

# Characteristics of Teacher Stress during Distance Learning Imposed by the COVID-19 Pandemic

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Abstract

Recent studies show that stress levels are higher among teachers than in many other occupational groups. Semi-structured interviews with 14 teachers from various regions of Russia were conducted to investigate the characteristics of psychological stress and coping strategies in the context of the abrupt transition to distance learning imposed by the COVID-19 pandemic. In remote schooling, teachers have to implement education programs despite their own pandemic anxiety, provide emotional support to students, and stimulate their motivation for learning. It appears from the interview data that teacher stress is elevated by the absence or lack of support from school administrators and a substantial increase in teacher workload caused by the need to search for new techniques of teaching and preparing for classes from a distance, intensified communication with students and their parents, and the growing amount of homework assignments to review. The stress factors specific to the pandemic include the new work-from-home setup and changes in the work-life balance. The most common strategies of coping with stress and reducing its consequences include an effort to search for the silver lining and/or new opportunities, seeking social and emotional support, physical exercise, and hobby activities.

Keywords

psychological stress, coping strategies, teachers, COVID-19.

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At the beginning of 2020, school teachers and administrators as well as students and their parents had to rapidly embrace new learning tools and formats under tremendous pressure of external circumstances

caused by the COVID-19 pandemic. A qualitative study was performed to find out how this situation affected subjective well-being and emotional experiences of teachers and what strategies they utilized to cope with negative feelings.

Teaching is one of the most exhausting social activities, which is often fraught with psychological stress [Rean, Kolominsky 2000; Regush, Rean, Rogov 2007]. Recent international research indicates that when compared to members of other occupational groups, teachers experience higher rates of mental health problems [Schonfeld, Bianchi, Luehring-Jones 2017]. The main stress factors affecting teachers are job stressors, which include high workload, unsupportive administration [Guglielmi, Tatrow 1998], and excessive emotional involvement with students, their parents, and colleagues [Kokkinen et al. 2014; Schonfeld et al. 2010]. A number of longitudinal studies conducted in Australia, Sweden, Finland, Great Britain, Israel, United States, and other countries show that these stressors give rise to depression and irritability, have adverse effects on self-esteem and job satisfaction, predict psychosomatic symptoms, and may lead to addictions [Schonfeld, Bianchi, Luehring-Jones 2017]. All these are symptoms of burnout, one of the most severe consequences of prolonged exposure to stress, which consists in psychological inability to cope with work-related difficulties [Maslach, Schaufeli, Leiter 2001]. Risks of burnout are especially high when new working methods and tools have to be embraced during the pandemic and in self-isolation. Analysis of coping strategies for stress are thus an important prerequisite for the development of recommendations for teachers to help them maintain subjective well-being under trying circumstances.

Teacher well-being largely determines the quality of the modern education process, which is based around creating a safe environment conducive to development, creativity, learning, and socialization [Zaretsky 2020; Zausenko 2012; 2013]. Teachers satisfied with their lives and capable of protecting their own peace of mind are much better at inculcating in their students the qualities necessary to achieve the same outcomes [Zausenko 2013].

Extensive literature is devoted to the choice of suitable self-care and coping strategies for psychological stress [Griffith, Steptoe, Cropely 1999; Liao et al. 2012; Vachkov, Savenkova 2019; Gurieva, Afanasyeva 2019]. However, no uniform conception of effective teacher strategies for dealing with uncertainty exists so far [Vachkov, Savenkova 2019; Rasskazova, Gordeeva 2011].

The present study investigates the characteristics of psychological stress and coping strategies in the unique context of emergency remote teaching imposed by the COVID-19 pandemic. Its findings can also be used in other situations characterized by high levels of uncertainty, distress, and increased workload.

**1. Psychological Stress and Coping Strategies**

Physiologically, stress is the nonspecific response of the body to any external demand, directed at returning to the initial state [Selye 1979]. Cognitive processes and emotions play an important role in the response to specific stressors, largely determining the quality of recovery [Fink 2009]. Psychological stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being [Lazarus 1970]. This state can be described as two sub-processes: appraisal of the demand (stressor) and strategies for coping with it, or coping strategies.

