


Article

Factor Structure and Psychometric Properties of Brief COPE in Russian Schoolteachers

Anna Pavlova ^{1,2}, Julia Marakshina ², Georgy Vasin ², Victoria Ismatullina ², Pavel Kolyasnikov ²,
Timofey Adamovich ², Artem Malykh ², Anna Tabueva ², Ilya Zakharov ², Marina Lobaskova ²
and Sergey Malykh ^{2,3,*}

¹ Center of Modern Childhood, Institute of Education, Higher School of Economics, 101000 Moscow, Russia

² Center of Population Research, Ural Institute of Humanities, Ural Federal University, 620002 Ekaterinburg, Russia

³ Developmental Behavioral Genetics Lab, Psychological Institute of Russian Academy of Education, 125009 Moscow, Russia

* Correspondence: malykhsb@mail.ru

Abstract: This study investigates the psychometric properties of brief COPE in Russian schoolteachers. A total of 773 (91% female; $M = 43$, $SD = 9.79$) teachers participated in the study. Principal component analysis (PCA) and confirmatory factor analysis (CFA) were applied to assess the psychometric properties of the brief COPE. The Perceived Stress Scale (PSS) was used to assess the construct validity. The main result of the current research is a revised structure for the brief COPE consisting of six subscales: «socio-emotional support», «religion», «acceptance», «problem-focused coping», «avoidance», and «humor». The goodness-of-fit criteria were as follows: SRMR = 0.054, RMSEA = 0.064, CFI = 0.888, and TLI = 0.869. Overall, the Russian version of the brief COPE shows acceptable psychometric properties and may be applied by researchers, school administrators, and psychologists; however, the reliability of the “avoidance” scale is doubtful and must be considered before application.

Keywords: brief COPE; coping; psychometric properties; stress; teachers



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1. Introduction

In the literature, stress is described as a person's reaction to stressors or as a conflict between a person and an environmental circumstance [1]. To cope with stress, people may use a variety of conscious and unconscious strategies (coping).

The choice of such a strategy (or strategies) may depend on socioeconomic status, personal traits, personal health, and professional identity. There have been a number of studies devoted to revealing coping specifics in particular social groups, such as pregnant women [2], families in poverty [3], hospital doctors [4], clinical psychologists [5], at-risk parents [6], and competitive athletes [7,8].

Schoolteachers are considered to have one of the most stressful professions [9]. The stress symptoms of schoolteachers are associated specifically with the poor academic performance of their students, difficulties with class management, low professional self-efficacy, burnout [10], school noise [11], work climate, perceived lack of social support [12], problems with student behavior, multiple social roles, and fear of losing their position [13]. The preferred coping strategies differ depending on work experience. Thus, new teachers tend to seek social support, whereas their more experienced colleagues are inclined to choose avoidance and confrontation strategies, demonstrating lower levels of self-control [12]. According to a study of primary schoolteachers [14], a high level of teacher stress predicts maladaptive teacher behavior in the class, and consequently low student academic achievement.

It is important to note that schoolteachers as a professional group have greater specificity compared with, for instance, university tutors. Thus, they serve both educational and mentoring functions; e.g., they translate certain norms, values, traditions, behavioral

patterns, and moral ideas to children [15]. For this reason, particular coping strategies (e.g., alcohol/drug use) may seem totally unacceptable for them, and will provoke negative reactions, as such strategies contradict the norms they are supposed to translate to children. Due to this peculiarity, it seems more productive to consider a coping strategy structure different than that used by other teachers.

There exist several models which describe selected coping strategies.

