

Original Scientific Paper

УДК: 159.944.4.072/.075-057.875(497.11)

159.9.072.59

doi: 10.5937/zrffp53-45495

VALIDATION OF THE PROACTIVE COPING INVENTORY ON SERBIAN UNIVERSITY STUDENTS

Dragana Z. STANOJEVIĆ¹

Emilija U. POPOVIĆ²

University of Priština in Kosovska Mitrovica

Faculty of Philosophy

Department of Psychology

Branislava M. DILPARIĆ³

University of Priština in Kosovska Mitrovica

Faculty of Philosophy

Department of English Language and Literature

¹ dragana.stanojevic@pr.ac.rs

² emapopovic97@outlook.com

³ branislava.dilparic@pr.ac.rs

Received: July 13, 2023
Accepted: September 29, 2023

VALIDATION OF THE PROACTIVE COPING INVENTORY ON SERBIAN UNIVERSITY STUDENTS⁴

Keywords:
PROACTIVE
coping inventory;
Serbian version;
university students;
validation.

Abstract. The existing literature recognizes the importance of studying proactive coping among university students. There are two different conceptualizations of proactive coping, one by Aspinwall and Taylor (1997) and the other by Greenglass et al. (1999). To date, the Proactive Coping Inventory (Greenglass et al., 1999) is the most frequently used instrument that measures this concept. However, the main aim of the present study was to investigate the psychometric properties of a newly developed measure, the PROACTIVE coping inventory (Tian et al., 2023). The translation process of the PROACTIVE coping inventory followed the back-translation procedure. A series of questionnaires were completed online and a total of 171 respondents were included in the final sample. The age of the respondents ranged from 18 to 26; three quarters of them were female. Confirmatory factor analysis revealed that the Serbian version of the PROACTIVE coping inventory matched the original factor solution ($\chi^2(df) = 202.350 (129)$, $p = .000$, $\chi^2/df = 1.569$, $CFI = .920$, $TLI = .908$, $RMSEA = .053$). The active preparation, ineffective preparation, and self-management subscales showed good internal consistency (Cronbach α : .76, .73 and .73 respectively), while the utilization of social resources subscale had a lower but acceptable $\alpha = .66$. The correlation analysis showed good convergent validity for all subscales except for ineffective preparation. The results obtained, the limitations of the study, and the need for future research have been discussed.

⁴ This research was supported by the Ministry of Science, Technological Development, and Innovation of the Republic of Serbia (Contract No. 451-03-47/2023-01/200184).

Introduction

Proactive Coping. People tend to think that we can handle stress once it occurs. In this case, we assess the stressors, their relevance, intensity, significance, and controllability, and take action to address the threat or challenge. However, we do not have to wait until something happens but can prepare for future risks or opportunities.

People make different efforts to prevent and/or minimize the negative outcomes of future stressors. Aspinwall and Taylor (1997) refer to these coping strategies as proactive coping. Although some events such as the death of a family member or natural disasters cannot be prevented, a person can take some steps to prepare for their consequences. According to Aspinwall and Taylor (1997), people who cope proactively have to accumulate resources, recognize potential stressors, make initial assessments, take coping efforts, and elicit and use feedback. Recognition of potential stressors at an early stage may lessen the development of these stressors through increased options to divert them. Proactive coping can decrease the stress provoked by a future event, provide a broader range of coping actions, and minimize the effects of the unexpected (Aspinwall & Taylor, 1997). The main suspicion about proactive coping is related to the possibility that an expected future event might never come; a person can take many efforts to affect something that never happens and be exhausted for something that they need to do.

Schwarzer and Taubert (2002) distinguish between preventive and proactive coping. According to them, preventive coping aims to prepare a person for distant uncertainty. This suggests that the “proactive” coping strategies defined by Aspinwall and Taylor (1997) are consistent with the concept of preventive coping (Greenglass et al., 1999; Schwarzer & Taubert, 2002). On the other hand, proactive coping can be seen as goal management rather than risk management (Schwarzer & Taubert, 2002). The main goal is for a person to build general resilience that leads to less stress in the future, minimizing the impact of stressful events and ultimately reducing the likelihood of their occurrence. Proactive people actively create opportunities for personal growth and strive for a better and more progressive life. Future events are recognized as opportunities and

possibilities for improvement. Greenglass (2000) describes proactive coping as a multidimensional concept that combines the maintenance of quality of life with self-regulatory processes of goal attainment. However, both preventive and proactive coping concepts are characterized by a person's future-oriented efforts to identify and overcome potential challenges (Stanojević, 2009).

Previous Research on Proactive Coping. Proactive coping has been the subject of research for over two decades. Several studies have been conducted in different countries. Proactive coping has been found to be positively correlated with relevant positive aspects of psychosocial functioning. In Germany, proactive coping was found to be correlated with perceived self-efficacy and higher perceptions of challenges in the teacher sample (Schwarzer & Taubert, 2002). In Canada, proactive coping of workers positively correlated with life satisfaction and fair treatment (Greenglass, 2000), and social support (Greenglass et al., 2006). Russian students who coped proactively had a more positive future orientation (Bekhter et al., 2021). Proactive coping was correlated with work productivity in China (Chang et al., 2021) and Indonesia (Efendi & Anindita, 2022) as well as with positive work stress outcomes in a sample of Costa Rica workers (Gutiérrez-Doña, 2002). One research conducted on medical workers in Slovakia showed that proactive coping was correlated with a sense of coherence (Ruiselova, 2011). These findings imply a significant positive role of proactive coping in work and university settings. Consistent with that conclusion, research from Canada showed that proactive coping was negatively correlated with anger, depression, emotional exhaustion, cynicism (Greenglass, 2000), and functional incompetence (Greenglass, 2006). In Indonesia, a negative relationship was found between proactive coping and borderline personality (Wibhowo et al., 2019), and in Germany, with procrastination (Schwarzer & Taubert, 2002).