Coping strategies are unique behavioral strategies that help overcome threats causing psychological stress [Lazarus, Folkman 1984]. Richard S. Lazarus and Susan Folkman distinguish between two major functions of coping: coping that is directed at managing or altering the problem causing the distress and coping that is directed at regulating emotional response to the problem. Accordingly, they distinguish between what they refer to as problem-focused coping (e. g. planning to solve the problem) and emotion-focused coping (e. g. looking for the silver lining or, by contrast, responding aggressively) [Ibid.]. Lazarus and Folkman's theoretical framework has been used in assessment of coping strategies [Carver, Scheier, Weintraub 1989] as well as in practical psychology.

An approach alternative to Lazarus and Folkman's theory suggests distinguishing between the personality and coping strategies and underlines the importance of a holistic perspective on behavioral strategies in stressful situations [Haan 1963; Kryukova 2004; Nartova-Bochaver 1997; Sergienko 2007]. Both approaches have supporters [Bityutskaya 2011; Sokolova 2007], and both require a specific research design. The present study explores methods of coping with stress in the specific situation of remote teaching during the pandemic. Actions taken by respondents to cope with stressors are qualified here based on Lazarus and Folkman's paradigm of coping strategies without making allowances for respondents' personality.

**2. Recent Findings on Teacher Stress and Coping**

The impact of psychological stress and stress management issues on human life has been demonstrated empirically a number of times: stress has adverse effects on overall psychological well-being [Fry 1995; Kuiper, Martin 1998] and work performance [Brown, Westbrook, Challagalla 2005; Leonova, Bagry 2009]. Teachers experience higher levels of stress than many other occupational groups, such as health-care professionals [Ingersoll 2003] or human service workers [Kokkinen et al. 2014], and are more likely to develop functional disorders, such as depressive and psychosomatic symptoms, etc. [Schonfeld, Bianchi, Luehring-Jones 2017]. Along with working conditions and excessive emotional involvement mentioned above, current trends in the development of education systems — the integration of new learning formats and information technology, which require learning new

skills and enhancing digital literacy — have become for many teachers a stressor which often makes them adopt avoidance strategies [Dmitrieva, Kachanovetskaya 2013]. Teachers today are in a desperate need of support, and searching for the most adaptive coping strategies to reduce work-related stress is a promising avenue of research.

Seeking social support is teachers' most popular behavioral strategy in a stressful situation [Aldrup, Klusmann, Lüdtkke 2017; Clipa 2017; Sandilos et al. 2018; Dmitrieva, Kachanovetskaya 2013; Osadchaya 2018]. This strategy may be qualified as both emotion- and problem-focused coping because it can be used to achieve different goals: solve a problem, obtain information (problem-focused coping), calm down, distract oneself, or release emotions (emotion-focused coping). Findings from a study of U.S. and British teachers imply that escape avoidance, accepting responsibility, and uncontrolled aggression are used as negative coping strategies and exercise is indicated to be an effective way of coping [Austin, Shah, Muncer 2005]. Years of teaching experience correlate positively with effective coping strategies in a teacher's repertoire. However, the same authors who revealed this correlation also show that more experienced teachers are more likely to suffer from burnout [Alhija 2015; Kukhterina, Fedina 2016; Ozerov 2011]. Therefore, the question of long-term adaptive coping strategies for teachers remains open.

The present publication continues the series of studies on teacher stress and coping and contributes to the body of research on how changes in life caused by the COVID-19 pandemic affect teachers' mental health and work performance [Petrikov et al. 2020; Rasskazova, Leontyev, Lebedeva 2020; Kharlamenkova et al. 2020].

Teachers themselves expressed a demand for interviews in which they could discuss their pandemic-related stressful experiences with psychologists, so the practical goal of research was to lend them every possible psychological help. Teachers were interviewed by one of the co-authors of this article, a clinical psychologist qualified to conduct supportive interviews of this kind.

The research goal consisted in analyzing how teachers coped with psychological stress and organized their remote teaching activities during the COVID-19 pandemic.