According to Lazarus and Folkman [16], there are problem-focused coping strategies, i.e., those aimed at eliminating the external source of the stress, and emotion-focused coping strategies, i.e., those associated with emotional regulation. However, it has recently been noticed that a model with only two categories leads to over-simplification of the coping variety [17]. Parker and Endler [18] have developed a three-factor model including task-oriented (intention to solve the problem or minimize its effects; cognitive reconceptualization), emotion-oriented (emotional responses; self-preoccupation; attempt to retreat into fantasy), and avoidance-oriented (self-distraction; substitute activities) coping. Carver et al. have proposed a 13-dimensional coping model with five higher-order scales, as follows: problem-focused coping (including active coping, planning, suppression of competing activities, restraint coping, and seeking social support for instrumental reasons), emotion-focused coping (including seeking social support for emotional reasons, positive reinterpretation and growth, acceptance, denial, and turning to religion), focusing on and venting emotions, behavioral disengagement, and mental disengagement [17]. Various multi-dimensional questionnaires based on the model of Carver et al. have been widely used in recent studies in order to measure stress coping mechanisms for specific social and professional groups, such as caregivers of children with chronic illnesses [19], pregnant African-American women [20], and breast cancer survivors [21].

Various forms of teacher stress intervention may be helpful in reducing these negative outcomes [22–25]. To make them more effective, a preliminary assessment of stress coping among teachers may be useful. In Russia, there exist few instruments to assess coping with stress. Two versions of Carver's questionnaire have been developed for the Russian population, of which the adaptation of Rasskazova et al. has demonstrated higher Cronbach's alpha coefficients, with 15 scales measuring different coping mechanisms [26,27]. In many countries, a brief version of Carver's questionnaire is widely used [21,28–30]; however, it has not yet been validated in a Russian population. The brief version of COPE has a number of advantages compared to the classic version; for example, it takes considerably less time to complete, that participants with busy schedules, such as schoolteachers, to complete the questionnaire more conveniently. In addition, the brief version is much more applicable if COPE is used as part of a large battery of scales measuring various constructs.

There are several variants of the brief COPE [31]. The brief COPE proposed by Carver [32], including 14 scales with two questions per scale, has been widely used. However, its psychometric properties and factor structure are debatable. Several subscales consist of only two items, which makes them unreliable in terms of construct validity [33]. As reported in the recent systematic review by Solberg et al. [31], most studies published between 1997 and 2021 analyzed the structure differently from the original 14-factor one. Furthermore, Carver et al. proposed a factor structure including first-order factors, which may be combined in terms of second-order factors [17].

Therefore, the main objective of the current study is to develop a new brief COPE version based on the approach considering second-order factors. Several of the scales were combined based on the size of their correlations in the correlation matrix presented in the study of Rasskazova et al. [27]. If the correlations were large enough, the scales were integrated. The same approach has been applied in a number of studies on the brief COPE structure [31]. In particular, the specific objectives of this study were: (1) to test the psychometric properties of the brief COPE; (2) to analyze its factor structure; and (3) to evaluate its external validity in a sample of Russian schoolteachers.

2. Materials and Methods

2.1. Participants

A total of 1273 schoolteachers (114 male, 1151 female, 8 unidentified) participated in the research. Their average age was 43 (SD = 10.37) and on average they had 20 years of professional experience (SD = 11.4). The vast majority of participants (875) taught in secondary (grades 5–8) or high school (grades 9–11), 175 in primary school, and 165 in primary/secondary and high schools. The participants completed the Russian version of the COPE scale and the Russian version of the PSS (Perceived Stress Scale).

Before the analysis, both «technical» and «actual» outliers were removed from the sample. Two main stages were performed in order to eliminate outliers. First, «technical» outliers (i.e., those which occurred due to unscrupulous questionnaire completion) were extracted. Four criteria were used to detect «technical» outliers: (1) identical answers for all questions in the questionnaire; (2) total time of questionnaire completion less than 500 s; (3) time for at least one answer less than 3 s; and (4) standard deviation of time for all answers less than 5 or more than 55 s.

Threshold values were chosen based on the distributions of total time, average time for one question, and standard deviation of time (the left peak of a bimodal distribution was removed). In terms of the total time for completion of the questionnaire, the right distribution tail was deleted. After that, Mahalanobis distances for time of completion were calculated. Observations with p values less than 0.01 were removed from the sample. Second, “actual” outliers were eliminated based on the Mahalanobis distances for all answers (i.e., observations exceeding the 0.95 quantile were considered outliers). The final sample included 773 teachers (M = 43, SD = 9.79) with an average of 20 years of professional experience (SD = 11.15). A total of 706 participants were female (91%), 66 were male (9%), and 1 was unidentified. Of the teachers, 539 worked in secondary or high schools, 95 in primary school, and 139 in both.