There have been only a few studies examining proactive coping in Serbia. The studies conducted on samples of university students found that proactive coping was positively correlated with hope, a sense of life and life satisfaction (Randelović & Minić, 2012; Stanojević et al., 2014), and social support (Stanojević et al., 2014). Negative correlations, on the other hand, were obtained with depression in a sample of students (Manić et al., 2017) and university students (Stanojević et al., 2014).

New Measure of Proactive Coping. Although there is a considerable amount of research on proactive coping, the Proactive Coping Inventory (Greenglass et al., 1999) with its two "future-oriented" coping subscales, i.e., proactive and preventive coping, has been the most frequently used scale to measure these coping strategies. This year, however, a new instrument was published that differs significantly from the earlier measures—the PROACTIVE coping inventory (PCI; Tian et al., 2023). With its four completely new subscales and a very rigorous methodology for conceptualizing and developing the scale, the PCI could be a very useful tool for studying proactive coping strategies among university students. As a starting point for the focus-group method of item

elicitation, Tian et al. (2023) used the concept of proactive coping proposed by Aspinwall and Taylor (1997) and defined four domains:

1. Active preparation: activities and strategies that people use to prepare for potential stressors in the future. Examples of this type of behaviour include seeking support, making plans, and collecting resources with the aim of identifying, preventing, and preparing for future disturbance.

2. Ineffective preparation: efforts in dealing with some potential problems and difficulties that can be described as “ineffective”. Individuals with high scores in this domain perceive their failure to anticipate and cope with future stressors.

3. Self-management: mental strategies aimed at maintaining flexibility, faith, optimism, etc. in relation to future stressors. These self-regulatory activities are intended to maintain a positive state despite potential problems.

4. Utilization of social resources: activities aimed at building social networks and capacities and identifying and using social resources that can be important tools for coping with problems in the future.

The conceptualization of proactive coping proposed by Tian et al. (2023) gives us the opportunity to understand strategies used by university students to face some potential future threats in a new way. Exploratory and confirmatory analyses were performed and both provided evidence for the initially conceptualized four-factor solution (Tian et al., 2023). The subscales of the PCI showed to be reliable with Cronbach α above .70 for three subscales, and .67 for active preparation. The PCI showed good concurrent and incremental validity, so we can conclude that it is a psychometrically sound scale for college students in the USA. According to Tian et al. (2023), individuals with higher scores in active preparation, self-management, and utilization of social resources have higher levels of problem-solving ability, life satisfaction, optimism, and positive future-oriented thoughts. They also have lower levels of negative future-oriented thoughts. On the other hand, respondents with high scores in ineffective preparation show an opposite correlation with the above indicators of positive functioning.

The starting point of the present study was that proactive coping is an important aspect of preparation for life's challenges, especially for young people such as university students. Although this importance has been recognized in the relevant literature, a sound empirical approach is lacking. The concept of proactive coping proposed by Tian et al. (2023) may be a useful tool to describe and measure the future-oriented coping strategies of university students in Serbia. Considering that the PCI was developed and validated on a sample of college students in the USA and that there may be significant cultural differences between them and university students in Serbia, we designed a study to determine whether the PCI can be used as a valid and reliable measure in Serbia as well. It should be noted that the social and cultural contexts in which college students study in the USA and in Serbia may differ in many aspects (student loan repayment, larger scholarships, greater individuality, degree of separation from family).

In Serbia, public universities are more popular than private ones and scholarships are significantly lower than those in the USA; student loans are very small and students have to rely on parental financial support. Serbia is a low-developed country and university students encounter many uncertainties about their future jobs and income. For the above reasons, cross-cultural validation is needed if the PCI is to be used as an appropriate measure for Serbian students.

The Purposes of the Present Study. The first aim of this study was to test the four-factor structure of the instrument for measuring proactive coping for university students, the PROACTIVE coping inventory (Tian et al., 2023), which was translated into Serbian by confirmatory factor analysis (maximum likelihood estimation). The second aim was to determine the reliability (Cronbach α) of the obtained factors. Finally, the third aim was to examine convergent validity of the PROACTIVE coping inventory by investigating the relations of its subscales with the two subscales of the Proactive Coping Inventory (Greenglass et al., 1999), namely proactive and preventive coping.

Method

Participants and Procedure. Participants were recruited through the snowball-sampling method (Goodman, 1961). The sample consisted of 171 university students who completed an online questionnaire. The link which directed participants to the Google Forms was distributed via social networks (Facebook and Instagram). Before they could start completing the questionnaire, the respondents had to give their informed consent by ticking the appropriate boxes. Their participation was anonymous and voluntary, without any compensation. The questionnaire consisted of a few questions about demographic data (age, gender, and university), the PCI (Tian et al., 2023), and the proactive and preventive coping subscales of the Proactive Coping Inventory (Greenglass et al., 1999). 76% of the respondents were female. The mean age was $M = 21.72$ ($SD = 2.04$, $min = 18$, $max = 26$). The sample consisted of students from the University of Priština in Kosovska Mitrovica (40%), the University of Belgrade (35%), and the State University of Novi Pazar (25%).