### **3. Research Methodology**

The study uses a qualitative data collection method of semi-structured interviews. Interviews were conducted using a dedicated interview guide and supportive techniques such as active listening, mirroring, and use of metaphors. The guide was designed to elicit information on the level of stress experienced, factors exacerbating or alleviating stress, and coping strategies. It comprised three modules of questions:

- Changes in working and home lives during the COVID-19 pandemic (time spent in self-isolation; use of distance learning (including

online) tools; communication with students, their parents, and colleagues; technological and psychological support from school administrators; changes in daily routines; interaction with family members);

- Perceived stress and coping strategies utilized (work-life balance during the lockdown; self-care techniques; daily routines, nutrition, sleep, socializing with friends and family, exercise);
- Perceptions of the future (returning back to normal; self-isolation practices that could be of use in the future; changes in relationships with students, their parents, and colleagues).

Interviews were conducted with 14 teachers (13 women and one man) from eight cities of Russia: Moscow, Khimki, Zheleznogorsk (Krasnoyarsk Krai), Omsk, Vorkuta, Saratov, Shakhty, and Yaroslavl. The number of years of teaching experience among the respondents ranged from 3 to 40. Seven respondents were middle school teachers, three taught elementary and middle school students, and one was a school administrator. Six of the teachers interviewed also worked as form teachers. Apart from subject teachers (in history, foreign language, etc.), the sample also included a school counselor, a psychologist, and deputy headmasters.

Time that respondents had spent in self-isolation and distance learning ranged from one week to two months. Such variance results from the fact that interviews were conducted over the period of two months (April–May 2020) and from regional differences in lockdown restrictions and remote work requirements, including those in distance learning.

Interviews were administered online. All the respondents gave their consent to participation in the present study and audio recording. Recordings were transcribed, and content analysis was used to analyze the data.

Content analysis revealed the following key themes: psychological stress (whether, how exactly, and how severely it is experienced), factors alleviating or exacerbating stress, and coping strategies. Results will be presented in accordance with these themes.

**4. Stress from Remote Teaching during the COVID-19 Pandemic**

Some respondents pointed out that they perceived the emergency transition to distance learning as a threat to their psychological well-being and health in general.

“That was a shock for our school.” (Respondent no. 1, three weeks into remote teaching)

“We were absolutely unprepared for this distance learning, absolutely.” (Respondent no. 2, two weeks into remote teaching)

For some, the feeling of uncertainty was particularly disturbing.

“This feeling of uncertainty all the time, because no one knows what happens next.” (Respondent no. 2, two weeks into remote teaching)

An abrupt change in working conditions caused acute emotional distress in some respondents.

“And then I went into hysterics, because all this stress, it’s not caused by everything that’s going on, it’s an emotional overload <...> By the end of the week I was fagged out, I just cried and went crazy, I mean, because of the overload.” (Respondent no. 4, two weeks into remote teaching).

Teachers who did not initially perceive the transition to distance learning as a threat or found resources to cope with the situation reported virtually no symptoms of psychological stress.

“I’m home, and I control my child, I know exactly what should be done and when, so I’m comfortable with the format.” (Respondent no. 5, about one month into remote teaching)

“I’m actually used to this format, I work a lot from home, with my kids, because of them in part. You just come, turn on the computer, as always, sit there, and work on <...> Yes, I lie on the couch! I need no make-up! I even don’t need no comb my hair—to think of it! And my dog is around, too. Benefits wherever I look.” (Respondent no. 6, three weeks into remote teaching)

“There’s no this fixed rule that you get up in the morning and head to school in any weather, rain or snow. Now, when it’s nasty outside, you’re home—such small things are really nice... It’s just convenient. In this sense, I wasn’t scared of staying home, it’s pretty familiar for me to be home. It feels more comfortable and safe psychologically, so working remotely gives me no strain.” (Respondent no. 7, about one month into remote teaching)

Interviews demonstrate that teachers who perceived the situation as threatening did not fear the pandemic itself (concerns about their own and their family’s health) but rather the abruptness of the transition from in-person to distance learning as well as the uncertainty about how long this period would last.

**5. Factors  
Alleviating or  
Exacerbating  
Stress**  
5.1. Administrative  
Support

Administrative support may manifest itself in a considerate way of notifying teachers about the transition to a new format, in preparation for such transition, in providing access to technical and information

resources, and in organization of psychological assistance from colleagues and administrators.

