may generate stress and be a reason for burnout. This is due to the need to work with students, which is connected with the burden of an emotional involvement in student affairs, such as giving advice, motivating or supporting in acquiring knowledge (Majchrzak, 2011; Wilczek-Rużyczka & Zaczyk 2022). An academic teacher is also exposed to risk factors resulting from the characteristic traits of the organizational culture typical of Polish universities. This is characterised by a high power distance, collectivism and a systemic barrier to the development of academic staff (Striker & Wojtaszczyk, 2009). Therefore, it is worth quoting here the results of a long-term study, where Trevers and Cooper in 1993 classified the burdens occurring in the academic teaching profession according to distinguished groups of stressors, such as: teacher-student interactions, management / university structure, poor working conditions, low promotion opportunities, social uncertainty and the ambiguity of the teacher's role (Majchrzak, 2011).

The job security of a university employee due to his/her education and position he/she holds in the social structure of the university may also be a cause of burnout. The influence of a degree or title on the level of burnout has been found in some studies, including in studies by Küçüksüleymanoğlu (2007) and Fadlelmula (2014). As Fadlelmula (2014) explains, especially in later years, academic staff may become more stable, mature, and resilient to the problems they face at work, thus experiencing less burnout.

Summing up these considerations, however, it should be stated that due to the insufficient number of research results concerning research and teaching staff at Polish universities, there are no grounds for resolving the issue of higher levels of burnout among academic teachers in comparison to secondary and primary school teachers. Nevertheless, it should be mentioned that there have already been comparative studies of Polish high school teachers and university teachers conducted by Świętochowski (2011), which concluded that university teachers are exposed to professional burnout syndrome to a much lesser extent than high school teachers. This applies to both men and women. According to this author, the burnout factor that rises relatively the highest values in university teachers is the feeling of professional ineffectiveness, while the other two factors: emotional exhaustion and cynicism are not a source of danger. However, in high school teachers, the dynamics of the components of burnout is rather the opposite.

Our findings, especially the difference in the sense of professional ineffectiveness that differentiates the two groups of respondents, can be explained using the microgenetic theory of consciousness. In this context, it is important to clarify the essence of the mental state (Pąchalska 2019). The path of development of the mental state follows a serial order, which means that this state occurs:

1. *in the space of brain structures*, where it can develop from covert processes to the level of the threshold of consciousness (an ascending mental state) and disappear (a disappearance of the mental state) or exceed this threshold (a development of the mental state) and rise even higher to the appearance of full consciousness and conscious cognition (the culmination of the mental state);
2. *in time*, in the form of pulsating individual mental states, which ensures the renewal of these states. This allows you to become more aware of reality. For healthy people with a properly functioning brain the time it takes to become aware of this reality may last for a relatively short time, while for those with brain damage due to the destabilization of neural networks this may be slow or may accelerate, which in each case will lead to disorders within cognitive and emotional processes.

This approach to the essence of the mental state makes it possible to understand the phenomenon of developing (T1) and renewing (T2) this state in time (cf. Fig. 1) and the birth of the minimal working self (Brown, Pąchalska 2003; Pąchalska 2019).

In working memory, images are reproduced in subsequent mental states in the order of memory, i.e., in relation to their resemblance to the coming state, and thus to the possibility of actually renewing the mental state. In the current state of mind, there are images closer to the perception that takes place, i.e., images from the working memory buffer that have almost reached the character

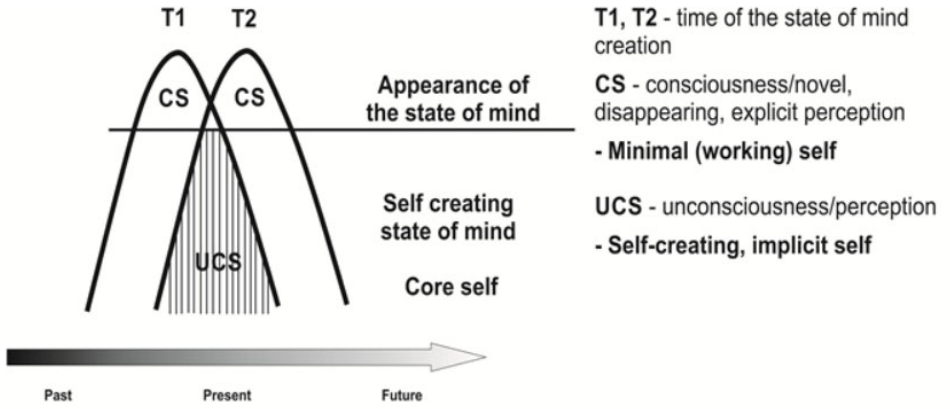

Fig. 1. Developing (T1) and renewing (T2) mental state in time: the birth of the minimal (working) self
Source: Pąchalska, MacQueen and Brown (2012b), modified