Measurements. The PROACTIVE coping inventory (Tian et al., 2023) was developed for the population of university students in the USA. The authors of the PCI followed a very rigorous scale development process and obtained the final instrument with 19 items and four factors (subscales): active preparation, ineffective preparation, self-management, and utilization of social resources. The response options correspond to a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Before we started this research, we had obtained permission to translate/adapt and use the PCI from the first author of the original scale. In translating the PCI into Serbian, a back-translation procedure was carried out with two English-speaking translators and two Serbian psychologists fluent in

English. In the first step, the scale was translated by an English translator and a psychologist checked whether the items retained their original meaning. In the second step, the second translator translated the Serbian items into English. The second psychologist also compared the original and translated English versions of the scale and concluded that there were no significant differences. We accepted the Serbian translation (see Appendix 1) as suitable for further study. In the original study, the authors determined the following Cronbach alphas: active preparation $\alpha = .67$ (6 items); ineffective preparation $\alpha = .74$ (5 items); self-management $\alpha = .73$ (4 items); and utilization of social resources $\alpha = .70$ (4 items). Since the main objective of the present study is to investigate the factor structure of this scale, the Cronbach alphas obtained in this research are reported under Results. The PCI also showed very good concurrent and incremental validity; its subscales had small to moderate correlations with measures of positive functioning (optimism, future-oriented thoughts, life satisfaction and problem solving) and significantly increased the predictive power of life satisfaction (Tian et al., 2023).

The Proactive Coping Inventory (Greenglass et al., 1999) consists of seven subscales: proactive coping, preventive coping, reflective coping, strategic planning, seeking emotional support, seeking instrumental support and avoidance coping. This inventory has already been translated into Serbian (Djordjevic & Greenglass, 2006) and is widely used among the Serbian population. For this study, we used only the first two subscales, i.e., proactive and preventive coping. While preventive coping reflects strategies which deal with potential future stressors, proactive coping focuses on future goals and opportunities rather than risks. The proactive and preventive coping subscales are used in many studies. While findings about their factor solution are inconsistent, other validity data are satisfactory. Both subscales are positively correlated with job satisfaction, self-efficacy, and optimism, and negatively correlated with depression, burnout, and other indicators of psychosocial malfunctioning (Greenglass et al., 1999). Proactive coping includes 14 items and preventive coping includes 10 items. Respondents were asked to answer on a 4-point Likert scale, where 1 means 'completely not true' and 4 means 'completely true'. Internal consistency of the proactive coping scale in Canadian and Polish-Canadian samples was $\alpha = .85$ and $\alpha = .80$, and regarding preventive coping authors reported "good reliability", without exact data. In the present study, the Cronbach alpha for proactive coping was $\alpha = .79$ and for preventive coping $\alpha = .82$.

Data Analyses. The factor structure of the Serbian version of the PCI was tested by performing confirmatory factor analysis (CFA). To determine whether the proposed model fitted the data well, we calculated the following fit indices: the relative χ^2 (χ^2/df) with values that should not exceed 5 (a value of 2–3 is good); CFI, which should be above .90 (preferably above .95); TLI, which should be above .90 (preferably above .95); and RMSEA with a value up to .10

as tolerated (preferably less than .06) (Šram, 2014). To examine the reliability of the subscales of the PCI, we calculated Cronbach α coefficients. To test the convergent validity of the PCI, we calculated Pearson's r between its subscales and two subscales of the Proactive Coping Inventory (Greenglass et al., 1999), namely proactive and preventive coping. All analyses were conducted using the JASP software (JASP Team, 2021).

Results

Because answers to all items in our set of questionnaires were required, we had no missing data in the final base. Prior to reporting the main data analysis results, we will present the descriptive estimates for all the variables in the present study (Table 1).

Table 1. Descriptive statistics for all variables

	N	Minimum	Maximum	Mean (*)	SD	Skewness	Kurtosis
Active preparation	171	6.00	30.00	20.04 (3,34)	4.98	-.473	-.039
Ineffective preparation	171	5.00	25.00	15.31 (3,06)	4.29	-.048	-.388
Self-management	171	4.00	20.00	14.00 (3,50)	3.58	-.732	.343
Utilization of social resources	171	4.00	20.00	13.77 (3,44)	3.29	-.687	.660
Proactive coping	171	22.00	56.00	42.33 (3,02)	6.13	-.625	.632
Preventive coping	171	12.00	40.00	27.97 (2,79)	5.69	-.149	.071

*Divided by number of items

Values of skewness and kurtosis show a normal distribution of obtained measures (Pallant, 2009). Mean values are about averages, except for proactive coping which is somewhat higher.

To examine the factor structure of the Serbian version of the PCI, we conducted a confirmatory factor analysis (CFA). According to the original scale solution, we created a model with four factors: active preparation (with 6 items); ineffective preparation (with 5 items); self-management (with 4 items); and utilization of social resources (with 4 items). The fit indices of the model tested were roughly acceptable, but not entirely satisfactory. When we considered the Modification Indices option, it was suggested that the model provided a better fit with few correlations between some errors of the observed variables within the same factor. Some modifications were reasonable and we allowed them. We then retested the same model and obtained improved indices with acceptable values. Although the fit indices were not the best, they showed that the factor structure of the Serbian translation of the PCI was consistent with the factor structure of the original instrument. The results are presented in Table 2.

