University Teachers' Resilience

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Abstract: *This research focuses on resilience and perceived stress as important components of university teachers' well-being. Resilience is generally conceptualized as a process and an outcome of successfully adapting to difficult / challenging life experiences and perceived stress as individual feelings or thoughts about the level of stress a person is experiencing at a given time period. In the context of the teaching profession and the current pandemic circumstances, we investigated university teachers' resilience and perceived stress. The Brief Resilience Scale and Perceived Stress Scale in digital format as Google Forms surveys are used in this study. The sample consisted of 100 university teaching staff (university teachers and university teaching assistants). The results show that the resilience of the university teaching staff is at a medium-high level. Perceived stress is low. The correlation between resilience and perceived stress of university teaching staff is negative and relatively high. University teaching assistants perceive more stressful situations and stress feelings than university teachers. There are no differences in resilience and perceived stress between university teaching staff from different educational and research fields. This study introduces new research topics and considerations in the contexts of teacher education and university activities aimed at enhancing university teaching staff resilience, stress management, and well-being.*

Keywords: *psychological resilience; perceived stress; teacher resilience; university teachers.*

1. INTRODUCTION

Educational policy in the last two decades has been based on the competency paradigm. Fostering the generic/transversal competencies is the focus of students' development. However, the question is what has happened with teachers' generic competencies and what is the impact of teachers' competencies in supporting the development of the same students' competencies? Some of the researchers ask the question: "Can the teacher teach what he/shehas notdeveloped in himself/herself?" [1]. Teachers' resilience is one of the competencies in focus, the same as conceptions and models of cultivating teachers' resilience [2]. At the end of the second decade of the XXI century, researchers recognized "the ability to maintain wellbeing and respond resiliently to professional challenges as a valuable teacher's capacity" [3]. At the same time, some researchers [4] emphasized teacher resilience as a necessary condition for their teaching effectiveness. Resilient teachers make an impact on students' academic resilience [5].

Positive psychology suggests that resilience and satisfaction of basic psychological needs contribute to predicting teachers' quality of teaching and professional engagement, and the optimal personal and professional development. Reflection of the teachers' psychological resilience on the students' community is important to resilient educational community development and to reduce students' stress [6]. Furthermore, we will consider resilient

teachers as a supportive environment for the development of resilient students.

2. CONCEPTUALIZATION OF THE RESILIENCE

The construct of resilience is "dynamic, complex in nature, and conceptualized as multidimensional" [3, p. 2]. Some definitions of resilience are considered:

- resilience is "the capacity to overcome personal vulnerabilities and environmental stressors, to be able to bounce back in the face of potential risks, and to maintain well-being" [7, p. 189];
- resilience is "using energy productively to achieve school goals in the face of adverse conditions" [7, p. 189];
- resilience is the "capacity to continue to bounce back, to recover strengths or spirit quickly and efficiently in face of adversity" [7, p. 189];
- resilience is "a mode of interacting with events in the environment that is activated and nurtured in times of stress" [8, p. 58];
- resilience is "the capacity to "overcome odds" and demonstrate the personal strengths needed to cope with hardship or adversity [9, p. 43].

Although the definitions of resilience are diverse, most people consider resilience as the ability to bounce back from an adverse event or set of circumstances [10].

Although the first approaches to the conception of resilience conceived resilience as a personal trait, later research confirmed that human resilience is

an attribute that can be developed. Nowadays, researchers with an educational orientation think that "resilience is one's ability to manage stressors and maintain adaptive functioning across all domains of life" [11, p. 263].

Different models of resilience explain the connection between resilience and risk and stress situation [9]. In accordance with the compensatory model, resilience is a factor that neutralizes exposure to risk. The challenge model suggests that the stress factor is a potential enhancer of successful adaptation, and prepares the person for the following challenges. In accordance with the protective factor model, the interaction between protection and risk factors reduces the probability of a negative outcome and moderates the effect of exposure to risk.