2.2. Instruments

Coping orientation to problem experienced (COPE), 32 questions. The brief COPE was developed based on the Russian adaptation of Carver’s questionnaire [27]. The Russian translation as performed and tested by Rasskazova et al. was applied in the current study. In the first stage, the scales that were highly correlated with each other were integrated. As a result, six scales were formed: «self-distraction», «active coping» (based on the «active coping», «planning», «self-distraction», «denial», and «suppression of competing activities» scales of the classic COPE), «socio-emotional support» («venting», «seeking emotional support», «seeking instrumental support»), «religion», «positive coping» («positive reinterpretation», «humor»), and «acceptance». For the «self-distraction» and «denial» scales, items were inverted because, as a part of «active coping», they have contradictory meanings. Additionally, the item “I drink alcohol or take drugs in order to think about it less” measuring “substance use” was added, as in Carver’s initial COPE version [17]. In the second stage, for each scale the items with low factor loadings were removed. As a result, each of the six scales consisted of 4–5 items (see Table A1 in Appendix A). The participants were asked what method(s) they had used in the last month when they encountered a difficult situation. Each item had four response options, according to a Likert scale: «never or almost never» = 1, «rarely» = 2, «from time to time» = 3, «very frequently» = 4. Items with opposite meanings were recoded as follows: 1 = 4, 2 = 3, 3 = 2, 4 = 1. The total result for each scale was calculated as an average of the results for the items.

Perceived Stress Scale (PSS), 10 questions. This scale measures self-reported unpredictability and tenseness of life under stressful circumstances. The 10-item scale of Ababkov et al. [34] was used in the current research. The PSS consists of two sub-scales: «overstrain», measuring the level of perceived stress in daily life, and «stress management», measuring the perceived inability to overcome stressful conditions. The total scale assesses the overall distress level. These constructs are measured using a 5-point Likert scale. In our sample, the scales showed an acceptable level of internal consistency: Cronbach’s alpha was 0.86, 0.78, and 0.88 for the

overstrain, stress management, and total scales, respectively. Recent studies have shown that the PSS correlates positively with maladaptive and passive coping strategies (measured by different questionnaires) and negatively with adaptive and active ones [35,36]. In the current study, the PSS was used as an instrument to test the construct validity of the brief COPE, similarly to previous studies [37,38].

2.3. Procedure

Data were collected through the psychodiagnostics online platform DigitalPsyTools (<https://digitalpsytools.ru/>) (accessed on 30 July 2020). Before the survey, consent forms from the school administration were collected. The teachers were asked to complete both the COPE and PSS. They also answered questions about their sex, age, professional experience, and socioeconomic status. The procedure was approved by the ethics committee of the Psychological Institute of the Russian Academy of Education.

2.4. Statistical Analysis

Principal component analysis (PCA), confirmatory factor analysis, descriptive statistics, correlation analysis, and Cronbach's alpha were applied to assess the psychometric properties.

Data analysis was performed using R (version 4.1.2) and Python (version 3). For confirmatory factor analysis, the lavaan R package was used. To assess whether the CFA model fit the empirical data, four metrics were applied [39–42]: the comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root of root mean square residuals (SRMR). TLI and CFI values exceeding 0.9 and RMSEA and SRMR values below 0.08 indicate high model quality [40,42].

Principal component analysis (PCA) was performed with varimax rotation. Pearson's correlation coefficient was used to confirm the construct validity of COPE. To measure the differences between gender groups, *t*-test statistics were implemented. The reliability of the scales was measured using Cronbach's alpha.

3. Results

In the first stage, a dimension reduction approach was applied to reveal the factor structure of COPE; for this purpose, principal component analysis was performed. Six factors were distinguished, as anticipated, based on the correlations of the subscales [27]. The number of factors was chosen based on a scree plot of the eigenvalues (see Figure 1) and the total variance explained (52.8% of the variance was explained by the six-component model).