Table 2. Fit indices of the four-factor model of the PROACTIVE coping inventory in the Serbian sample

Significance of fit		Fit index			
$\chi^2(df)$	p	χ^2/df	CFI	TLI	RMSEA
202.350 (129)	.000	1.569	.920	.908	.053

Standardized factor loadings ranged from .37 to .81 in the final four-factor model (Fig. 1). All factor loadings were significant ($p < .001$), indicating that they contributed to the corresponding latent factor as hypothesized. Ineffective preparation was not significantly correlated with the other three factors, while the absolute values of the correlation between active preparation, self-management, and utilization of social resources ranged from .30 to .61. Since none of these values exceeds .80, this means that we can rely on the discriminant validity of the factors.

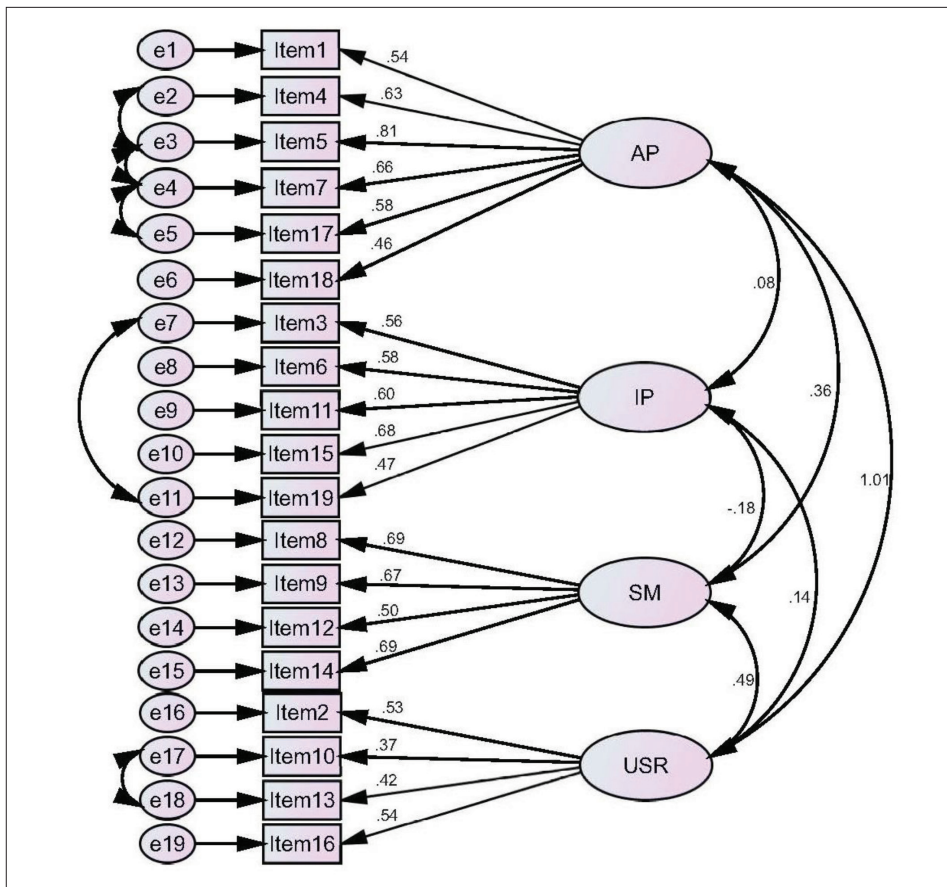


Fig. 1. Model of the Serbian version of the PROACTIVE coping inventory

After confirming that the Serbian version of the PCI has a factor structure that corresponds to the original instrument, we examined the internal consistency of the four factors. The Cronbach alphas are shown in Table 3. As we can see, the first three subscales have good internal consistency, while the fourth has $\alpha = .66$. However, this value is very close to the acceptable α -value, so we decided to use this subscale for future analyses.

Table 3. Values of internal consistency coefficient for four factors of PCI

	Active preparation	Ineffective preparation	Self-management	Utilization of social resources
Cronbach α	.76	.73	.73	.66

To examine the relationships between the subscales of the Serbian version of the PCI and the proactive and preventive coping subscales of the Proactive Coping Inventory (Djordjevic & Greenglass, 2006), we calculated Pearson's correlation. The results are given in Table 4.

Table 4. Correlations between the subscales of PCI and the proactive and preventive coping scales

	Active preparation	Ineffective preparation	Self- management	Utilization of social resources
Proactive coping	.121	.111	.302**	.298**
Preventive coping	.297**	.101	.334**	.351**

** $p < .01$

The statistics presented in Table 4 show that there are significant positive correlations between proactive coping and self-management and between proactive coping and utilization of social resources. These correlations are low to moderate. This means that respondents with higher scores in self-management and utilization of social resources also have higher scores in proactive coping. Active preparation and ineffective preparation, on the other hand, are not correlated with proactive coping strategies. Positive low to moderate correlations were also found between preventive coping and all subscales of the PCI, except for ineffective preparation. This means that respondents with higher scores in active preparation, self-management, and utilization of social resources also have higher scores in preventive coping. Ineffective preparation, however, does not correlate with preventive coping strategies.