Interviews revealed a variety of teacher support strategies applied by schools during the transition to distance learning, from strong involvement to no support at all. Some teachers reported that school administrators had organized master classes and tutorials on various online platforms, experience exchange sessions, and mock online classes. Teachers who had an opportunity to seek assistance from IT departments or computer science teachers highly appreciated this supportive measure.

“Mock online classes started the day before the lockdown, while we were still in the workplace. Those who still had questions after such classes could seek assistance from experts... Our IT support guys have been doing great: they’re available 24/7, and we have special chats with them...” (Respondent no. 8, three weeks into remote teaching)

**Others, however, did not feel supported by the school administration.**

“I panicked because I’m not an advanced user. I would contact my colleagues who had similar problems, and we would deal with them on our own. Some were helped by their grown-up children, others by someone else, but there was no support from the school.” (Respondent no. 9, six weeks into remote teaching)

“We were just given recommendations as to which platforms we could use and what we could recommend to our students, but there are few resources for elementary school.” (Respondent no. 10, one month into remote teaching)

**Some teachers described the school’s strategy in the transition to distance learning as granting them complete freedom, which in fact was equal to no support at all.**

“On the one hand, we were granted freedom, but on the other, it was like we were not taken care of. No one discussed with us how exactly it was gonna work. They just gave us a command, and that was it.” (Respondent no. 2, two weeks into remote teaching)

When talking about administrative support, nearly all the respondents mentioned technology infrastructure and earlier experience of using online platforms by teachers as well as schools in general. For example, one of the schools had used Discord on a regular basis before the pandemic and made this platform its core technology during the lockdown. Yet, in some schools the transition to distance learning was performed at the expense of teachers’ personal resources.

"In fact, not every classroom at our school has access to the Internet. We were basically left to the devices that we had at home. I was lucky to have a laptop and a smartphone, but the storage regularly gets full and has to be cleared." (Respondent no. 10, one month into remote teaching)

The choice of tools for remote teaching and communication with students and their parents depended on households' access to technology as well as students' age and experience. Respondents who were quick enough to select their teaching and communication tools reported lower levels of stress.

**5.2. Workload** Increased teacher workload during the period of distance learning is caused not only by the need to seek new teaching methods and adjust content to the new format but also by intensified communication with students and their parents and an increased amount of homework to review. Some routine tasks became more difficult to perform in distance learning, such as reviewing written assignments and preparing feedback for each student. This complaint was most common among elementary school teachers and form teachers.

"My working days now end at 2 or 4 a. m. I should review all the assignments from every student. Sixty students send in their assignments, and each may have, say, four or seven attachments, it depends... Some of them don't see their assignments are under review already and send the entire amount of homework they did. Well, I need to look through all of this, because if they do it, they might need my help or assistance with something." (Respondent no. 10, one month into remote teaching)

"The only thing I can say is that I spend at least 12–14 hours a day on computer." (Respondent no. 11, two months into remote teaching)

"Each assignment should be reviewed individually, and you do it from the screen. You either print it all out or stare at the screen—it causes eye discomfort." (Respondent no. 12, six weeks into remote teaching)

**Elementary school teachers are engaged in communication with parents more than any other type of respondents.**

"Today is May 1, and I have over 100 messages <from parents> since last night, and they started coming quite late in the evening." (Respondent no. 10, one month into remote teaching)

Some teachers believe that the role of parents increased in distance learning and mention having hoped for their support. Others, meanwhile, say that they provided support to parents, particularly during the first days of lockdown.



"They may call to ask for assistance with homework as well as some family issues." (Respondent no. 10, one month into remote teaching)

**In distance learning, teachers spent a lot of time on finding formats that would allow them to deliver the material more effectively and support children's well-being.**

"Most kids... they need our facial expressions, our lips when they watch us, it's easier for them to understand this way... I normally record an audio or video message and drop it to the <parents'> chat group so that everyone could hear and watch me explain something and then show this to their children or put it in their own words." (Respondent no. 10, one month into remote teaching)

"I set strict deadlines: assignments should be submitted within two days. I make a reading list for them, indicating the chapter and the topic, and add a link, or a video or presentation if the link doesn't work, and give written test assignments. If there are no assignments, they just study theory." (Respondent no. 7, about one month into remote teaching)