Tait described a resilient person stating that a "person who demonstrates resilience is able to regulate his or her emotions and interact more effectively in social environments. Resilience is nurtured, developed, and mobilized in times of stress" [8, p. 72]. Stress is a part of everyday life, but people's perceptions of stress, especially distress, differ, as do how their perceptions of stress trigger their distress responses and how they influence the establishment and maintenance of resilience.

Some of the indicators of resilience are the following: able to show positive adaptation in the face of adversity; able to rebound; flexible; able to make and maintain supportive relationships; reflective; has problem-solving skills; able to plan; seeks to help; able to act independently; has goals; persistent; takes risks; optimistic; able to regulate his or her emotions and interact more effectively in social environments [8, p. 61, 72] and has a higher sense of control and internal locus of control [12]. A resilient person is ready for positive adaptation and "functioning despite prolonged exposure to stressors and disadvantages" [11]. Resilient people are aware of situations, their own emotional reactions, and the behavior of those around them [12]. Resilience behaviour involves the ability to recover and rebound from challenges and setbacks and to understand that life is full of challenges [12].

The most comprehensive definition and the most widely accepted in the expert professional community is the following statement of psychological resilience, according to the APA Dictionary [13]: "Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands.

A number of factors contribute to how well people adapt to adversities, predominant among them:

- the ways in which individuals view and engage with the world;
- the availability and quality of social resources;
- specific coping strategies.

Psychological research demonstrates that the resources and skills associated with more positive adaptation (i.e., greater resilience) can be cultivated and practised" [10].

According to Brunetti (cited in [7, p. 8], teachers' resilience is "the quality that enables teachers to maintain their commitment to teaching and their teaching practices despite challenging conditions and recurring setbacks."

3. THE TEACHERS' RESILIENCE

"To teach, and to teach at one's best over time, has always required resilience" [4].

Maria Assunção Flores [14] concluded that "over the last fifteen years or so, resilience has emerged as a field of research, not only in countries that experience high rates of attrition, but also in contexts in which the teaching profession has gone through policy and social changing circumstances affecting its social and economic status [14. P. 169].

What is the role of resilience in teacher effectiveness? Gu & Day investigated this topic 15 years ago. They considered teaching as an emotional practice. And they understood teachers' resilience as a "multidimensional, socially constructed concept that is relative, dynamic, and developmental" [4]. The main findings are the following: "Teachers' capacity to manage such interactions is a sophisticated process which contributes strongly to the relative strength of their resilience."

Maria Platsidou and Athena Daniilidou [15] considered teachers' resilience processes, their adaptive behaviour, the feeling of well-being, and the meaning of life. The research "emphasized the important role of the presence of meaning in strengthening resilient responses; also, searching for meaning, when combined with a high sense of meaning, relates to better use of the resilience protective factors and resources."

The other researchers confirmed an important connection between the teachers' resilience with self-confidence [16], the highest level of well-being and job satisfactithe on, lowest level of burnothe ut, highest level of self-esteem, self-care, emotional intelligence and optimism, emotional intelligence [10], absence of mobbing [17], level of happiness [18], less depression, anxiety, and stress [19]; emotional intelligence (awareness of own emotions and others' emotions, expressiveness of own emotions effectively and controlling them, forming strong empathetic relationships with people). Although the concept of teacher resilience and teacher well-being are intertwining in the research and in the teacher's professional experience and doing, it is necessary to differentiate them [3]. Teachers' well-being is a

positive emotional state, which is the result of harmony between the sum of specific environmental factors on the one hand, and the personal needs and expectations of teachers on the other hand [9, p. 44].

Current research emphasizes that both individual and environmental factors are important for teacher resilience. There are some conceptions integrated as the "theory of teachers' resilience". In the comparison with the theory, Drew & Sosnowski [20] recognized that: resilient teachers are looking for support in their school communities; they embrace non-expected negative experiences as the useful experienced learning; they use relationships with teaching staff (teaching colleagues), students, and school principals to endure challenges and overcome stressful situations.