Discussion

The aim of the present study was to investigate the validity and reliability of the new measure, the PROACTIVE coping inventory, and its potential use among university students in Serbia. After a careful translation process and data collection, we conducted a confirmatory factor analysis. Fit indices and other estimates proved that the factor structure of the Serbian version of PCI corresponds to the original solution. The fit indices we obtained are not excellent, but only acceptable. However, we decided to make only minor corrections which were reasonable and can be understood as consequences of language use. Thus, we can conclude that the final model tested in the Serbian sample is consistent with the model obtained in the sample of college students from the USA (Tian et al., 2023). It is very important to note that there are significant differences between social and cultural circumstances in Serbia and USA, especially in student's life. It might happen that they need different proactive efforts which university students in Serbia have to take. However, the mean values of PCI subscales in the present study are very similar to the values obtained in the USA. Our findings suggest that proactive coping conceptualized by Tian et al. (2023) is a consistent construct at least across these two countries.

Reliability analysis showed good internal consistency for the first three subscales: active preparation, ineffective preparation, and self-management. The coefficient α for utilization of social resources was .66 which normally casts doubt on the reliability of the scale. Looking at the alphas found in the original study (Tian et al., 2023), we find that only ineffective preparation had a favourable value above .70 ($\alpha = .81$). Self-management and utilization of social resources showed alphas of .69, which is close to a usual lower value, active preparation showed pretty low internal consistency measured with Cronbach $\alpha = .62$ (Tian et al., 2023). However, such low α -coefficients are not uncommon when we use measures of coping strategies.

Tian et al. (2023) reviewed questionnaires such as the Ways of Coping Questionnaire (Folkman & Lazarus, 1985) and the COPE Inventory (Carver et al., 1989) and concluded that their subscales also had internal consistency coefficients of .6 to .8. A newly developed questionnaire, the Proactive Coping Inventory (Greenglass et al., 1999), showed a similar problem. Although the authors of the original English version of the instrument and other researchers (Almássy et al., 2014; Efendi & Anindita, 2022; Vaculíková, 2017) reported good reliability estimates for the Proactive Coping Inventory, some subscales had Cronbach α -values of only about .70, while internal consistency for avoidance coping was unclear or unavailable (Hambrick & McCord, 2010). Greenglass (2002, cited in Đurić, 2017) reported that internal consistency for the subscales of the Proactive Coping Inventory ranged from .64 to .84. It seems that some measures of coping strategies are not stable enough. We can hypothesize some

reasons for their instability. Coping strategies are very broad constructs and can encompass many thoughts, behaviours, and emotions. Also, they can be related to so many different stress situations, both ones that provoke distress or eustress. Items of the utilization of social resources scale are very different and cover a broad range of what people can mean by social resources: experienced people, people they are close with, or social relations in general. However, until we obtain a more reliable measure of utilization of social resources, the subscale offered by Tian et al. (2023) can be used as acceptably reliable.

The correlation analysis showed that self-management and utilization of social resources are positively related to proactive coping. This means that individuals with high self-regulation and social network utilization skills are more likely to achieve their future goals and to recognize and realize the opportunities and challenges of the future. Active preparation and ineffective preparation, on the other hand, are not related to proactive coping strategies. This result is quite surprising, as other researchers found that people with higher levels of active preparation tend to have more positive and optimistic thoughts about their future (Tian et al., 2023). The explanation for our finding might lie in the description of proactive coping as orienting and preparing for distant future goals, while preventive coping refers to the near future (Schwarzer & Luszczynska, 2008). While active preparation means that people do something to better prepare themselves for future stresses, proactive coping stands for building personal skills for all future challenges, regardless of whether they are stressful or offer opportunities (Schwarzer & Taubert, 2002). The lack of correlation between ineffective preparation and proactive coping can be discussed along the same lines, as ineffective preparation measures “coping behaviours dealing with potential stressors” (Tian et al., 2023, p. 15). Ineffective coping, however, is not even correlated with preventive coping. It could be that ineffective coping reflects more negative thoughts about personal abilities to cope with future stressors, while preventive coping reflects concrete actions. For example, “I incorrectly estimate my ability to deal with future stressors” is the typical item for the ineffective preparation subscale, while “Instead of spending every cent I earn, I prefer to save for a rainy day” is the typical item for the preventive coping scale. In the present study, we also found positive correlations between preventive coping and the other three subscales of the PCI. This means that respondents with higher scores in active preparation, self-management and utilization of social resources will be more successful in preventive coping. They will be able to prepare for future stressful events and respond appropriately when they occur. In conclusion, we can see that the subscales of the PCI have more to do with preventive coping than with proactive coping. This is very understandable when we recall that Tian et al. (2023) started the development process of the PCI with the definition of proactive coping offered by Aspinwall and Taylor (1997) and that this concept is more in line with the preventive than proactive coping described by Greenglass et al. (1999).