"You have to consider a lot in advance and try to predict difficulties with comprehension that may arise—purely didactic moments. And you have to elaborate assignments more carefully and ask more comprehension questions than usual." (Respondent no. 13, three weeks into remote teaching)

"We meet <with children> via Zoom for a small talk because I need to see how the kids feel. You see, family relationships come to play a huge role in self-isolation, and some families have socioeconomic difficulties and hardships. So I need to see how the kids feel. It matters to me <...> And now we have Zoom meetings almost every day at 8 p. m. And we have this project, Bedtime Stories. Right now, we're reading about Winnie-the-Pooh." (Respondent no. 1, three weeks into remote teaching)

**Teachers tried various formats for their classes: video conferencing (sometimes only for consultations or homerooms), discussions, video-recorded tutorials, etc.**

"We actually analyzed cases that had been reviewed by the Constitutional Court. I clutched my head and panicked, but I had no other choice. There was no use in reading the textbook cuz it's empty talk, and lecturing made no sense either, so we studied court cases." (Respondent no. 8, three weeks into remote teaching)

"I think a fundamental outcome of my work is when a student becomes able to self-organize and do the work without me. Firstly, I de-

clare this as my goal. Secondly, classes are originally designed on the basis of “flipped classroom”. It’s vital to have students ask questions and engage them in conversation. I keep using group work techniques, so that each group of students is assigned their own cha-  
troom.” (Respondent no. 6, three weeks into remote teaching)

In addition, teachers started paying more attention to feedback.

“If a child knows his or her work will be reviewed and assessed, it total-  
ly motivates them. I review assignments very carefully, and they know  
it.” (Respondent no. 10, one month into remote teaching)

### 5.3. Work-Life Balance

Transition to the new format and increased workload affected the  
work-life balance. A number of respondents were stressed by difficul-  
ties protecting their personal space.

“Up to May 1, we would constantly receive all kinds of requests and  
instructions on WhatsApp. We were available for the headmaster  
day and night. In the end, someone asked her to give us some rest  
on Sunday, because it took all the time, this WhatsApp, this smart-  
phone, this incessant work.” (Respondent no. 9, six weeks into re-  
mote teaching)

For some respondents, allowing themselves some personal space be-  
came a challenge but at the same time a source of energy.

“Ever since pre-pandemic days, I’ve got my English course. This is my  
rigidly scheduled personal time when I study English, period. It dis-  
tracts me a lot and just makes me feel better. Whatever state you’re  
in, you do it just to rewire your brain to a different language... This is  
crucial for me.” (Respondent no. 8, three weeks into remote teaching)

“And parents don’t understand that I can’t bury myself in the comput-  
er <...> and then, maybe two weeks later, I texted in the group chat,  
“Dear parents, let’s set a break between 12 and 13 p.m.” (Respondent  
no. 10, one month into remote teaching)

As we can see, factors alleviating or exacerbating teachers’ stress in-  
duced by the transition to distance learning include administrative sup-  
port (or lack of it), increased workload caused by the need to seek new  
teaching methods and keep in touch with students, intensified com-  
munication with parents, and disrupted work-life-balance.

## 6. Coping Strategies

A few respondents tried to look on the bright side of things through-  
out the period of teaching in self-isolation.

"I do believe in God, and I understand that if we are sent into a situation, it means we need it and we ought to go through it <...> I think when people stop, during this period of slowdown, they should catch this feeling, something like 'I love you all', and change a little for the better." (Respondent no. 4, two weeks into remote teaching)

"I've found myself thinking, when I approach a traffic light and it changes from green to red right in front of me... Back in normal life, I would feel bad about it and think, 'There we go, I'm late, what a shame.' And now I think, 'How nice, I'm gonna stand for a whole minute in the sunshine.'" (Respondent no. 3, two weeks into remote teaching)

**Nearly all the respondents say that the situation at hand is a good opportunity to learn new skills for employing modern technology and distance learning practices. This is especially valuable for teachers from regions with long winters and extremely low temperatures.**

"For our region, it will definitely improve performance in case of weather-related cancellations. I mean, these distance learning practices should be extrapolated to such days. It would be a big win if our teachers used their skills with online learning platforms to teach more effectively in such situations." (Respondent no. 5, about one month into remote teaching)