What contributes to the teacher's resilience? One of the issues considered the concept of "lived in resilience" (Fig. 1; [11]), and the other emphasized the importance of resilient culture, school resilient culture. etc.
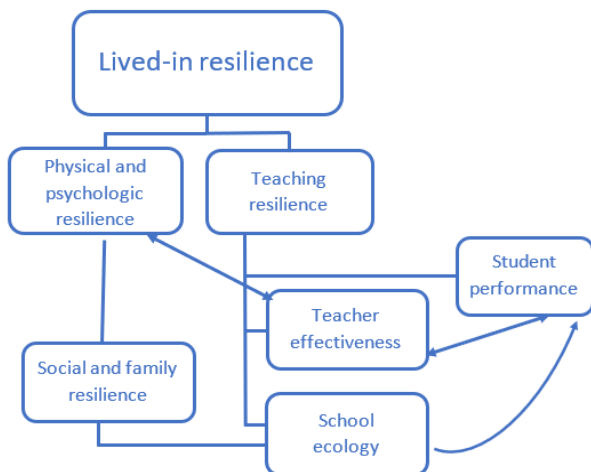
Figure 1. Resilience living framework for teachers (adapted according to [11, p. 272]

Teacher resilience "fluctuate[s] as a result of the influences of the personal, relational and organizational settings in which they work" [21, p. 1304]. Research on the resilience of teachers at different educational levels (from pre-primary education to higher education) considered the specificities of their resilience.

Relevant research of the resilience of teachers in different educational levels (from pre-primary education to higher education) considered the specificities of their resilience.

In the research on the protective factors associated with resiliency among teachers in elementary special education in Jakarta, two protective factors were discovered: self-compassion and self-esteem, which contribute 33.1% to resilience in the elementary special education [22].

Analysis of the data about associations among preschool teachers' positive emotions, negative emotions, psychological resilience, and work stress, realized with Taiwan preschool teachers [23] obtained the following conclusions: positive emotions raise preschool teachers' psychological resilience; negative emotions lower preschool teachers' psychological resilience; positive emotions lower preschool teachers' work stress; negative emotions increase preschool teachers' work stress, and positive emotions lower preschool teachers' work stress.

The research on teachers' resilience, teacher perceived stress, self-efficacy, and burnout of Greek primary school teachers confirmed associations between these variables and emphasized the importance of teachers' self-efficacy to predict their resilience as well as their burnout and stress, and that resilience predicts burnout and stress resilience [24].

In the research on resilience and occupational well-being of secondary education teachers in Greece, "teachers' resilience mean was found to be above average and at higher levels than it was reported in other recent research projects'' [9].

One of the research studies on university teachers' resilience, including stress, anguish, and anxiety as a consequence of the COVID-19 pandemic, realized in Latin America [25], showed that the stress of university teachers is high, anxiety is high too, resilience was manifested at a medium-high level, the emotional state of most participants is low, and their resilience response is medium-high.

According to the current approaches and social-ecological approach to resilience, resilience is a process which operates across the individual and their environment. University teaching staff and university students constitute a joint academic community and environment for their growth as individuals and as professionals.

Why is the university teaching staff important in the context of resilient educational settings? Why is the focus of this research on the university teaching staff?

What we know so far from various research is that in order for the teacher to direct a certain behavior, in this case, resilient behavior, it is necessary to develop and manifest the characteristics that should be promoted. Educational, research, management, and work settings at the university make university teachers' profession different from the other teaching professions. The profession of university teachers is also delicate in its dual nature: university teachers are expected to be both teachers and researchers and to meet the criteria of quality university teaching and the criteria of quality scientific production. In addition to all this being related to overall teacher resilience, the current working and living conditions are gravely modified by the pandemic in a time of social crisis, and in that context, teachers' resilience becomes of great importance.

4.   RESEARCH METHODOLOGY

What is the incentive for this research? Resilience is mobilized in times of stress. Although the teaching profession is one of the more stressful professions, the direct incentive for this empirical research is the research on the digital and psychological resilience of the students at the University of Kragujevac developed as a part of the project "Enhancing digital and psychological resilience through peer networking in the online environment in times of crises" (DigiPsyRes [26]).

