

Perceived stress and wellbeing in Romanian teachers during the COVID-19 pandemic: The intervening effects of job crafting and problem-focused coping

Geanina C. Ciuhan¹  | Ruxandra G. Nicolau² | Dragos Iliescu² 

¹Department of Psychology, Communication Sciences and Social Work, Faculty of Educational Sciences, University of Pitesti, Pitesti, Romania

²Department of Psychology, University of Bucharest, Bucharest, Romania

Correspondence

Geanina Cucu Ciuhan, Department of Psychology, Communication Sciences and Social Work University of Pitesti, Targu din Vale St no. 1, Pitesti, Romania.
Email: geaninaciuhan@gmail.com

Abstract

This study examines the relationship between teacher perceived stress during the online period of schooling in the coronavirus disease 2019 pandemic, and their wellbeing, with job crafting as a mediator. The study also examines the role of problem-focused coping as a moderator in the stress-job crafting relationship. A sample of 360 teachers, 347 females, and 13 males, aged 21–63 years answered to an online survey from October to December 2020. Regression analyses were employed to the data. The results show that the conditional indirect effects of stress on wellbeing are statistically significant for low problem-focused coping ($\beta = -.06$, $SE = 0.02$, $p < .001$), whereas for high problem-focused coping the effects are not statistically significant ($\beta = .01$, $SE = 0.01$, $p > .05$). The effects of stress on wellbeing are mediated by job crafting for teachers who score low on problem-focused coping.

KEYWORDS

job crafting, perceived stress, problem-focused coping, well-being

1 | INTRODUCTION

As a result of the coronavirus disease 2019 (COVID-19) crisis, as many as 191 countries worldwide decided on school-closing, and this decision affected 91.3% of the school population (The United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). The COVID-19 period revealed a weakness in those educational systems that

mostly relied on school-based learning, since teachers did not have the right competencies, tools, and guidelines to switch to full online learning (Chabbott & Sinclair, 2020). Teachers worldwide were not prepared to adjust to this kind of situation and have been struggling to transform their face-to-face curriculum for online teaching, working hard to find suitable ways and platforms to adapt to the existing solutions (Wang, 2020).

The majority of studies published in the past 10 months about the struggle of teachers to adapt to the new online school situation are mainly descriptive, focusing primarily on *external resources*: the lack of suitable textbooks or technology (Chabbott & Sinclair, 2020), the difficulties they encounter with the underdeveloped digital skills of their pupils (Kim, 2020), the struggle to adapt existing pedagogical strategies (Bergdahl & Nouri, 2020) or pedagogical content to online teaching, and, eventually, lessons learned (Rapanta et al., 2020). We have found no study on the internal psychological mechanisms (i.e., internal resources) that teachers succeeded to activate, to adapt to their work demands and switch to different job resources, to cope with the situation, to teach effectively, and to regain their wellbeing.

The present study focuses on analyzing the mechanisms that facilitate the psychological adaptation of teachers to the stressful situation generated by the COVID-19 context. Specifically, we investigate how perceived stress can lead to well-being when teachers take responsibility for their own work context by exhibiting high levels of job crafting. Job crafting is an action that involves employees shaping and redefining their job to further motivate them and to experience the task as more attractive (Oubibi et al., 2022), and previous research has shown that to cope with changes in their working environment, employees may engage in this behavior.

We also investigate how problem-focused coping strategies can influence the relationship between perceived stress and wellbeing. A previous study showed that emotion-focused coping strategies were not helpful for different professionals (medical staff, teachers, governmental staff, economy staff, and workers) during the COVID-19 lockdown period, and were rather related to stress, anxiety, and depression, but cognitive and problem-focused strategies were more adaptive (Du et al., 2020).

Our model fits the job demands-resources theory (JD-R; Bakker & Demerouti, 2007), which defines working conditions (job characteristics) in terms of job demands and job resources. Job demands are physical, social, organizational, and psychological aspects of the work that require physical and psychological effort and are associated with psychological and/or physiological costs. Job resources are physical, social, organizational, and psychological aspects of the work that are functional in achieving goals, reduce job demands and their associated costs, and stimulate personal growth, learning, and development. Teacher wellbeing may be produced by the interaction between these two categories of working conditions (Bakker & Demerouti, 2007).

In the current study, we consider perceived stress as job demand, problem-focused coping as a job resource, well-being as an outcome, and job crafting as a mediator. Previous studies in the JD-R framework have shown that stressors may still lead to a state of well-being, depending on the available coping resources within the individual at a given time (Demerouti et al., 2019). The stress context generated by the COVID-19 pandemic situation may be seen as job demand, since the lockdown and the associated pressure toward online teaching have significantly modified physical, social, organizational, and psychological aspects of a teacher's work environment (Kim, 2020).