"We live in Siberia and we have freezing temperatures at times. And usually, when we did, distance learning was announced officially, but children didn't study because we didn't know what to do with them. At least now we have some idea." (Respondent no. 2, two weeks into remote teaching)

**Leisure activities was another coping strategy for managing stress.**

"My hobby is making beaded brooches, and now I'm in the middle of an online course. The instructor is currently located in Israel, so we use Google Forms and Google Classroom to study and do our assignments." (Respondent No. 2, two weeks into remote teaching)

"I took out my knitting today, I've been dreaming of knitting in front of the TV for several months, and now I'm gonna finally do it, yay!" (Respondent no. 3, two weeks into remote teaching)

**Respondents took longer walks with their pets, and some of them starting exercising.**

"Me and my family members, we found some Latin dance online courses, so now we dance. It's fun, it's laughable, and it's some kind of release." (Respondent no. 1, three weeks into remote teaching)

Socializing with family and friends also worked as a factor alleviating negative emotions.

"I now call my mom more often because I understand she needs socializing too. She goes out to her large balcony and walks around it with the phone in her hand. She says, 'Right, I'm walking, talk to me.'" (Respondent no. 3, two weeks into remote teaching)

"Socializing with friends via Skype and Telegram helps a lot. But it has to be a pool of people you really want to talk to." (Respondent no. 8, three weeks into remote teaching)

Most respondents managed to find "positive" coping strategies. However, anxiety about remote teaching and uncertainty about the future of teaching prompted some interviewees to respond aggressively.

"Everyone says it's the future, this distance learning, but I think it's just not for me. The teacher cannot be reduced to a fancy moving puppet!" (Respondent no. 9, six weeks into remote teaching)

"I'm not optimistic! I know perfectly well that education will be gradually forced into the virtual environment! <...> A human being should be nearby, and that's what I'm very concerned about. As soon as humans are removed from the chain of transfer of sociocultural experiences, they will stop being humans." (Respondent no. 14, six weeks into remote teaching)

To sum up, the interview data reveals the following major coping strategies: (a) looking for the silver lining and trying to find something good or even useful in the situation, (b) engaging in favorite activities and exercise, and (c) socializing with friends and family. In some cases, the strategy of aggression was also applied.

## **7. Characteristics of Psychological Stress and Coping Strategies during the Transition to Distance Learning**

Psychological stress during the COVID-19 pandemic was caused by the living conditions as such, i. e. the constant risk of infection that led to mandatory self-isolation [Kharlamenkova et al. 2020]. At the same time, teachers had to embrace modern technology and remote teaching practices within an extremely short period of time, while supporting students and their parents and maintaining students' motivation for learning.

Teachers involved in the study reported various levels of psychological stress experienced. Remarkably, their stress was not caused by the pandemic itself with its threats to life and health, but rather by the emergency transition to distance learning and the associated uncertainty.

Findings reveal that stress was exacerbated by the lack or absence of the following: administrative support, preparedness for the transition to distance learning, technical and information resources, and psychological support from colleagues and administrators.

Essentially increased workload became a critical stressor for teachers, manifesting itself in the need to seek new methods of teaching and lesson preparation in the context of distance learning, intensified communication with students and their parents, and increased amount of homework to review. Work overload was reported most often by elementary school teachers and form teachers, which may be due to specific job features and the age of children that they worked with. Analysis of the relationship between workload and specific characteristics of the teaching profession may become an avenue for further research.

Results of the present study are mostly consistent with earlier findings about teacher stress being caused by working conditions (high workload, no administrative support) and excessive emotional involvement in relationships with students, their parents, and colleagues [Schonfeld et al. 2010; Bagnetova 2017]. However, the transition to distance learning introduced a stress-exacerbating factor that had never been the focus in earlier studies: the work-life balance was seriously disrupted by working from home and increased workload. Challenges associated with protecting one's personal space may be a stressor and thus require further investigation.

Design of the present study does not allow making inferences about the relationship between individual teacher characteristics such as years of experience, weeks/months into remote teaching, and region of residence, on the one hand, and stress-exacerbating factors, on the other. Possible mutual influences among these factors also present a promising area of research.