The main problem investigated in this empirical research is the university teaching staff's resilience and its correlation with perceived stress. The following research questions were selected:

- Are university teachers resilient?
- What are the differences between teaching university staff from different educational fields?
- Are there differences in the resilience and perceived stress between different universities' educational settings or school cultures?

The goals of the research are: to explore the basic level of university teachers' resilience, to define and recognize their perception of stress, and to explore correlations between resilience and perceived stress.

Research variables:

- Resilience is "the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands" (APA Dictionary [13]). It was measured by the Brief Resilience Scale.

- Perceived stress "is the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period". Perceived stress is "a subjective belief about the possibility to control and predict one's life, the frequency of coping with a variety of stressful events, as well as the belief in one's ability to cope with problems" [27, p. 204]. It was measured by the Perceived Stress Scale.

- University staff positions: university teachers (full professors, associate professors, assistant professors, professors of applied studies, lecturers), and university teaching assistants (teaching assistants and similar).

- The field of teaching: university staff in the field of social sciences and humanities; university staff in the field of technology and engineering; university staff of science and mathematics; university staff of the arts; university staff of the biomedical sciences (according to the classification of the HEIs/university educational fields in Serbia).

- University teaching experience: first five years; six and fifteen years; sixteen to twenty-five years; and more than twenty-five years.

Hypothesis:

- The resilience of the university teaching staff is high.
- Their perception of the stress – perceived stress is low.
- The correlation between resilience and perceived stress is negative.
- There are some differences in resilience and perceived stress between university teachers of different educational fields.
- There are certaing differences in resilience and perceived stress between university teachers and university teaching assistants.

The research is based on an exploratory quantitative approach.

Survey polling is used to collect data. The survey was developed using Google Forms. The research instrument (Google questionnaire) consists of two psychological scales (Brief Resilience Scale and Perceived Stress Scale) and general questions.

- BRS – The Brief Resilience Scale was created to assess the perceived ability to bounce back or recover from stress. The instrument was developed by Smith, Dalen, Wiggins, Tooley, Christopher and Bernard [28]. The scale was developed to assess a unitary construct of resilience (one-dimensional or monofactorial scale), including both positively and negatively worded items. It consists of six items (table 2). The respondent takes a response on the five-point scale (from 1 – low resilience to 5 – high resilience).

The metric characteristics of the BRS are confirmed for different populations and different languages: Cronbach's alfa is between 0.71 and 0.83 [29, 30, 31, 32, 33]. Range of the resilience categories: low resilience 1.00-2.99; medium resilience 3.00-4.30; high resilience 4.31-5.00 [34]. It is not a specific instrument to measure a specific dimension of teacher resilience, but it is an instrument to measure the general concept of resilience.

Example of items: *I have a hard time making it through stressful events.*

- PSS – Perceived Stress Scale is a self-reported measure designed to deal with the degree to which situations in an individual's life are appraised as stressful [34]. The instrument was developed by Cohen, Kamarck, and Mermelstein [35]. The 10-item scale is used in the research. The respondent takes a response on a five-point scale (from 1=never to 5=very often). A higher score indicates higher stress.

The PSS-10 has demonstrated adequate reliability coefficients; Cronbach's alpha ranges from 0.75 to 0.91 (cited in [34, p. 108]. The perceived stress scale (PSS-10) reliability and validity were evaluated for different populations and different languages [34].

Example of items: *In the last few months, how often have you found that you could not cope with all the things that you had to do?*

Participants: The sample consists of 100 members of the university teaching staff: 71 university teachers and 29 university teaching assistants from the universities in Serbia: University of Kragujevac, University of Niš and other universities (Tab. 1).

Table 1. *Structure of the participants*

Variables	Subgroups	N/%
Gender	Female	68
	Male	31
	No answer	1
University teaching experience	More than 25 years	16
	16 to 25 years	21
	6 to 15 years	43
	Less than 5 years	20
Teaching/research domains	Social sciences and Humanities	79
	Engineering and technology	18
	Science (nature) and Mathematics	3
Type of university teaching engagements	University teachers	71
	University teaching assistants	29

Research procedure: data were collected between May and June 2022 using Google Forms polling. University teaching staff was informed by an e-mail about the general aim of the research, anonymity of their answers and voluntary participation. Questionnaire completion demands a maximum of 10 minutes.