of renewed perception. The brain-mind state in T1 is replaced by the overlapping state T2 before T1 ends in time, i.e., before the next phase occurs. This explains the reoccurrence of the early phases in T1, related to the condition of the body (body and brain), the individuality of the person, i.e., the Self, character, disposition, the capacity of working memory buffers, long-term memory resources and experience, and the durability of basic beliefs, values and personality. Later phases disappear when the whole process of realizing reality is completed to make room for new perceptions. The activity of earlier mental state phases in the process of the overlapping of individual phases explains the sense of self continuity in time. It should be emphasized that the early stages of mental state development are components that incorporate later states that are more susceptible to environmental influences. At the same time, the repetition of earlier phases is closely connected with the feeling of a reality that exists (Pąchalska, MacQueen and Brown 2012a). Thus, it can be seen that the burdens present in the academic teaching profession according to the distinguished groups of stressors we have already discussed above, cause the associated specific psychological states to also exacerbate the level of professional burnout. These mental states, especially the relationship of perceived stress and life satisfaction with all three dimensions of job burnout is clearly related to the Self system, especially the emotional Self (cf. also Pąchalska 2019) of the research groups. It also explains the differences obtained between those in the post-doctoral research group with those with lower academic degrees group.

CONCLUSIONS

1. Almost two-thirds (62.69%) of the research and teaching staff surveyed had a high level of a loss of a sense of personal accomplishment, and no more than one in three of the respondents in the case of the other two dimensions of occupational burnout according to the MBI.
2. A significant relationship was found between the self-reported burnout score and the level of the three dimensions of burnout according to the MBI among the research and teaching staff surveyed.
3. Significant differences in the level of only one, that is the loss of a sense of personal accomplishment (PAR) - of the three dimensions of job burnout according to the MBI between the studied groups of research and teaching staff holding different degrees/titles were confirmed. Significant differences were found for those with a doctoral degree and habilitation but without a university professor position - the most burned-out group compared to the groups of both PhDs without habilitation and university professors, and these differences were statistically significant. In contrast, professors did not differ significantly in the level of PAR, as well as other dimensions, from any of the other employee groups.
4. Statistical analysis significantly confirmed that the higher the score on the Perceived Stress Scale according to PSS-10, the higher the level of all three

dimensions of professional burnout according to MBI in the research and teaching staff studied.

5. It has been proved statistically significantly that the higher the score on the Life Satisfaction Scale according to SWLS, the lower the level of all three dimensions of job burnout according to MBI in the research and teaching staff surveyed.
6. Statistically significant differences were confirmed for only one level of the three dimensions of professional burnout - emotional exhaustion, which is significantly higher only in divorced people and only in relation to the group of married research and teaching employees surveyed.
7. No statistically significant differences could be found in the level of any of the three dimensions of burnout in the research and teaching staff studied according to age, gender, and length of service.

REFERENCES

Akca, M., Küçükoğlu, M. T. (2020). *Relationships between mental workload, burnout, and job performance: A research among academicians.* In *Evaluating mental workload for improved workplace performance. book series IGI Global*. 49–68.

Arias, W. L., Huamani, J., & Ceballos, K. D. (2019). Burnout syndrome in Schoolteachers and University Professors: A psychometricand comparative anaylys from Arequipa City. *Propósitos y Representaciones*, *7*(3), 72- 110.

Barkhuizen, E. N., Rothmann, S., Tytherleigh, M. Y. (2004). Burnout of academics in a South African higher education institution. *Paper presented at the 2nd South African Work Wellness Conference*, Potchefstroom, South Africa.

Barkhuizen, N., Rothmann, S. (2008). Occupational stress of academic staff in south african higher education institutions. *South African Journal of Psychology*, *38*(2), 321-336.

Bell, A. S., Rajendran, D., Theiler, S. (2012). Job Stress, Wellbeing, Work-Life Balance and Work-Life Conflict Among Australian Academics. *Electronic Journal of Applied Psychology*, *8*(1): 25-37.

Bilge, F. (2006). Examining the burnout of academics in relation to job satisfaction and other factors. *Social Behavior and Personality: An international journal*, *34*(9), 1151-1160.

Brown J.W., Pąchalska M. (2003). The symptom and its significance in neuropsychology. *Acta Neuropsychologica*, *1(1)*: 1–11.

Chen, W.S., Haniff, J., Siau, C.S., Seet, W., Loh, S.F., Abd Jamil, M. H., Sa'at, N., Baharum, N. (2014). Burnout in academics: an empirical study in private universities in Malaysia. *International Journal of Social Sciences and Humanities Invention*, *1*(2), 62-72.