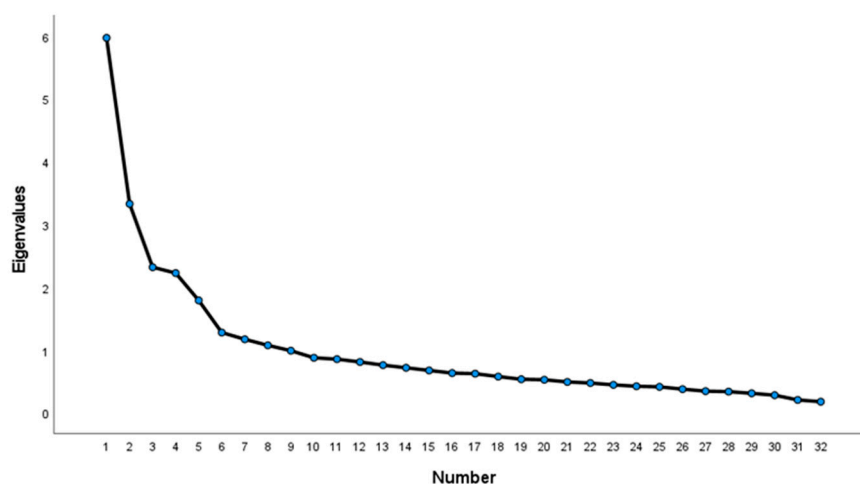


Figure 1. Scree plot of eigenvalues after PCA.

The items with loadings exceeding 0.3 for two or more components (factors) and items with low loadings (below 0.3) for all components were removed at each iteration. The final COPE structure as derived from PCA is detailed in Table 1 below.

Table 1. Principal component analysis of the brief COPE.

Items	C1	C2	C3	C4	C5	C6
6	0.559					
12	0.628					
14	0.769					
17	0.763					
24	0.594					
26	0.702					
4		0.866				
8		0.884				
25		0.845				
29		0.864				
19			0.774			
23			0.798			
27			0.803			
30			0.841			
2				0.669		
16				0.627		
18				−0.464		
28				0.705		
1					0.601	
3					0.749	
11					0.636	
13					0.458	
21						0.868
32						0.877

Notes: Varimax rotation was used. Variables with factor loadings of less than 0.30 were omitted.

Items 5 «I've been using alcohol or other drugs to make myself feel better» (substance use), 7 «I just give up trying to reach my goal» (active coping, inverted), 9 «I take additional action to try to get rid of the problem» (active coping), 15 «I've been trying to see it in a different light, to make it seem more positive» (positive coping), 20 «I've been looking for something good in what is happening» (positive coping), 22 «I've been doing something to think about it less, such as going to movies, watching TV» (self-distraction), 31 «I put aside other activities in order to concentrate on this» (active coping), and 10 «I sleep more than usual» (self-distraction) were removed from the scale due to low PCA loadings. As a result, six coping strategies were identified: C1 «socio-emotional support», C2 «religion», C3 «acceptance», C4 «problem-focused coping», C5 «avoidance», and C6 «humor».

In the second stage, confirmatory factor analysis was performed. For the fourth component, Item 18 «To give up the attempt to get what I want» (with negative loading) was replaced by Item 9 «I take additional action to try to get rid of the problem», as the model using the latter configuration demonstrated better fitting indices. The goodness-of-fit criteria were dubious (SRMR < 0.06 and RMSEA < 0.08), indicating that the model fit the data well, whereas CFI and TLI < 0.9 provided evidence of the insufficient quality of the model.

Additionally, the model without the «avoidance» subscale was tested, as it seemed to be the most questionable one. The model without «avoidance» (Model 2) had better overall goodness-of-fit indices (see Table 2) than the initial model (Model 1): The CFI exceeded 0.9, TLI had a marginal value of 0.898, SRMR < 0.06, and RMSEA exceeded 0.06. However, the difference between the two models was marginal.

Table 2. Goodness-of-fit indices for CFA models.

Index	CFI	TLI	RMSEA	SRMR	Chi-Square
Value (Model 1)	0.888	0.869	0.064	0.054	6990.346
Value (Model 2)	0.914	0.898	0.066	0.048	6991.479

Notes: Model 1 represents the model with six factors (including «avoidance» subscale). Model 2 represents the model with five factors (excluding «avoidance» subscale).