Limitations of the Study

The main limitation of the present study is the relatively small sample in relation to the objectives of the study. Although 171 respondents can be considered a medium-sized sample, larger samples or multiple studies are preferable for validation studies. The second limitation is that three quarters of the sample were female. Earlier research data about gender differences in proactive coping are not consistent. While several studies showed that gender differences in proactive coping are not found (Lücker et al., 2022; Sollar & Sollarova, 2009), in one research it was reported that women had higher scores (Vaculíková, 2016) and in another higher scores of proactive coping are obtained in men (Greenglass et al., 2006). These variations can lead to suspicions about generalizability of results across Serbian university students with different gender. Considering the fact that the PCI is a new scale based on completely new approach, future studies should be designed in a way to address possible gender issue. Also, our respondents were recruited on voluntary basis without any compensation so it might be that they represent specific body of students' population who are interested in research activities. Their motivation for present research is autonomous and it was proved that this kind of motivation was positively related with proactive coping (Mih et al., 2017). However, future research should include some kind of compensations for students' participation, maybe in coursework credits.

Finally, in the present study, we only examined the factor structure of the PCI and its correlation with proactive and preventive coping (Greenglass et al. 1999) as similar constructs. However, future research should include further investigation of the convergent and discriminant validity of the PCI in Serbian student samples. With evidence about replicated factor structure and good reliability of factors, new concept of proactive coping can be investigated across different samples and with different purposes. The present study can be seen only as a starting position for future broader research with larger and better designed sample, more variables, and stronger statistical analyses which can make our conclusion more reliable.

Conclusion

The Serbian version of the PROACTIVE coping inventory has a factor structure that represents the concept of proactive coping and the solutions of the scale as proposed in the USA sample. In the present study, the subscales of the PCI were found to be reliable, and active preparation, self-management and utilization of social resources showed good convergent validity. The subscale of ineffective preparation needs further investigation. However, we can conclude that the Serbian version of the PCI is a valid and reliable measure for exploring proactive coping strategies in a sample of Serbian university students.

References

- Almássy, Z., Pék, G., Papp, G., Greenglass, E. R. (2014). The Psychometric Properties of the Hungarian Version of the Proactive Coping Inventory: Reliability, Construct Validity and Factor Structure. *International Journal of Psychology and Psychological Therapy*, 14(1), 115–124.
- Aspinwall, L. G. & Taylor, S. E. (1997). A Stitch in Time: Self-Regulation and Proactive Coping. *Psychological Bulletin*, 121(3), 417–436.
- Bekhter, A. A., Gagarin, A. V., Filatova, O. A. (2021). Reactive and Proactive Coping Behaviors in Russian First-Year Students: Diagnostics and Development Opportunities. *RUDN Journal of Psychology and Pedagogics*, 18(1), 85–103.
- Carver, C. S., Scheier, M. F., Weintraub, J. K. (1989). Assessing Coping Strategies: A Theoretically Based Approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
- Chang, Y., Chien, C., Shen, L.-F. (2021). Telecommuting During the Coronavirus Pandemic: Future Time Orientation as a Mediator Between Proactive Coping and Perceived Work Productivity in Two Cultural Samples. *Personality and Individual Differences*, 171, Article 110508.
- Djordjevic, D. & Greenglass, E. R. (2006). Proactive Coping Inventory – Serbian Version. Retrieved February 15, 2023 from: <https://estherg.info.yorku.ca/files/2014/09/SerbianPCI.pdf?x53209>
- Đurić, B. (2017). Razlike u kognitivnim strategijama prevladavanja stresa kod studenata iz Slovenije i Srbije. *Godišnjak za psihologiju*, 14, 35–48.
- Efendi, R. & Anindita, R. (2022). The Role of Proactive Coping and Future Time Orientation on Perceived Work Productivity in Generations Y and Z. *Indonesian Journal of Business and Entrepreneurship (IJBE)*, 8(2), 229–229.
- Folkman, S. & Lazarus, R. S. (1985). If It Changes, It Must Be a Process: Study of Emotion and Coping during Three Stages of a College Examination. *Journal of Personality and Social Psychology*, 48(1), 150–170.
- Goodman, L. A. (1961). Snowball Sampling. *Annals of Mathematical Statistics*, 32, 142–170.
- Greenglass, E., Fiksenbaum, L., Eaton, J. (2006). The Relationship Between Coping, Social Support, Functional Disability and Depression in the Elderly. *Anxiety, Stress, and Coping*, 19(1), 15–31.
- Greenglass, E. R. (2000, July 20–22). *Work Rage and Its Psychological Implications* [Conference presentation]. 21st International STAR Conference, Bratislava, Slovakia.
- Greenglass, E. R. (2002). Proactive Coping. In: E. Frydenberg (Ed.), *Beyond Coping: Meeting Goals, Visions, and Challenges* (37–62). London: Oxford University Press.
- Greenglass, E. R., Schwarzer, R., Jakubiec, D., Fiksenbaum, L., Taubert, S. (1999, July). *The Proactive Coping Inventory (PCI): A Multidimensional Research Instrument* [Conference presentation]. 20th International Conference of the Stress and Anxiety Research Society (STAR), Cracow, Poland.
- Gutiérrez Doña, E. B. (2002). *Coping with Stress at Work: A Longitudinal Study on Health Outcomes and Quality of Life* [Doctoral dissertation]. Free University of Berlin, Department of Education and Psychology.
- Hambrick, E. P. & McCord, D. M. (2010). Proactive Coping and Its Relation to the Five-Factor Model of Personality. *Individual Differences Research*, 8(2), 67–77.
- JASP Team. (2021). *JASP (0.15)* [Computer software].