Croom, D.B. (2003). Teacher burnout in agricultural education. *Journal of Agriculture Education*. *44*(2),1-13.

Demirbatır, R.E., Engür, D. (2018). Academicians' Burnout, Vigor and Occupational Satisfactions in the Department of Fine Arts Education: A Sample of Uludag University. *Journal of Education and Training Studies*, *6*(7), 86-93.

Dz. U. 2018 poz. 1668, Ustawa z dnia 20 lipca 2018 r. *Prawo o szkolnictwie wyższym i nauce*.

Evans, S., Huzley, P., Gately, C., Webber, M., Mears, A., Pajak, S., Medina, J., Jendall, T., Katoma, C. (2006). Mental health, burnout and job satisfaction among mental health social workers in England and Wales. *The British Journal of Psychiatry*, *188*, 75-80.

Fadlelmula, F. K. (2014). Academicians' Burnout Levels. *Ondokuzmayis University Journal of Education*, 33(2), 424-438.

Ghorpade, J., Lackritz, J., Singh, G. (2007). Burnout and personality: evidence from academia. *Journal of Career Assessment*, *15*(2), 240-256.

Gursel, M., Sunbul, A.M., & Sari, H. (2002). An analysis of burnout and job satisfaction between Turkish head teachers and teachers. *European Journal of Psychology of Education*, *17*(1), 35-45.

Hoenig, C. Y. (2020). Professional self-care practices, emotional work and burnout in Australian psychology academics. https://ro.ecu.edu.au/theses_hons/1543.

Ishak, R., Mahmood, A. (2017). Relationship between Job Stress and Employee Burnout-The Moderating Role of Self-Efficacy for University Teachers. *Journal of Research and Reflections in Education, 11*(2), 100-112.

Juczyński, Z. (2012). *Narzędzia pomiaru w promocji i psychologii zdrowia. Skala Satysfakcji z Życia*. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego, 184.

Juczyński, Z., Ogińska-Bulik, N. (2009). *Narzędzia pomiaru stresu i radzenia sobie ze stresem*. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego, s. 87-96.

Khan, A., Ud Din, S., Anwar, M. (2019). Sources and Adverse Effects of Burnout Among Academic Staff: A Systematic Review. *City University Research Journal*, *9*(2), 350-363.

Khan, F., Rasli, A. M., Yusoff, R. M., & Ahmad, A. (2015). Do demographic make a difference to job burnout among university academicians? *International Journal of Economics and Financial Issues*, 5, 229-237.

Küçüksüleymanoğlu, R. (2007). Burnout syndrome levels of education faculty academic staff. *Educational Reserach*, 28, 101-112.

Lackritz, J.R. (2004). Exploring burnout among university faculty: incidence, performance, and demographic issues. *Teaching and Teacher Education*, *20*, 713-729.

Lin, S. H., Huang, Y. Ch. (2013). Life stress and academic burnout. *Active Learning in Higher Education*, *15*(1), 77-90.

Majchrzak, I. (2011). Wypalenie zawodowe u nauczycieli akademickich. *Folia Pomeranae Universitatis Technologiae Stetinensis. Oeconomica*. *287*(63), 137–146

Manzoor, S., Kazi, A. Sh., Aziz, F. (2019). Female University Teachers Burnout and its Association with their Demographic Variables. *Pakistan Journal of Social and Clinical Psychology*, *17*(2), 56-61.

Maslach. C., Jackson. S., Leiter. M. (1996). *The Maslach Burnout Inventory*. Palo Alto, CA, Consulting Psychologists Press.

Mohamed, S., Nikmat, A., Hashim, N. A., Shuib, N., Raduan, N. J. (2021). *Burnout and its* Relationship to Psychological Distress and Job Satisfaction Among Academician and Non-Academician in Malaysia. *International Journal of Higher Education*, *10*(1), 85-92.

Navarro, M.L.A., Mas, M.B. (2010). Job stress and burnout syndrome at university: a descriptive analysis of the current situation and review of the principal lines of research. *Annuary of Clinical and Health Psychology*, 6, 67-72.

Ogresta, J., Rusac, S., Zorec, L. (2008). Relation between burnout syndrome and job satisfaction among mental health workers. *Croation Medical Journal*, 49(3), 364-74.

Ozyurt, A., Hayran, O., Sur, H. (2006). Predictors of burnout and job satisfaction among Turkish Physicians. *Qjm: An International Journal*, *99*(3), 161-169.

Pasikowski, T. (2011). Polska adaptacja kwestionariusza Maslach Burnout Inventory. W: H. Sęk (red.), *Wypalenie zawodowe. Przyczyny i zapobieganie*. Warszawa: Wydawnictwo Naukowe PWN.