Descriptive statistical analysis, correlation analysis and ANOVA were used to generate an overview of the university teaching staff resilience and stress perception.

5. RESULTS AND DISCUSSION

The focus of the research on the resilience of university teaching staff and their perceived stress is a descriptive and comparative analysis of these variables.

5.1. Descriptive and correlation analysis

The resilience of the university teaching staff is at a medium-high level (Mbrs=3.06), and perceived stress is low (Mpss=1.86) (Tab. 2, on the next page). The university teaching staff resilience mean was found to be above average and at higher levels than that reported in other comparative research of resilience measured by BRS [9].

Perceived stress among university teaching staff is low. The low scores on the scale imply that most university teaching staff have decreased levels of stress (distress).

In accordance with research organizations, the first two hypotheses on the level of university teaching staff resilience and stress perception are confirmed.

As expected, the correlation between resilience and perceived stress is negative (r=-0.54, p<0.001): increasing resilience is associated with a decrease in stress perception. In accordance with the theoretical conceptualizations and empirical research, the essence of resilient behaviour is to better cope with stress and overcome stress. The other research confirmed the correlation between resilience and perceived stress too: participants with low resilience showed higher scores in perceived stress level (r=-0., p<0.001) [36]; in the other research, the relationship between these variables is statistically significant (r=-0.38; p≤0.001) [37].

The research publications on resilience provide a variety of individual and contextual risk and protective factors. Price et al. [38] confirmed that personal factors, such as strong self-efficacy, high motivation, moral purpose, flexibility, and sense of humour, as well as contextual factors, such as an effective administrative team and supportive peers, have been suggested as some of the most powerful characteristics that distinguish resilient teachers. Most of these factors (both personal and contextual) are recognized in the university teaching staff work settings.

Table 2. *University teaching staff's resilience and perceived stress – scores on BRS and PSS*

	Minimum	Maximum	M	SD	Kurtosis	Skewnes
Resilience: BRS (Sum/6)	1.50	4.67	3.06	0.74	-0,517	-0.108
Perceived stress: PSS. (Sum/10)	0.90	3.50	1.86	0.59	0.167	0,749

Compliant with the conceptualization of resilience as "the capacity to overcome odds and demonstrate the personal strengths needed to cope with hardship or adversity" [9, p. 43]) , perhaps the university teaching staff has conditions for strengthening personal capacities, especially self-

efficacy, through their professional engagement. Personal and environmental characteristics (interaction in the triangle of university teacher–students–colleagues is one of the most important) are proposed to function as protective factors that mitigate the negative impact of stressful events, situations or conditions.

In the comparison with the research on resilience and stress of academic medical staff in Serbia [39], there are some similarities and some differences.

The results of both studies on the resilience of academic staff are similar: in our research Mbrs=3.06; in cited research Mbrs=3.42, with similar standard deviations in both studies.

At the other study of resilience as moderator factor of the association between burnout and subjective well-being among medical workers at the time of the pandemic, the results confirmed that resilience reduces the negative connection between burnout and subjective well-being [40].

Perceived stress (measured by PSS) in our study is lower than the measured perception of stress in cited research, which is higher: in our research Mpss=1.86, in cited research Mpss=3.17. The participants of these studies differ: university teaching staff from different educational and research fields and medical academic staff.

In the research on teachers' perceived stress and experience in online teaching during the early phase of the COVID-19 pandemic [27], the score of the school teachers on PSS is similar (Mpss=17.92/10=1.79) to the score of university teaching staff in our study.

One of the reasons for differences in perceived stress may be the time of the research: the cited study [40], was conducted at the start of the pandemic and dealt with medical academic staff, whereas our study was conducted two years later in different health and work settings and with university teaching staff from various professions.