- Lücker, P. et al. (2022). Stress, Coping and Considerations of Leaving the Profession – A Cross-Sectional Online Survey of Teachers and School Principals after Two Years of the Pandemic. *International Journal of Environmental Research and Public Health*, 19(23), 16122.
- Manić, S., Janjić, V., Dejanović, S. D., Aleksić, A., Aleksić, Z., Jaredić, B., Krkić, M. (2017). Burnout, Depression and Proactive Coping in Underground Coal Miners in Serbia – Pilot Project. *Serbian Journal of Experimental and Clinical Research*, 18(1), 45–52.
- Mih, V., Mih, C., Dragoş, V. (2017). Proactive Coping, Engagement in Learning and Deep Processing as Mediators Between Autonomous Motivation and Adjustment at School. *Studia Universitatis Babeş-Bolyai, Psychologia-Paedagogia*, 62(1), 27–46.
- Pallant, J. (2009). *SPSS: Priručnik za preživljavanje*. Beograd: Mikro knjiga.
- Randelović, D. & Minić, J. (2012). Predictors of Students' Life Satisfaction. *Engrami*, 34(1), 59–68.
- Ruiselova, Z. (2011). Antonovsky's Sense of Coherence in the Context of Personality and Coping. *Inovacije u nastavi – časopis za savremenu nastavu*, 24(4), 19–34.
- Schwarzer, R. & Luszczynska, A. (2008). Reactive, Anticipatory, Preventive, and Proactive Coping: A Theoretical Distinction. *The Prevention Researcher*, 15(4), 22–25.
- Schwarzer, R. & Taubert, S. (2002). Tenacious Goal Pursuits and Striving toward Personal Growth: Proactive Coping. In: E. Frydenberg (Ed.), *Beyond Coping: Meeting Goals, Visions and Challenges* (19–35). London: Oxford University Press.
- Sollár, T. & Sollarova, E. (2009). Proactive Coping from the Perspective of Age, Gender and Education. *Studia Psychologica*, 51(2–3), 161–165.
- Stanojević, D. (2009). The New Approaches in Investigation of Coping with Stressful Situations. *Zbornik radova Filozofskog fakulteta u Prištini*, 39, 451–465.
- Stanojević, D., Krstić, M., Jaredić, B., Dimitrijević, B. (2014). Proactive Coping as a Mediator Between Resources and Outcomes: A Structural Equations Modeling Analysis. *Applied Research in Quality of Life*, 9, 871–885.
- Šram, Z. (2014). Eksplorativna i konfirmatorna faktorska analiza skale nacionalističkog sindroma (sns-1). *Političke perspektive*, 4 (10), 7–30.
- Tian, L. et al. (2023). A PROACTIVE Coping Scale for U. S. College Students: Initial Evidence and Implications. *Journal of Psychoeducational Assessment*, 41(4), 395–415.
- Vaculíková, J. (2016). Proactive Coping Behavior in Sample of University Students in Helping Professions. *Sociální pedagogika / Social Education*, 4(2), 38–55.
- Vaculíková, J. (2017). Exploring the Multivariate Aspects of the Proactive Coping Inventory. *Turkish Online Journal of Educational Technology, Special Issue for ITEC 2017*, 344–350.
- Wibhowo, C., Retnowati, S., Ul Hasanat, N. (2019). Childhood Trauma, Proactive Coping, and Borderline Personality among Adults. *Research Studies in Psychology*, 8(1), 27–35.

Appendix 1.

Serbian version of the PROACTIVE coping inventory (PCI)
(Serbian: *Инвенџар ПРОАКТИВНОГ њревлaдaвaњa*)

Уџуџсџво. У свакодневном животу не савладавамо само различите задатке и проблеме, већ и размишљамо о томе како да се носимо са будућим стресорима, са оним што нам се може догодити у будућности (нпр. могући интерперсонални сукоби, академски притисак, бриге у вези са каријером, бриге у вези са здрављем, финансијске тешкоће, природне катастрофе и потенцијалне несреће). Овај упитник односи се на твоја размишљања и понашања у вези са потенцијалним стресорима, који се могу догодити у будућности. Прочитај сваку ставку и изабери одговор који најбоље описује твоје мишљење/понашање.

1 – Уопште се не слажем; 2 – Донекле се не слажем; 3 – Нити се слажем нити се не слажем; 4 – Донекле се слажем; 5 – Потпуно се слажем

1	Улажем напоре да схватим који ће ми бити стресори у будућности.	1	2	3	4	5
2	Градим друштвене везе како бих се припремио/ла за будуће стресоре.	1	2	3	4	5
3	Нетачно процењујем своју способност да се носим са будућим стресорима.	1	2	3	4	5
4	„Вежба“ како бих се припремио/ла за будуће стресоре.	1	2	3	4	5
5	Користим своје краткорочне циљеве како бих се припремио/ла за будуће стресове.	1	2	3	4	5
6	Не почињем да се припремам за будуће стресоре све док не постанем врло оптерећен/а њима.	1	2	3	4	5
7	Припремам се за будуће стресоре тако што визуализујем оно што треба да урадим.	1	2	3	4	5
8	Остајем оптимистичан/а у погледу својих шанси док се припремам за будуће стресоре.	1	2	3	4	5
9	Задржавам присебност/смиреност док се припремам за будуће стресоре.	1	2	3	4	5
10	Тражим савет од искусних људи како бих се припремио/ла за будуће стресоре.	1	2	3	4	5
11	Сувише сам окупиран/а садашњим стресорима да бих се припремао/ла за будуће.	1	2	3	4	5
12	Када сам преоптерећен/а будућим стресорима, одвојим време да се побринем за себе.	1	2	3	4	5
13	Тражим подршку од блиских људи како бих се припремио/ла за будуће стресоре.	1	2	3	4	5
14	Нађем време да уживам у садашњем животу и док се припремам за будуће стресоре.	1	2	3	4	5
15	Тешко ми је да нађем начин да се припремим за будуће стресоре.	1	2	3	4	5
16	Сарађујем са људима који се суочавају са сличним будућим стресорима.	1	2	3	4	5
17	Замишљам различите сценарије када се припремам за будуће стресоре.	1	2	3	4	5
18	Скупљам материјална средства (нпр. новац, залихе, алате, опрему) како бих се припремио/ла за будуће стресоре.	1	2	3	4	5
19	Нетачно процењујем утицај будућих стресора.	1	2	3	4	5