Table 3 displays the CFA standardized factor loadings for each item for both the initial model (Model 1) and the model without the «avoidance» subscale (Model 2). Loadings of the items measuring avoidance strategy (Model 1) were relatively low compared with other scales. Overall, it can be concluded that when the «avoidance» subscale was excluded, the model had better psychometric properties.

Table 3. CFA standardized loadings.

Items	Loading (Model 1)	Loading (Model 2)
F1 Socio-Emotional Support		
6	0.559	0.551
12	0.476	0.467
14	0.762	0.763
17	0.732	0.729
24	0.472	0.467
26	0.707	0.721
F2 Religion		
4	0.850	0.846
8	0.857	0.855
25	0.804	0.808
29	0.822	0.824
F3 Acceptance		
19	0.679	0.678
23	0.749	0.748
27	0.769	0.768
30	0.840	0.843
F4 Problem-focused coping		
2	0.531	0.538
16	0.663	0.634
18	0.767	0.766
28	0.671	0.667
F5 Avoidance		
1	0.394	-
3	0.511	-
11	0.601	-
13	0.454	-
F6 Humor		
21	0.815	0.836
32	0.743	0.725

Notes: Model 1 represents the model with six factors (including «avoidance» subscale). Model 2 represents the model with five factors (excluding «avoidance» subscale)

Table 4 demonstrates the descriptive statistics and reliability for the new structure of the brief COPE. The Cronbach's alpha coefficients exceeded the threshold of 0.7 for all scales, except for «avoidance» (0.55). Additionally, the discriminative potential of the «avoidance» subscale was assessed; Ferguson's delta was 0.68, significantly below the recommended threshold of 0.9 [43]. Additionally, this subscale has the lowest standard deviation. Thus, the reliability of the «avoidance» scale is questionable.

Table 4. Descriptive statistics and Cronbach's alpha for brief COPE.

	F1	F2	F3	F4	F5	F6
Number of items	6	4	4	4	4	2
Mean	2.31	2.17	2.71	2.96	2.13	2.23
Standard deviation	0.54	0.81	0.60	0.53	0.51	0.73
Median	2.33	2.00	2.75	3.00	2.25	2.00
Cronbach's α	0.79	0.90	0.84	0.75	0.55	0.75

Notes: F1, Socio-emotional support; F2, Religion; F3, Acceptance; F4, Problem-focused coping; F5, Avoidance; F6, Humor.

All items and scales had a distribution close to normal. Asymmetry and kurtosis did not exceed ± 1 for any of the six scales, indicating excellent values [44]. The descriptive statistics in the context of sex differences for the brief COPE are presented in Table 5 below. Men and women presented differences in three scales: women were more inclined than men to seek socio-emotional support, turn to religion, and avoid stressful circumstances.

Table 5. Descriptive statistics and sex differences for brief COPE.

	Men (N = 66)		Women (N = 706)		Mean Difference	p-Value
	M	SD	M	SD		
F1	1.99	0.53	2.33	0.53	-0.34	0.000
F2	1.77	0.77	2.21	0.81	-0.44	0.000
F3	2.59	0.59	2.72	0.60	-0.13	0.096
F4	2.87	0.62	2.97	0.52	-0.1	0.154
F5	1.95	0.48	2.15	0.51	-0.2	0.004
F6	2.21	0.68	2.24	0.74	-0.03	0.807

Notes: F1, Socio-emotional support; F2, Religion; F3, Acceptance; F4, Problem-focused coping; F5, Avoidance; F6, Humor. *t*-test statistics were applied

To assess the construct validity of the brief COPE, the Perceived Stress Scale (PSS) was applied. Pearson's correlations between the COPE and PSS scales were analyzed (see Table 6). Overstrain correlated positively with socio-emotional support, religion, acceptance, and avoidance, and negatively with humor. Stress management correlated positively with religion and avoidance, and negatively with acceptance and active coping. The total PSS scale had positive correlations with socio-emotional support, religion, and avoidance, and negative correlation with humor.

Table 6. Correlations between COPE and PSS scales.