Job crafting manifested by teachers can modify the relationship between perceived stress (job demands) and well-being (outcome), since job crafting may lead to many positive outcomes for the employee, such as the enhanced meaning of work or positive work identity. Also, job crafting enhances person-job fit and leads to higher job satisfaction and to a higher sense of control over the work environment. It is therefore likely that the teachers who are active in shaping their environment will experience better well-being (Tims & Bakker, 2010).

1.1 | Challenges for teachers in the context of the COVID-19 pandemic

Interviews conducted with middle school teachers during the COVID-19 pandemic found that their main challenge was to establish a cognitive, social, and teaching presence with the pupils, with a greater emphasis on establishing

social presence (Rannastu-Avalos & Siiman, 2020). In a study on 153 Swedish school teachers, Bergdahl and Nouri (2020) concluded that lesson preparations were mainly focused on technical issues and that teachers reported a lack of pedagogical strategies needed in the emerging learning landscape of online learning (Bergdahl & Nouri, 2020). Teachers faced important challenges in finding online learning tools that fit the children's developmental level, and that is also appropriate for their participation and learning, especially with younger children who often don't yet have the skills for typing written information in a chat or share documents with hand-written text or drawings (Kim, 2020).

1.2 | Job crafting and well-being in teachers

Teacher occupational well-being is defined as their responses to cognitive, emotional, health, and social conditions in their work and profession (Viac & Fraser, 2020). The occupational well-being of teachers is further considered to be multidimensional, comprising four core dimensions: cognitive well-being, subjective well-being, physical and mental well-being, and social well-being (Cann et al., 2020).

Job crafting is defined as "a specific form of proactive behavior in which the employee initiates change in the level of job demands and job resources" (Tims & Bakker, 2010, p. 14). Employees thereby adapt the job to their individual knowledge, skills, and abilities, to attend to their personal needs and preferences. This implies role innovation and personal initiatives, attributes that are essential in the COVID-19 crisis to adapt teaching strategies to online teaching. Adaptation driven by the teachers' own efforts is critical when the educational organization is incapable to offer guidance since pupil engagement with online learning depends deeply on the efficiency of their teachers in using the appropriate technology, and on their attitudes and abilities to cover the gap between what they used to practice and what they are expected to use now in practice (Kim, 2020).

1.3 | Coping strategies as personal resources

Early studies showed that problem-focused coping (the individual's effort to change a difficult situation) will lead to better well-being by lowering stress responses and improving performance (Shimazu & Schaufeli, 2007). Other research nuanced this relationship, stating that prolonged problem-focused coping can have side effects such as cumulative fatigue or job burnout (Cohen & Spacapan, 1978). A meta-analysis (Penley et al., 2002) reported reliable associations between individual coping strategies and health outcomes, concluding that confronting coping (or problem-focused) is consistently negatively correlated with psychological health across a range of stressors, that is, problem-focused coping is likely to increase individual psychological distress and negative affectivity.

This interpretation is consistent with the framework of Cohen's costs of coping theory (Cohen et al., 1986, cited by Shimazu & Schaufeli, 2007), which proposes that individuals should combine problem-focused coping with emotional-focused coping to adapt to prolonged stressful situations. This can be done by alternating direct coping strategies (e.g., taking action to change the situation) with nonactive coping strategies (e.g., recovering from resources loss or distraction) (Shimazu & Schaufeli, 2007).

1.4 | The current study

Our study examines the relationship between teacher perceived stress during the online period of schooling during the COVID-19 pandemic, and their well-being, with job crafting as a mediator. We also examine the role of problem-focused coping as a moderator in the stress-job crafting relationship.

The proposed model is presented below:

In essence, we propose that: (a) teacher well-being in the COVID-19 context is related to perceived stress, job crafting, and problem-focused coping strategies, (b) the problem-focused coping style will reinforce the relationship between perceived stress and job crafting, and (c) the ability of teachers to shape their work environment (job crafting) will mediate the effect of perceived stress on their well-being.

2 | METHODS

2.1 | Participants

The current study uses data involving a sample of 360 teachers, 347 females, and 13 males, aged 21 to 63 years ($M = 40.2$; $SD = 9.8$); 245 teachers (68%) were from urban area schools, and 115 (32%) from rural area schools. The sample contains 120 (33.33%) kindergarten teachers, 136 (37.77%) primary school (Grades 0–4) teachers, 61 (16.94%) gymnasium (Grades 5–8) teachers, and 41 (11.38%) high school teachers. We did not approach schools for the data collection but approached teachers directly; more specifically, the questionnaire was shared via email and social media to a large number of teachers, asking for voluntary participation. An important part of the sample (47 teachers, 13.05%) was in the first 2 years of their career, the rest were more experienced teachers.