Драгана З. СТАНОЈЕВИЋ

Емилија У. ПОПОВИЋ

Универзитет у Приштини са привременим

седиштем у Косовској Митровици

Филозофски факултет

Катедра за психологију

Бранислава М. ДИЛПАРИЋ

Универзитет у Приштини са привременим

седиштем у Косовској Митровици

Филозофски факултет

Катедра за енглески језик и књижевност

Валидација Инвентара ПРОАКТИВНОГ превладавања на узорку студената у Србији

Резиме

За појам превладавања обично се везује стрес који је доживљен или је већ у најави. Међутим, савремена наука препознала је да се људи могу унапред припремити за потенцијалне стресове, али и за изазове и прилике које се могу појавити на животном путу. Такви напори усмерени на припрему за оно са чиме би се појединаца могао сусрести у будућности, а што може представљати ризик или шансу за његово ментално здравље и развој потенцијала, препознати су кроз појам проактивног превладавања. У литератури су позната два приступа сагледавању проактивног превладавања, један, који су понудили Аспинвол и Тејлор (Aspinwall & Taylor, 1997) и други, који су осмислили Гринглас и сарадници (Greenglass et al., 1999). За проучавање проактивног превладавања до сада је коришћена субскала Инвентара проактивног превладавања (Greenglass et al., 1999), која управо носи назив *проактивно превладавање*.

Основни циљ овог истраживања јесте провера психометријских карактеристика (факторске структуре, поузданости и валидности) нове мере која се назива Инвентар ПРОАКТИВНОГ превладавања (ИПП; Tian et al., 2023). Приликом развоја ове скале аутори су пошли од дефиниције проактивног превладавања коју су дали Аспинвол и Тејлор (Aspinwall & Taylor, 2023), па она представља корисну меру којом се операционализује приступ за који, до сада, није постојала адекватна мера. Скала се састоји из четири супскале: активна припрема, неефикасна припрема, управљање собом и коришћење социјалних ресурса. Упитник је најпре преведен поступком повратног превода, а потом је, заједно са субскалама Инвентара проактивног превладавања (Greenglass et al., 1999), које мере проактивно и превентивно превладавање, администриран онлајн. Узорак је сачињен од 171 студента различитих универзитета у Србији, узраста 18–26 година, при чему су три четвртине испитаника чиниле женске особе.

Конфирмативном факторском анализом тестирано је да ли подаци добијени применом српске верзије ИПП одговарају оригиналној структури скале. Добијени су индекси фита који су били релативно близу задовољавајућих, па смо

прегледали индиције за модификацију модела. Повезујући мали број грешака мерења, модел је поново тестиран и постигнути су задовољавајући индекси фита: ($\chi^2(df) = 202.350 (129)$, $p = .000$, $\chi^2/df = 1.569$, $CFI = .920$, $TLI = .908$, $RMSEA = .053$). Супскеале активна припрема, неефикасна припрема и управљање собом показале су добру унутрашњу конзистентност (Кронбахов α : .76, .73, .73 редом), док је супскала коришћења социјалних ресурса имала нижи али прихватљив $\alpha = .66$. Корелациона анализа показала је да постоје значајне позитивне корелације између проактивног превладавања и управљања собом ($r = .302$, $p < .01$), као и коришћења социјалних ресурса ($r = .298$, $p < .01$). Значајне позитивне корелације добијене су и између превентивног превладавања и активне припреме ($r = .297$, $p < .01$), управљања собом ($r = .334$, $p < .01$), као и коришћења социјалних ресурса ($r = .351$, $p < .01$). Између супскеале неефикасна припрема, проактивног и превентивног превладавања нису добијене значајне корелације. Ови резултати нам указују на то да је ИПП мера са адекватним факторским решењем, да је поуздан и валидан инструмент, а да је за субскалу неефикасна припрема пожељно спровести додатна истраживања за проверу конвергентне валидности.

Кључне речи: Инвентар ПРОАКТИВНОГ превладавања; српска верзија; студенти; валидација.



Овај чланак је објављен и дистрибуира се под лиценцом *Creative Commons ауторство-некомерцијално 4.0 међународна* (CC BY-NC 4.0 | <https://creativecommons.org/licenses/by-nc/4.0/>).

This paper is published and distributed under the terms and conditions of the *Creative Commons Attribution-NonCommercial 4.0 International* license (CC BY-NC 4.0 | <https://creativecommons.org/licenses/by-nc/4.0/>).