5.2. Comparison of the subgroups

Based on differences between some teacher groups and sub-populations [7], the differences between university teachers and university teaching assistants, then university teaching staff with different teaching experiences and university staff gender are assumed in this research.

Two main subgroups of the participants in the research – university teachers and university teaching assistants – have different perceptions of stress (Tab. 3). It is a statistically significant difference (p<0.05).

University teachers are more resilient than university teaching assistants. However, the results are not independent of the age of the participants, which is the topic for the following research. Most university teachers are older than 35 years, and

most of the university teaching assistants are younger than 35 years.

Table 3. *Different teaching status and resilience and perceived stress – scores on BRS and PSS*

Variables	University teachers	Teaching assistant	F	
	M	**M**	**F**	**sig**
Resilience (BRS)	3,15	2.84	3.806	0.054
Perceived stress (PSS)	1.77	2.09	6.479	0.012*
N	71	29		*p<0.05

Data analysis showed that there are no differences between the other subgroups of university teaching staff:

- University teaching staff with different teaching experiences (years of university teaching experience) do not differ in the level o resilience (F=0.767, p=0.516) and perceived stress (F=1.426, p=0.242).
- Different research and educational fields of teaching are not reflected in their resilience (F=0.009, p=0.991) and perceived stress (F=0,129, p=0.880).
- There are no gender differences in resilience (F=0.125, p=0.833) and perceived stress (F=0.435, p=0.648) in the group of university teaching staff.

These findings may be a consequence of the similar educational contexts — university educational settings – where all of them work.

6. CONCLUSION

The university teaching staff's resilience is at a medium-high level, and their perceived stress is low. As expected, their resilience is negatively associated with perceived stress.

The type of the sample (it is not a representative sample), using procedures for data collection (Google forms and online surveys are not reliable procedures), and the number of items in both scales are the limitations of this research

What is the next step in the analysis of university teachers' resilience? Based on the confirmation that the university teaching staff, especially university teachers, have moderately high resilience and low perceived stress, research on the supportive factors for strong resilience and overcoming stress of the highly educated professionals suggests the following steps — to recognize factors of high resiliency and to use these findings and positive practice for empowering university staff continually.

This study introduces new research topics and considerations in the contexts of teacher education and university activities aimed at enhancing university teaching staff resilience, stress management, and well-being.

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REFERENCES

[1] Fragulela Collar, A., & Rosas Colín, C. P. (2021). Rethinking teacher competencies of the 21st century. *ACADEMIA Letters*. Article 2744. https://doi.org/10.20935/AL2744

[2] Mansfield, C. F. (ed). (2020). *Cultivating Teacher Resilience. International Approaches, Applications and Impact*. Springer.

[3] Hascher, T., Beltman, S., & Mansfield, C. (2021). Teacher wellbeing and resilience: toward an integrative model. *Education Research*, *63*(4), 416–439. DOI: 10.1080/00131881.2021.1980416

[4] Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education*, *23*, 1302–1316. doi: 10.1016/j.tate.2006.06.006

[5] Liu, Y., & Huang, X. (2021), Effects of Basic Psychological Needs on Resilience: A Human Agency model. *Frontiers in Psychology.* 12:500035. doi: 10.3389/fpsyg.2021.700035

[6] Kinay, I., Süer, S., & Altindağ Kumaş O. (2021). Investigating Relationship between Teachers Psychological Resilience and Student Related Social Stress. *Elektronik Sosyal Bilimler Dergisi /Electronic Journal of Social Sciences*, 20(77), 121–133. DOI:10.17755/esosder.729371

[7] Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, *6*(3), 185–207. doi: 10.1016/j.edurev.2011.09.001

[8] Tait, M. (2008). Resilience as a contributor to novice teacher success, commitment, and retention. *Teacher Education Quarterly,* Fall 2008, 57–75. https://files.eric.ed.gov/fulltext/EJ838701.pdf

[9] Brouskeli, V., Kaltsi, V., & Loumakou, M. (2018). Resilience and occupational well-being of secondary education teachers in Greece. *Issues in Educational Research*, *28*(1), 43–60. https://www.iier.org.au/iier28/brouskeli.pdf

[10] Ainsworth, S. & Oldfield, J. (2019). Quantifying teacher resilience: Context Matters. *Teaching and Teacher Education*. 2019(82), 117-128.