2.2 | Measures

2.2.1 | Stress

We measured stress using the 14-item Perceived Stress Scale (PSS; Cohen et al., 1983). Sample items include “In the last month, how often have you felt confident about your ability to handle your personal problems?” and “In the last month, how often have you felt that you were on top of things?” Responses were collected on a 5-point Likert scale (1 = *never*; 5 = *every day*). Internal consistency in the current study was 0.87. This scale has been adapted into several languages and has been shown to have good measurement qualities (Lee & Jeong, 2019).

2.2.2 | Well-being

We used The Warwick–Edinburgh Mental Well-being Scale (WEMWBS; Tennant et al., 2007) to assess the extent (1 = *never*; 5 = *every day*) to which participants experienced a mental state of well-being over the course of 2 weeks. Sample items include “I’ve been thinking clearly” and “I’ve been feeling relaxed.” Alpha for the present study was .93. This scale has been shown to good psychometric properties (Lang & Bachinger, 2017) in its more than 25 different-language forms and is used extensively in research (with over 200 publications annually, cf. Warwick Medical School, 2022).

2.2.3 | Job crafting

The Job Crafting Scale (JCS; Tims et al., 2012) was used to measure the four dimensions of job crafting, namely increasing structural job resources (“I decide on my own how I do things”), decreasing hindering job demands (“I try to ensure that my work is emotionally less intense”), increasing social job resources (“I ask others for feedback on my job performance”) and increasing challenging job demands (“When there is not much to do at work, I see it as a chance to start new projects”). Items were assessed on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*).

agree). The Romanian version alpha Cronbach coefficients for all dimensions are between .65 and .79. Internal consistency reliabilities in the current study were .85, .85, .82, and .84, respectively, with an overall alpha of .85. Good measurement qualities have been reported for this scale also in previous studies (e.g., Huyghebaert-Zouaghi et al., 2020),

2.2.4 | Problem-focused coping

This variable was measured using the COPE questionnaire (Carver et al., 1989) which assesses different ways of responding to stress. The 60-item scale can be divided into three coping styles, each consisting of five patterns of coping. Problem-focused coping comprises five subscales: Active coping, Planning, Suppression of Competing Activities, Restraint, and Use of Instrumental Social Support. Sample items include "I concentrate my efforts on doing something about it" and "I make a plan of action." Responses were collected on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). The alpha reliability for the total score is .70, and reliabilities for the factors are .86 for problem-focused coping, .83 for emotion-focused coping, .82 for social support-focused coping, and .82 for avoidant coping. The Romanian adaptation of the COPE questionnaire has been used before in published studies that reported good psychometric characteristics (Crasovan & Sava, 2013).

2.3 | Procedure

Informed consent was obtained from all the participant teachers with an online form. Common ethical practices in research with human subjects were followed. The study was approved by the Ethics Committee of the university with which the principal investigator is associated. All the questionnaires were incorporated in a Google Form and the form was shared by the authors via email and via social media to a large number of teachers in Romania. Data were collected during October 2020 and December 2020, that is, after the first eight months of the COVID-19 pandemic. The time for completing the questionnaire per participant was about 15–20 min. There were no missing answers because participants had to answer all questions to submit the online survey.

3 | RESULTS

3.1 | Descriptive analysis

Mean, standard deviations, and correlation coefficients are presented in Table 1.

Results show that well-being is significantly correlated with stress ($r = -.69$, $p < .01$), job crafting ($r = .41$, $p < .01$) and problem focused coping ($r = .13$, $p < .05$). These findings support the fact that teacher wellbeing is significantly related to the perceived stress, job crafting and problem-focused coping strategies.

3.2 | Indirect effects of stress on well-being

Table 2 shows the mediating effects of job crafting on the relationship between stress and wellbeing. Even though both the total ($\beta = -.69$, $SE = 0.03$, $p < .001$) and the direct effect ($\beta = -.66$, $SE = 0.03$, $p < .001$) are statistically significant, the path a of the mediation analysis—indicating the relationship between the predictor and the mediator—is not statistically significant ($\beta = -.07$, $SE = 0.05$, $p > .05$). As a result, our hypothesis that job crafting mediates the relationship between perceived stress and teacher wellbeing is not supported.