Pąchalska, M. (2019b). Integrated self system: microgenetic approach. Acta Neuropsychologica 17(4):349-392.

Pąchalska, M., MacQueen, B.D., Brown, J.W. (2012a). Microgenetic theory: Brain and mind in time. W: R.W. Rieber (red.), *Encyclopedia of the history of psychological theories* (s. 675–708). T. 26. Frankfurt: Springer

Pąchalska, M., MacQueen, B.D., Brown, J.W. (2012b). Microgenesis of consciousness. W: H. Pashler (red.), *Encyclopedia of the mind* (s. 513–515). Los Angeles–London–New Delhi–Singapoore: Sage.

Petersen, E. B. (2011). Staying or Going?: Australian Early Career Researchers' Narratives of Academic Work, Exit Options and Coping Strategies. *The Australian Universities' Review*, *53*(2), 34-42.

Pyhältö, K., Pietarinen, J., Haverinen, K. et al. (2021). Teacher burnout profiles and proactive strategies. *European Journal of Psychology of Education*, *36*, 219–242. https://doi.org/10.1007/s10212-020-00465-6

Rey, L., Extremera, N., Pena, M. (2016). Emotional competence relating to perceived stress and burnout in Spanish teachers: a mediator model. PeerJ 4:e2087; DOI 10.7717/peerj.2087

Shaiful, A. K., Rosnah I., Mohd R. A. M. (2017). Systematic review of organization stressors as predictors for job stress and burnout among university academicians in Malaysia. *International Journal of Public Health and Clinical Sciences*, *4*(3), 2289-7577.

Slišković, A., Maslić, S. D. (2011). Work stress among university teachers: gender and position differences. Arhiv za Higijenu Rada i Toksikologiju, 62(4), 299-307.

Smulczyk, M., Rycielska, L. (2013). Symptomy wypalenia zawodowego w grupie nauczycieli szkół ponadgimnazjalnych. *Pedagogika społeczna*, Rok XII, *4*(50), 113-132.

Striker, M., Wojtaszczyk, K. (2009). Społeczne bariery rozwoju kadry naukowo-dydaktycznej uczelni wyższej. *Nierówności Społeczne a Wzrost Gospodarczy*, 14, 474–486.

Strzelecki, M. (2013). *Nauczyciel zły, czyli najczęstsze błędy popełnianie przez pedagogów*. Materiały Konferencyjne. V konferencja naukowo-metodyczna „Mistrzostwo pedagogiczne jako konieczna cecha wykładowcy uczelnianego", Uniwersytet Przyrodniczy we Wrocławiu. 47-51.

Świętochowski, W. (2011). Wypalenie zawodowe nauczycieli akademickich i nauczycieli szkoły średniej – analiza porównawcza. *Medycyna Pracy*, *62*(2), 133–143.

Toker, B. (2011). Burnout Among University Academicians: an Empirical Study on the Universities of Turkey. *Doğuş Üniversitesi Dergisi*, *12*(1), 114-127.

Väisänen, S., Pietarinen, J., Pyhältö, K., Toom, A., & Soini, T. (2018). Student teachers' proactive strategies for avoiding study-related burnout during teacher education. *European Journal of Teacher Education*, *42*(3), 301–317.

Walczyna, A., Arent, A., Droździel, P. (2017). Wypalenie zawodowe w ocenie nauczycieli akademickich Politechniki Lubelskiej. *Edukacja-Technika-Informatyka*, *19*(1), 106-113.

Wilczek-Rużyczka E. (2014). Wypalenie zawodowe pracowników medycznych. Warszawa: Wydawnictwo ABC a Wolters Kluwer business.

Wilczek-Rużyczka. E., Grzywniak C., Korab M., Cielebąk K. (2021). ERPs as an index of impaired working memory in an ischemic brain stroke aphasic patient awakened from a long-term coma following an amphetamine overdose. Acta Neuropsychologica 19(2): 137-145; DOI: 10.5604/01.3001.0014.8032.

Wilczek-Rużyczka, E., Zaczyk, I. (2022). Determining the effect of stress and job burnout on the life satisfaction of nursing Staff. Acta Neuropsychologica 2022; 20 (2): 139-158. DOI: 10.5604/01.3001.0015.8545.

Woyessa, N. W., Gelaw, T. A. (2020). Emotional intelligence, areas of work life and Burnout Syndrome among selected university academic staffs in Ethiopia. *Research, Society and Development*, *9*(9), 1-10.

Coresponding author
Ewa Wilczek-Rużyczka
Department of Health Psychology
Andrzej Frycz Modrzewski Krakow University,
Herlinga-Grudzińskiego 1
31-212 Kraków
e-mail: ewaroz0@poczta.onet.pl
ORCID: 0000-0003-2261-8939