[11] Boon, H. J. (2021). Teachers' resilience: conceived, perceived or lived-in. In: Mansfield, C.F. (eds). *Cultivating Teacher Resilience.* Springer, Singapore.

[12] Cherry, K. (2021). Resilience. Verywellmind. https://www.verywellmind.com/what-is-resilience-2795059

[13] APA Dictionary. Resilience. https://dictionary.apa.org/resilience

[14] Flores, M. A. (2018). Teacher resilience in adverse contexts: issues of professionalism and professional identity. In M. Wosnitza, F. Peixoto, S. Beltman & C. F. Mansfield (Eds). *Resilience in Education. Concepts, Contexts and Connections* (pp. 167–184). Cham: Springer.

[15] Platsidu, M., & Daniilidou, A. (2021). Meaning in life and resilience among teachers. *Journal of Positive Psychology and Wellbeing, 5*(2).

[16] Lawrence, D. (1999*). Teaching with Confidence: A Guide to Enhancing Teacher Self-Esteem.* Thousand Oaks: Paul Chapman.

[17] Arslantaş, H İ., İnandi, Y., & Ataş, M. (2021), The relationship between mobbing towards teachers and psychological resilience in educational institutions. *Education Quarterly Reviews*, *4*(1), 39–49. DOI: 10.31014/aior.1993.04.01.171

[18] Ulukan, H., & Ulukan, M. (2021). Investigation of the relationship between psychological resilience, patience and happiness levels of physical education teachers. *International Journal of Educational Methodology*, 7(2), 335-351. https://doi.org/10.12973/ijem.7.2.335

[19] Ratanasiripong, P., China, T., Ratanasiripong, N. T., & Toyama, S. (2021). Resiliency and mental health of school teachers in Okinawa. *Journal of Health Research*, *35*(6), 470–481. DOI: 10.1108/JHR-11-2019-0248

[20] 20 Drew, S. V., & Sosnowski, C. (2019). Emerging theory of teacher resilience: a situational analysis. *English Teaching: Practice & Critique*, 18(4), 492–507. https://doi.org/10.1108/ETPC-12-2018-0118

[21] Gu, Q., & Day, C. (2013). Challenges to teacher resilience: conditions count. *British Educational Research Journa*l, *39*(1), 22–44. http://dx.doi.org/10.1080/01411926.2011.623152 https://www.jstor.org/stable/24464800

[22] Akbar, Z., & Mauna, M. (2020). Protective factors for teacher resilience in elementary special education. *Proceedings he 2st National Conference on Education, Social Sciences and Humanities*, Vol. 2. Mataram, Indonesia. https://journal-center.litpam.com/index.php/essh/article/view/341

[23] Chou, M-J., Lee, H-M., & Wu, H-T. (2016). Emotion, psychological resilience and work stress: A study among preschool teachers. *European Journal of Psychological Research*, *3*(1), 8–15.

[24] Daniilidou, A., Platsidou, M., & Godina, S.E. (2020). Primary school teachers' resilience: Association with teacher self-efficacy, burn-out and stress. *Electronic Journal of Research in Educational Psychology*, *18*(3), 549–582.

[25] Casimiro Urcos, W. H., Casimori Urcos, C. N., Barbachan Ruales, E. A., & Casimiro Urcos, J. F. (2020). Stress, Anguish, Anxiety and Resilience of University Teachers in the Face of Covid-19. *ARTÍCULOS: UTOPÍA Y PRAXIS LATINOAMERICANA. 25*(7), 453–464.