TABLE 1 Means, standard deviations, and inter-correlations for the study variables (N = 360)

	M	SD	1	2	3	4
1. Perceived stress	2.35	0.62	-			
2. Well-being	4.20	0.67	-.69**	-		
3. Job crafting	3.42	0.56	-.07	.41**	-	
4. Problem-focused coping	3.77	0.54	.05	.13*	.44**	-

**p* < .05;

***p* < .01.

TABLE 2 Indirect effects of stress on well-being (N = 360)

Predictors	On JC				On WB			
	β	SE	<i>p</i>	95% CI	β	SE	<i>p</i>	95% CI
Stress	-.07	0.05	.19	[-0.17 to 0.04]	-.66	0.03	<.001	[-0.73 to -0.60]
Job crafting					.36	0.03	<.001	[0.30 to 0.42]
Total effect					-.69	0.03	<.001	[-0.76 to -0.61]
R ²	0		0.19		.61		<.001	
F	1.67				281.9			

Abbreviations: JC, job crafting; PS, perceived stress; WB, well-being.

TABLE 3 Moderating effects of problem-focused coping (N = 360)

	β	SE	95% confidence interval		Z	<i>p</i>
			Lower	Upper		
PS	-.07	0.04	-0.16	0.01	-1.59	.11
PFC	.45	0.04	0.36	0.55	9.82	<.001
PS x PFC	.10	0.04	0.01	0.18	2.21	.02

Abbreviations: JC, job crafting; PFC, problem-focused coping; PS, perceived stress.

3.3 | Moderating effects of problem-focused coping

Table 3 shows the moderating effects of problem-focused coping on the relationship between stress and job crafting. According to the results, the effect of stress on job crafting is not statistically significant ($\beta = -.07$, $SE = .04$, $p > .05$), however the effect of problem-focused coping on the dependent variable is statistically significant ($\beta = .45$, $SE = .04$, $p < .001$). Moreover, the interaction effect of stress and problem-focused coping on job crafting is also statistically significant ($\beta = .10$, $SE = .04$, $p < .05$), which supports our initial assumption. As such, problem-focused coping style reinforces the relationship between perceived stress and job crafting.

Table 4 and Figure 3 show the results of the simple slope analysis indicating that the effect of the predictor on the dependent variable is statistically significant only at low levels (-1SD) of the moderator ($\beta = -.17$, $SE = .06$, $p < .01$).

Under these circumstances, we decided to look further into the differences between the low and the high problem-focused coping individuals in terms of job crafting dimensions and we noticed significant differences among the two categories, briefly presented in Table 5. Accordingly, there is a significant difference between low

TABLE 4 Simple slope estimates

	β	SE	95% confidence Interval		Z	p
			Lower	Upper		
Average (-1 SD to (+1 SD)	-.07	0.04	-0.16	0.01	-1.57	.11
Low (-1 SD)	-.17	0.06	-0.29	-0.05	-2.86	<.01
High (+1 SD)	.02	0.07	-0.11	0.16	.36	.71

Note: The table shows the effect of the predictor (PS) on the dependent variable (JC) at different levels of the moderator (PFC).

Abbreviations: JC, job crafting; PFC, problem-focused coping; PS, perceived stress.

TABLE 5 T test for mean differences among participants high and low on problem-focused coping

Job crafting factor	Mean difference	t	p	Cohen's d
Increasing structural job resources	-0.48	-4.93	<.001	0.54
Increasing structural job resources	-0.32	-3.12	<.01	0.33
Increasing social job resources	-0.49	-4.82	<.001	0.52
Increasing challenging job demands	-0.58	-5.75	<.001	0.63

Note: A negative mean difference reflects higher scores for participants scoring low on problem-focused coping.

($M = -0.22$, $SD = 1.21$) and high ($M = 0.26$, $SD = 0.55$) problem-focused coping individuals when talking about increasing structural job resources ($t = -4.93$, $p < .001$, $d = .54$). In regard to the decreasing hindering job demands dimension, there is also a significant difference ($t = -3.12$, $p < .01$, $d = .33$) between the low ($M = -0.15$, $SD = 1.01$) and high ($M = 0.17$, $SD = .96$) problem focused coping respondents. Moreover, a notable significant difference can also be observed when it comes to increasing social job resources ($t = -4.82$, $p < .001$, $d = .52$) for low ($M = -0.22$, $SD = 0.92$) versus high ($M = 0.26$, $SD = 1.02$) values of problem-focused coping. Finally, for the last dimension of job crafting, namely increasing challenging job demands, results show significant differences ($t = -5.76$, $p < .001$, $d = .63$) between the first ($M = -0.26$, $SD = 0.97$) and the second ($M = 0.31$, $SD = 0.94$) categories (Figure 1).