	F1	F2	F3	F4	F5	F6	Overstrain	Stress Management	Total PSS Scale
F1	-								
F2	0.252 **	-							
F3	0.218 **	0.140 **	-						
F4	0.390 **	0.129 **	0.376 **	-					
F5	0.327 **	0.223 **	0.193 **	0.109 **	-				
F6	0.110 **	0.032	0.200 **	0.130 **	0.010	-			
Overstrain	0.251 **	0.218 **	0.082 *	0.072 *	0.388 **	0.102 **	-		
Stress management	0.059	0.106 **	-0.091 *	-0.174 **	0.225 **	0.075 *	0.496 **	-	
Total PSS scale	0.208 **	0.202 **	0.020	-0.091	0.376 **	-0.105 **	0.934 **	0.773 **	-

Notes: **, *p*-value < 0.01; *, *p*-value < 0.05.

The final structure of the Russian version of the brief COPE is shown in Table 7.

Table 7. Revised brief COPE (Russian version).

Subscale	Items					
Socio-emotional support	6	12	14	17	24	26
Religion	4	8	25	29	-	-
Acceptance	19	23	27	30	-	-
Problem-focused						
Coping	2	16	9	28	-	-
Avoidance	1	3	11	13	-	-
Humor	21	32	-	-	-	-

Notes: The revised brief COPE consists of 24 items. Items 5, 7, 10, 15, 18, 20, 22, and 31 were excluded.

4. Discussion

The result of the current research is a revised structure of the brief COPE (see Table 7), which consists of the six subscales «socio-emotional support», «religion», «acceptance», «problem-focused coping», «avoidance», and «humor». The development of this instrument is based on the idea that the COPE consists of many first-order factors, which may be integrated into second-order factors. Carver proposed four second-order factors in the initial COPE version: (1) problem-focused, (2) emotion-focused, (3) disengagement, and (4) acceptance [17]. However, further studies on the COPE factor structure have demonstrated that the COPE has three to five second-order factors [45–47]. Regarding the brief COPE, different studies have distinguished from two to fifteen second order factors [31]. The number of factors derived depends particularly on the language of the instrument [31]. Thus, the six subscales proposed in the current study may be described as second-order factors.

Compared with the theoretical structure (see Table A1 in Appendix A), the «socio-emotional support», «religion», and «acceptance» subscales remained stable, whereas the rest of the subscales were changed. Thus, the items in «problem-focused coping» were reduced from nine on the «active coping» scale to four. The items «I just give up trying to reach my goal», «I refuse to believe that it has happened», «I give up the attempt to get what I want», and «I put aside other activities in order to concentrate on this» were removed from the scale, and the item «I say to myself «this is not real»» (with opposite meaning) became a part of the «avoidance» scale (with direct meaning), whereas the item «I go to movies or watch TV, to think about it less» was removed from that scale. Regarding «positive coping», the items «I look for something good in what is happening» and «I try to see it in a different light, to make it seem more positive» (originally measuring «positive reinterpretation and growth») were removed; thus, the scale was renamed «humor» (as long as the remaining items measure that construct). The only item measuring substance use, «I drink alcohol or take drugs, in order to think about it less», was removed as well.

It can be concluded empirically that «problem-focused coping», «avoidance», and «positive coping» are blurry and indeterminate concepts, while «religion», «acceptance», and «socio-emotional support» are concrete concepts. It can be presumed that substance use is unsuitable, particularly for schoolteachers, due to social desirability; for teachers, especially, as professionals who work with children and translate behavioral norms, drinking alcohol is socially unacceptable.

All of the subscales showed a high level of reliability (Cronbach’s alpha exceeding 0.7), except for «avoidance» (with Cronbach’s alpha 0.55). This scale deteriorated the goodness-of-fit indices of the CFA model as well; therefore, it can be concluded that its reliability is questionable. Additionally, this scale showed poor discriminative potential (i.e., an ability to differentiate respondents by their attitudes). However, «avoidance» coping is considered as a significant strategy to measure, and the difference between the two models (i.e., with and without “avoidance”) was marginal. In previous studies which have aimed to shorten the COPE [48–50], the «avoidance» subscale was identified as a second-order factor. For these reasons, the initial model (including the «avoidance» subscale) was proposed as

a final one. However, in further research, it will be necessary to revise the items of the «avoidance» subscale in order to increase their discriminative potential.