[26] DigiPsyRes [14] DigiPsyRes. Enhancing digital and psychological resilience through peer networking in the online environment in times of crises. ERASMUS+ cooperation partnership project (2021-1-RS01- KA220-HED000032204). EACEA. Available on https://digipsyres.kg.ac.rs/

[27] Beara, M., Rakić-Bajić, G., & Hinić, D. (2021). Teachersć perceived stress and experience in online teaching during the early phase of the COVID-19 pandemic. *Psihološka istraživanja*, XXIV(2), 201–215. DOI: 10.5937/PSISTRA24-32741
https://doi.org/10.1007/978-981-15-5963-1_16

[28] Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International journal of behavioral medicine, 15*(3), 194-200.

[29] Fung, S. F. (2020). Validity of the Brief Resilience Scale and Brief Resilient Coping Scale in a Chinese Sample. *International Journal of Environmental Res Public Health*. 17(4):1265. doi:10.3390/ijerph17041265

[30] Jacobs, I., & Horsch, A. (2019). Psychometric Properties of the French Brief Resilience Scale. *European Journal of Health Psychology*, *26*(19, 1–9. https://doi.org/10.1027/2512-8442/a000022

[31] Konaszewski, K., Niesiobędzka, M., & Surzykiewicz, J. (2020). Validation of the Polish version of the Brief Resilience Scale (BRS). *PLoS ONE 15*(8): e0237038. https://doi.org/10.1371/journal.pone.0237038

[32] Rodríguez-Rey, R., Alonso-Tapia, J., & Hernansaiz-Garrido, H. (2016). Reliability and validity of the Brief Resilience Scale (BRS) Spanish Version. *Psychological Assessment, 28*(5), e101–e110. https://doi.org/10.1037/pas0000191

[33] Slišković A, & Burić I. (2018). Brief Resilience Scale. In A. Slišković, I. Burić, Ć.C. Adorić, M. Nikolić, T.I. Junaković (eds). *Collection of psychological scales and questionnaires, Vol.* 9, 7–12. Zadar: Sveučilište u Zadru. (Croatian)

[34] Smith, B.W., Epstein, E.E., Oritz, J.A., Christopher, P.K., & Tooley, E.M. (2013). The Foundations of Resilience: What are the critical resources for bouncing back from stress? In Prince-Embury, S. & Saklofske, D.H. (Eds.), Resilience in children, adolescents, and adults: Translating research into practice, The Springer series on human exceptionality (pp. 167-187). New York, NY: Springer.

[35] Reis, R. S., & Ferreira Hino, A. A. (2010). Perceived Stress Scale: Reliability and Validity Study in Brazil. *Journal of Health Psychology*, *15*(1), 107–114. DOI: 10.1177/1359105309346343

[36] Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behaviour, 24*(December), 385–396. https://doi.org/10.2307/2136404

[37] García-León, M. Á., Pérez-Mármol, J.M., Gonzalez-Pérez, R., García-Ríos, M.D.C., Peralta-Ramírez, M. I. (2019). Relationship between resilience and stress: Perceived stress, stressful life events, HPA axis response during a stressful task and hair cortisol. *Physiological Behaviour*, *1*(202), 87–93. doi: 10.1016/j.physbeh.2019.02.001.

[38] Pourafzal, F., Seyedfatemi, N., Inanloo, M., & Haghani, H. (2013). Relationship between Perceived Stress with Resilience among Undergraduate Nursing Students. *HAYAT,19*(1), 1-12.

[39] Price, A., Mansfield, C., & McConney, A. (2012). Considering "teacher resilience" from critical discourse and labour process theory perspectives. *British Journal of Sociology of Education*, 33(1) 81–95. https://doi.org/10.1080/01425692.2011.614748

[40] Ignjatović Ristić, D., Hinić, D., Branković, D., Kočović, A., Ristić, I., Rosić, G. et al. (2020). Levels of stress and resilience related to the COVID-pandemic among academic medical staff in Serbia. PCN Psychiatry and Clinical Neurosciences, 74(11) 604-605.https://doi.org/10.1111/pcn.13124

[41] Safiye, T., Vukćević, B., & Čabarkapa, M. (2021). Resilience as a moderator in the relationship between burnout and subjective well-being among medical workers in Serbia during the COVID-19 pandemic. *Vojnosanitetski pregled, 78(11),* 1207-1213. Doi: 10.2298/VSP210517070"