3.4 | Conditional indirect effects

Table 6 shows the moderated mediating effect of stress on wellbeing. As noted above, the direct influence of stress on job crafting is not statistically significant ($\beta = -.07$, $SE = 0.04$, $p > .05$), however its direct effect on wellbeing is statistically significant ($\beta = -.66$, $SE = 0.03$, $p < .001$). Nevertheless, a significant moderating effect of problem-focused coping on the direct effect of stress on job crafting was found. We plotted the results for well-being predicted by stress separately for low (one standard deviation below the mean) and high (one standard deviation above the mean) problem-focused coping. The results show the moderated mediating effects of stress on wellbeing are statistically significant for low problem-focused coping ($\beta = -.06$, $SE = 0.02$, $p < .001$, 95% CI = [-0.11 to -0.01]), whereas for high problem-focused coping the effects are not statistically significant ($\beta = .01$, $SE = 0.01$, $p > .05$, 95% CI = [-0.03 to 0.06]). In conclusion, the effects of stress on well-being are mediated by job crafting for people that score low on problem-focused coping. This finding supports our proposed model (Figure 2).

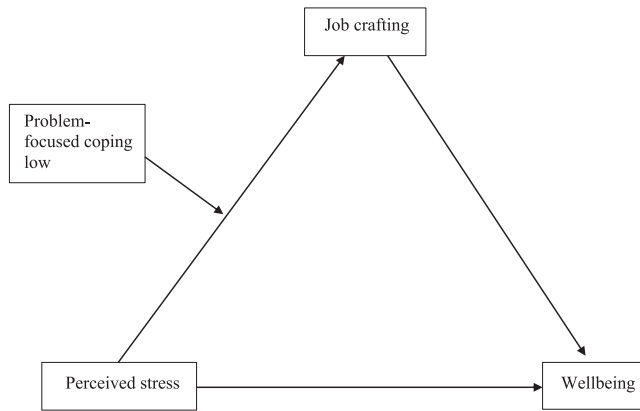


FIGURE 1 The proposed model showing the mediational moderated relationship of the job crafting mediating the effect of the perceived stress on wellbeing in Romanian teachers during the COVID-19 pandemic, with the moderating effect of low problem-focused coping.

TABLE 6 Conditional indirect effects (N = 360)

Predictors	On JC				On WB			
	β	SE	p	95% CI	β	SE	p	95% CI
PS	-0.07	0.04	.12	[-.16 to .02]	-.66	0.03	<.001	[-.73 to -.60]
PS × PFC	0.10	0.04	<.05	[-.01 to .19]	.04	0.03	.21	[.01 to .07]
JC					.36	0.03	<.001	[-.30 to .42]
JC × PFC					.01	0.04	.99	[-.08 to .08]
R ²	0.21		<.001		.61		<.001	
F	34.34				270.4			

Abbreviations: JC, job crafting; PFC, problem-focused coping; PS, perceived stress; WB, well-being.

4 | DISCUSSION

Our study was conducted after the first eight months of the COVID-19 pandemic, capturing the effects of the context on teacher wellbeing. Specifically, we found a conditional indirect effect of teacher perceived stress on their wellbeing, and these effects were mediated by job crafting only for those individuals with low problem-focused coping - the indirect effect of perceived stress on wellbeing via job crafting was statistically significant only for respondents with low problem-focused coping and not for those with high problem-focused coping. We observed significant differences between the low and the high problem-focused coping respondents for all job crafting dimensions.

These results are counter-intuitive given the fact that we expected high problem-focused coping to exercise a buffer effect on the stress-wellbeing relationship in general. The data however show that for those teachers who have high problem-focused coping, job crafting is not a mediator of the stress-wellbeing relationship - which means that for these teachers the effects on wellbeing are defined by other mechanisms. For teachers who are low on problem-focused coping, job crafting is one of the ways through which they develop well-being under stress conditions, and our results point to the fact that they were more flexible in adapting their job conditions to the conditions of online teaching and have found solutions to improve their wellbeing in the given difficult context. At