A high level of perceived stress (total PSS) was positively correlated with «socio-emotional support», «religion», and «avoidance», and was negatively correlated with «humor», which is partially consistent with previous studies showing that individuals with a high level of stress have a higher preference for avoidance coping strategies [51], and are inclined to use acceptance and humor strategies less frequently [52]. Consequently, the results obtained here indicate a high level of construct validity for the brief COPE.

Regarding the sex differences observed, women tended to use socio-emotional support, religion, and avoidance more frequently than men. These findings are partially consistent with previous studies showing that females are inclined to use emotion-focused coping dimensions (e.g., self-distraction, emotional support, venting) more than males [53]. These differences may be the consequence of different gender-role orientations [54] and a lower readiness to report stress issues among men compared to women due to socially prescribed masculinity [55]. At the same time, gender differences in the frequency of using problem-focused strategies were not observed in the current study, further confirming findings in previous research [56].

The current research has two main limitations. The first concerns the structure of the sample. There were difficulties in obtaining access to schools, and only schools that provided agreement participated in our research. Additionally, the social and financial contexts of schools were not controlled. Another sample problem was the strong gender imbalance. The second limitation concerns the validation procedure, in that not all recommended statistical tests were performed. In particular, re-test reliability was not assessed. In further research, it will be important to consider the coping strategies of teachers with respect to different stimuli (e.g., relationship, financial, professional, and health problems) and compare them to those of other professional groups.

Overall, the Russian version of the brief COPE presented acceptable psychometric properties, and may be applied by researchers, school administrators, and psychologists. However, the «avoidance» scale is doubtful, and must be considered before application.

5. Conclusions

The prime concern of the current study was the development of a new version of the brief COPE, as well as testing its psychometric properties on a sample of Russian schoolteachers. As a result, a 24-item questionnaire with six subscales measuring different coping strategies was developed. Overall, the psychometric properties of the questionnaire were not perfect, but were acceptable. The values of various assessment indices were as follows: CFI = 0.888, TLI = 0.869, RMSEA = 0.064, and SRMR = 0.054. Presumably, the presented instrument may be applicable to schoolteachers as well as to other professional groups.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of the Psychological Institute of the Russian Academy of Education (protocol code 2020/4-1, date of approval 02 April 2020).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request. None of the experiments were preregistered.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Theoretical structure of Brief COPE *.

Initial Subscales (Carver et al., 1989)	Items in Initial Version (Carver et al., 1989)	Items in Brief Russian Version	Subscales of Brief Russian Version	Item Number
Active coping	I take additional action to try to get rid of the problem.	Я предпринимаю какие-то еще действия, стараясь преодолеть сложившуюся ситуацию.	Active coping	9
	I concentrate my efforts on doing something about it.	Я сосредоточиваю усилия на том, чтобы как-то решить проблему		2
	I do what has to be done, one step at a time.			
	I take direct action to get around the problem.			
Planning	I try to come up with a strategy about what to do.	Я тщательно обдумываю шаги, которые буду предпринимать для решения проблемы	Active coping	28
	I make a plan of action.	Я думаю, как лучше всего я могу справиться с этой проблемой		16
	I think hard about what steps to take.			
Suppression of competing activities	I think about how I might best handle the problem.			
	I put aside other activities in order to concentrate on this.	Я откладываю другие дела в сторону, чтобы сосредоточиться на решении проблемы	Active coping	31
	I focus on dealing with this problem, and if necessary let other things slide a little.			
I keep myself from getting distracted by other thoughts or activities.				
Restraint coping	I try hard to prevent other things from interfering with my efforts at dealing with this.			
	I force myself to wait for the right time to do something.			
	I hold off doing anything about it until the situation permits.			
	I make sure not to make matters worse by acting too soon.			
Seeking social support for instrumental reasons	I restrain myself from doing anything too quickly.			
	I ask people who have had similar experiences what they did.	Я ищу совета у других людей, что делать	Socio-emotional support	14
	I try to get advice from someone about what to do.			
I talk to someone to find out more about the situation.				
	I talk to someone who could do something concrete about the problem.	Я говорю с кем-нибудь, кто мог бы конкретно помочь решить мою проблему	Socio-emotional support	26

Table A1. Cont.