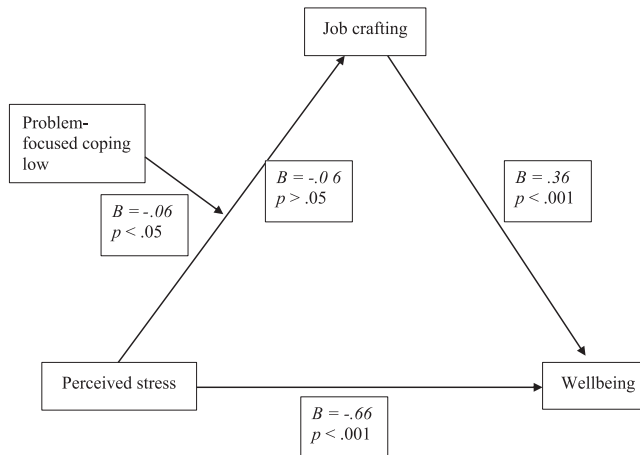


FIGURE 2 Path analysis diagram showing the mediational moderated relationship of the job crafting mediating the effect of the perceived stress on wellbeing in Romanian teachers during the COVID-19 pandemic, with the moderating effect of low problem-focused coping. * $p < .05$. ** $p < .01$ *** $p < .001$

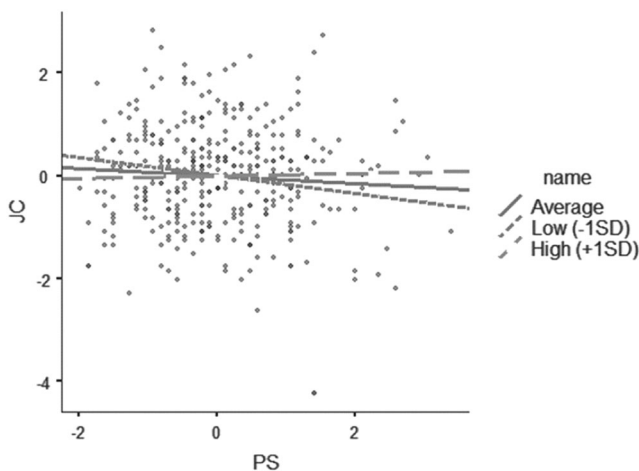


FIGURE 3 Simple slope chart for the simple moderation analysis (problem-focused coping low and a moderator between perceived stress and job crafting). JC, job crafting; PS, perceived stress

the same time, despite the counterintuitive nature of our results, we point to another recent study that has associated problem-focused coping with higher mental health conditions during the COVID-19 pandemic (Li, 2020).

4.1 | Theoretical and practical implications

An important implication of our study is the fact that using low problem-focused coping can actually be helpful when individuals have no means to change the situation and all they can do is adapt to preserve their mental health status. Previous studies have found that problem-focused coping works better for adaptation to perceived stress, and this effect was reported on adaptation to the COVID-19 pandemics. For example, Szabó et al. (2020) have gathered data in May 2020 from 441 Hungarian adults and have found that perceived stress highly correlates with

anxiety, depression, and emotion-focused coping, and has significant negative correlations with health status and problem-focused coping; problem-focused coping also correlated significantly with participant health status (Szabó et al., 2020). Similar results were found by Guo et al. (2020) on data gathered in February 2020 in China; these authors concluded that emotion-focused coping was associated with a higher risk of clinical PTSD levels, whereas problem-focused coping reduced that risk (Guo et al., 2020).

A different result was obtained by Li (2020) in a study conducted in March 2020 on 1109 Chinese adults. Li (2020) examined their psychological responses to the COVID-19 pandemics and found that 11.45% of the participants used problem-focused coping, 51.31% used emotion-focused coping and 37.24% used both problem and emotion-focused coping strategies. The author concludes that people using problem-focused coping were at higher risk for developing posttraumatic stress disorder (PTSD) and that using emotion-focused coping was better for controlling PTSD. In contrast, using both emotion and problem-focused coping was better for the psychiatric health of these individuals (Li, 2020).

This means that during the pandemic only a small number of individuals (at least as reflected by our sample) have used problem-focused coping, and they were at higher risk for developing serious mental health conditions, such as PTSD. A larger number of people rather used emotion-focused coping or combined coping strategies—although we emphasize that the adult samples investigating this issue in other studies have not been representative and that our sample only focuses on teachers (with a more complete picture of the patterns of coping across other professions still missing). Using emotion-focused coping make sense insofar as problem-focused coping may be more efficient for individuals who want to change the stressful situation—but during the COVID-19 period this was unlikely, as people did not have the power to change their work, social or interpersonal situations. On the other hand, emotion-focused coping can help regulate negative emotions, and can be a good strategy to adapt to situations that cannot be changed.

This interpretation is also partially supported by the findings of Zhou et al. (2021) 1 year later, when they emphasized the indirect effect of perceived organizational support on the PTSD symptoms of employees, through the mediation of problem-focused strategies, and found that organizational support and self-efficacy had significant predictive effects on problem-focused coping (Zhou et al., 2021). In other words, problem-focused coping can help when employees have organizational support to craft their jobs, but otherwise, it will only increase stress and feelings of powerlessness, since employees have no decision freedom to implement their solutions.