Initial Subscales (Carver et al., 1989)	Items in Initial Version (Carver et al., 1989)	Items in Brief Russian Version	Subscales of Brief Russian Version	Item Number
Seeking social support for emotional reasons	I talk to someone about how I feel.	Я стараюсь получить эмоциональную поддержку у друзей или родных Я ищу сочувствия и понимания у других людей	Socio-emotional support	6
	I try to get emotional support from friends or relatives. I discuss my feelings with someone. I get sympathy and understanding from someone.		Socio-emotional support	17
Positive reinterpretation and growth	I look for something good in what is happening.	Я ищу что-то хорошее в том, что произошло Я пытаюсь посмотреть на ситуацию с более позитивной стороны, в ином свете	Positive coping	20
	I try to see it in a different light, to make it seem more positive. I learn something from the experience. I try to grow as a person as a result of the experience.		Positive coping	15
Acceptance	I learn to live with it.	Я учусь жить с этим. Я стараюсь принять ситуацию, сжиться с ней. Я стараюсь привыкнуть к мысли, что это случилось, адаптироваться к ситуации Я стараюсь принять то, что случилось, привыкнуть к этому.	Acceptance	27
	I accept that this has happened and that it can't be changed. I get used to the idea that it happened. I accept the reality of the fact that it happened.		Acceptance Acceptance Acceptance	23 19 30
Turning to religion	I seek God's help.	Я прошу помощи у Бога. Я надеюсь на то, что Бог мне поможет. Я пытаюсь найти утешение в вере (религии). Я молюсь (больше, чем обычно).	Religion	4
	I put my trust in God I try to find comfort in my religion. I pray more than usual.		Religion Religion Religion	8 25 29
Focus on and venting of emotions	I get upset and let my emotions out.	Я переживаю и активно проявляю свои чувства Я даю выход своим переживаниям	Socio-emotional support	24
	I let my feelings out. I feel a lot of emotional distress and I find myself expressing those feelings a lot. I get upset, and am really aware of it.		Socio-emotional support	12
Denial	I refuse to believe that it has happened.	Мне не хочется верить, что это произошло Я говорю себе: «этого не может быть»	Active coping	13R
	I pretend that it hasn't really happened. I act as though it hasn't even happened. I say to myself "this isn't real."		Active coping	3R

Table A1. Cont.

Initial Subscales (Carver et al., 1989)	Items in Initial Version (Carver et al., 1989)	Items in Brief Russian Version	Subscales of Brief Russian Version	Item Number
Behavioral disengagement	I give up the attempt to get what I want.	Я перестаю пытаться добиться своего (получить то, что я хочу) Я не предпринимаю активных действий	Active coping Active coping	18R 7R
	I just give up trying to reach my goal.			
	I admit to myself that I can't deal with it, and quit trying. I reduce the amount of effort I'm putting into solving the problem.			
Mental disengagement	I turn to work or other substitute activities to take my mind off things.	Я погружаюсь в работу или другие дела, чтобы отключиться от проблем Я читаю, смотрю фильмы или телевизор или делаю что-то другое, чтобы отвлечься Я предаюсь фантазиям на другие темы, чтобы отвлечься Я сплю больше обычного, стараясь забыть о проблеме	Self-distraction Self-distraction Self-distraction Self-distraction	1 22 13 10
	I go to movies or watch TV, to think about it less.			
	I daydream about things other than this			
	I sleep more than usual.			
Alcohol–drug disengagement	I drink alcohol or take drugs, in order to think about it less.	Я выпиваю или принимаю лекарства, чтобы поменьше думать о проблеме	Substance-use	5
Humor **	I have been making jokes about it	Я перевожу случившееся в шутку. Я нахожу в случившемся забавные моменты.	Positive coping Positive coping	21 32
	I've been making fun of the situation			

Notes: * Russian translation is taken from Rasskazova et al.'s COPE version [27]. ** Items of the scale «Humor» cited by Carver (1997).

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