4.2 | Limitations of the current study

One of the limitations of our study is the relatively small sample of teachers who participated in our study and the disproportionately large number of women in our sample. We also draw attention to the possibility of common method variance in our study, because of its cross-sectional and self-report design. To test that limitation, we performed Harman's One-Factor Test. Results indicated that one factor is extracting 20.43% of the variance, suggesting that common method bias is unlikely.

4.3 | Further research directions

A number of interesting research directions are opened by our study. First, it would be interesting to see how teachers with high problem-focused coping improved their well-being during the pandemic's stressful situation, which factors were involved in their coping strategies. Second, our model will be clearer if we could identify the type of job crafting that helped the teachers with low problem-focused cope with the online school new situation and to design a more comprehensive model. After that, job crafting programs could be developed and implemented as teacher training continuous education programs. Also, gender differences could be studied and introduced to the

model, if the case. Third, larger-scale studies could lead to national strategic proposals to adapt the teacher training initial programs and to prepare them for flexible adaptation to online teaching in stressful situations. Fourth, the longitudinal design would enhance the ability to make temporal conclusions, and thus, edge closer to making causal inferences.

ACKNOWLEDGMENT

The authors received no financial support for the research, authorship, and/or publication of this article.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

ETHICS STATEMENT

APA ethical standards were followed in the conduct of the study. All authors acknowledge ethical responsibility for the content of the manuscript and will accept the consequences of any ethical violation. This study is not part of a larger study. The assessment described in this paper are made in a psychology individual practice office approved by the Ethics Board of the University of Pitesti, Romania, where the first author is affiliated. Informed consent was obtained from all the participant teachers with an online form. Common ethical practices in research with human subjects were followed.

ORCID

Geanina C. Ciuhan  <https://orcid.org/0000-0002-0819-7819>

Dragos Iliescu  <https://orcid.org/0000-0002-5958-3920>

REFERENCES

- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bergdahl, N., & Nouri, J. (2020). Covid-19 and crisis-prompted distance education in Sweden. *Technology, Knowledge and Learning*. <https://doi.org/10.1007/s10758-020-09470-6>
- Cann, R. F., Riedel-Prabhakar, R., & Powell, D. (2020). A model of positive school leadership to improve teacher wellbeing. *International Journal of Applied Positive Psychology*, 6, 195–218. <https://doi.org/10.1007/s41042-020-00045-5>
- 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. <https://doi.org/10.1037/0022-3514.56.2.267>
- Chabbott, C., & Sinclair, M. (2020). SDG 4 and the COVID-19 emergency: Textbooks, tutoring, and teachers. *Prospects*, 49(1–2), 51–57. <https://doi.org/10.1007/s11125-020-09485-y>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385–396. <https://doi.org/10.2307/2136404>
- Cohen, S., & Spacapan, S. (1978). The aftereffects of stress: An attentional interpretation. *Environmental Psychology and Nonverbal Behavior*, 3(1), 43–57. <https://doi.org/10.1007/BF01114531>
- Crasovan, D. I., & Sava, F. A. (2013). Translation, adaptation, and validation on romanian population of cope questionnaire for coping mechanisms analysis. *Cognition, Brain, Behavior. An Interdisciplinary Journal*, XVII(1), 61–76.
- Demerouti, E., Peeters, M. C. W., & van den Heuvel, M. (2019). Job crafting interventions: do they work and why? In L. Van Zyl, & S. Rothmann, Sr. (Eds.), *Positive psychological intervention design and protocols for multi-cultural contexts*. Springer. <https://doi.org/10.1007/978-3-030-20020-6-5>
- Du, J., Mayer, G., Hummel, S., Oetjen, N., Gronewold, N., Zafar, A., & Schultz, J. -H. (2020). Mental health burden in different professions during the final stage of the COVID-19 lockdown in China: Cross-sectional survey study. *Journal of Medical Internet Research*, 22(12), e24240. <https://doi.org/10.2196/24240>
- Guo, J., Feng, X. L., Wang, X. H., & van Ijzendoorn, M. H. (2020). Coping with COVID-19: Exposure to COVID-19 and negative impact on livelihood predict elevated mental health problems in Chinese adults. *International Journal of Environmental Research and Public Health*, 17(11), 3857. <https://doi.org/10.3390/ijerph17113857>
- Huyghebaert-Zouaghi, T., Morin, A. J. S., Forest, J., Fouquereau, E., & Gillet, N. (2020). A longitudinal examination of nurses' need satisfaction profiles: A latent transition analysis. *Current Psychology*. <https://doi.org/10.1007/s12144-020-00972-1>

- Kim, J. (2020). Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. *International Journal of Early Childhood*, 52(2), 145–158. <https://doi.org/10.1007/s13158-020-00272-6>
- Lang, G., & Bachinger, A. (2017). Validation of the German Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) in a community-based sample of adults in Austria: A bi-factor modelling approach. *Journal of Public Health*, 25(2), 135–146. <https://doi.org/10.1007/s10389-016-0778-8>
- Lee, B., & Jeong, H. I. (2019). Construct validity of the perceived stress scale (PSS-10) in a sample of early childhood teacher candidates. *Psychiatry and Clinical Psychopharmacology*, 29(1), 76–82. <https://doi.org/10.1080/24750573.2019.1565693>
- Li, Q. (2020). Psychosocial and coping responses toward 2019 coronavirus diseases (COVID-19): A cross-sectional study within the Chinese general population. *QJM: An International Journal of Medicine*, 113(10), 731–738. <https://doi.org/10.1093/qjmed/hcaa226>
- Oubibi, M., Fute, A., Xiao, W., Sun, B., & Zhou, Y. (2022). Perceived organizational support and career satisfaction among Chinese teachers: The mediation effects of job crafting and work engagement during COVID-19. *Sustainability*, 14(2), 623. <https://doi.org/10.3390/su14020623>
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine*, 25(6), 551–603. <https://doi.org/10.1023/A:1020641400589>
- Rannastu-Avalos, M., & Siiman, L. A. (2020). Challenges for distance learning and online collaboration in the time of COVID-19: Interviews with science teachers. In Nolte, A., Alvarez, C., Hishiyama, R., Chounta, I. -A., Rodríguez-Triana, M. J. & Inoue, T., *Collaboration technologies and social computing* (12324, pp. 128–142). Springer International Publishing. <https://doi.org/10.1007/978-3-030-58157-2-9>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity, *Postdigital Science and Education* 2(3)pp. 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Shimazu, A., & Schaufeli, W. B. (2007). Does distraction facilitate problem-focused coping with job stress? A 1 year longitudinal study. *Journal of Behavioral Medicine*, 30(5), 423–434. <https://doi.org/10.1007/s10865-007-9109-4>
- Szabó, C., Pukánszky, J., & Kemény, L. (2020). Psychological effects of the COVID-19 pandemic on hungarian adults. *International Journal of Environmental Research and Public Health*, 17(24), 9565. <https://doi.org/10.3390/ijerph17249565>
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(1), 63. <https://doi.org/10.1186/1477-7525-5-63>
- Tims, M., & Bakker, A. B. (2010). Job crafting: Towards a new model of individual job redesign. *SA Journal of Industrial Psychology*, 36(2), <https://doi.org/10.4102/sajip.v36i2.841>
- Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior*, 80(1), 173–186. <https://doi.org/10.1016/j.jvb.2011.05.009>
- UNESCO. (2020). 10 recommendations to ensure that learning remain uninterrupted. <https://en.unesco.org/news/covid-19-10-recommendations-plan-distance-learning-solutions>.
- Viac, C., & Fraser, P. (2020). Teachers' well-being: A framework for data collection and analysis. OECD, 2021. <https://pdfs.semanticscholar.org/0741/01ad8a1f324a61789d092d614d5ae86570b9.pdf>
- Wang, C. X. (2020). CAFE: An instructional design model to assist K-12 teachers to teach Remotely during and beyond the Covid-19 pandemic. *TechTrends*. <https://doi.org/10.1007/s11528-020-00555-8>
- Warwick Medical School (2022) Warwick-Edinburgh Mental Well-Being Scale (WEMWBS). <http://www2.warwick.ac.uk/fac/med/research/platform/wemwbs/>
- Zhou, T., Guan, R., & Sun, L. (2021). Perceived organizational support and PTSD symptoms of frontline healthcare workers in the outbreak of COVID-19 in Wuhan: The mediating effects of self-efficacy and coping strategies. *Applied Psychology: Health and Well-Being*, 13, 12267–12760. <https://doi.org/10.1111/aphw.12267>

How to cite this article: Ciuhan, G. C., Nicolau, R. G., & Iliescu, D. (2022). Perceived stress and wellbeing in Romanian teachers during the COVID-19 pandemic: The intervening effects of job crafting and problem-focused coping. *Psychology in the Schools*, 59, 1844–1855. <https://doi.org/10.1002/pits.22728>