Judging by interview results, teachers utilize a variety of strategies to cope with stress and mitigate its consequences. One of them consists in looking for the silver lining and/or new opportunities in the situation, or positive re-appraisal—an example of emotion-focused coping according to Lazarus and Folkman's theory. Another example of emotion-focused coping is aggression, where the teacher looks on the dark side of things.

Hobby and exercise distracted teachers from work-related stressors and helped them boost their energy levels, which is in line with the finding that exercise is one of the most effective emotion-focused coping strategies [Austin, Shah, Muncer 2005].

Socializing with family and friends and seeking assistance from colleagues (seeking social support, in Lazarus and Folkman's terms) can be regarded as both emotion- and problem-focused coping—as a way of settling nerves and searching for support in solving specific problems. In the present study, this coping strategy had a double meaning as well: some respondents mentioned interactions with family, friends, and colleagues as a pleasant pastime to alleviate negative

emotions caused by the lockdown (emotion-focused coping), but many also viewed socializing as an opportunity to obtain the information necessary for embracing new technology (problem-focused coping).

Research design does not allow measuring the incidence of emotion- and problem-focused coping among teachers. A quantitative study could be a good way of answering this question.

**8. Conclusions** Analysis of interviews with teachers reveals factors associated with teacher psychological stress and coping strategies in the unique situation of transition to distance learning during the COVID-19 pandemic. As a next step, the impact of every factor on the level of psychological stress as well as the incidence and effectiveness of different coping strategies could be explored.

Yet, the results of the present study already point to the need for creating a system to support teachers' mental health, which we regard as requisite to promote education effectiveness in terms of both learning outcomes and psychological well-being of all participants in the learning process.

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- References**
- Aldrup K., Klusmann U., Lüdtke O. (2017) Does Basic Need Satisfaction Mediate the Link between Stress Exposure and Well-Being? A Diary Study among Beginning Teachers. *Learning and Instruction*, vol. 50, November, pp. 21–30.
- Alhija F. N.-A. (2015) Teacher Stress and Coping: The Role of Personal and Job Characteristics. *Procedia—Social and Behavioral Sciences*, vol. 185, May, pp. 374–380.
- Austin V., Shah S., Muncer S. (2005) Teacher Stress and Coping Strategies Used to Reduce Stress. *Occupational Therapy International*, vol. 12, no 2, pp. 63–80.
- Bagnetova E. A. (2017) Faktory professionalnogo stressa pedagogov obshcheobrazovatelnykh shkol [Factors of Professional Stress of Educators in General Education Schools]. *The Surgut State Pedagogical University Bulletin*, no 3 (48), pp. 84–88.
- Bityutskaya E. V. (2011) Sovremennyye podkhody k izucheniyu sovladaniya s trudnymi zhiznennymi situatsiyami [Modern Approaches to the Research of Coping with the Difficult Life Situations]. *Moscow University Psychology Bulletin*, no 1, pp. 100–111.
- Brown S. P., Westbrook R. A., Challagalla G. (2005) Good Cope, Bad Cope: Adaptive and Maladaptive Coping Strategies Following a Critical Negative Work Event. *Journal of Applied Psychology*, vol. 90, no 4, pp. 792–798.
- Carver C. S., Scheier M. F., Weintraub J. K. (1989) Assessing Coping Strategies: A Theoretically Based Approach. *Journal of Personality and Social Psychology*, vol. 56, pp. 267–283.
- Clipa O. (2017) Teacher Stress and Coping Strategies. *Studies and Current Trends in Science of Education* (ed. O. Clipa), Suceava, Romania: LUMEN Proceedings, pp. 120–128.

- Dmitrieva N. Yu., Kachanovetskaya N. I. (2013) Razlichnye koping-strategii prepodavateley v zavisimosti ot urovnya motivatsii k innovatsionnoy deyatel'nosti [Various Coping-Strategy of Teachers Depending on Motivation Level to Innovative Activity]. *Vestnik Rossiiskogo universiteta druzhby narodov. Seriya: Ekologiya i Bezopasnost' Zhiznedeyatel'nosti / RUDN Journal of Ecology and Life Safety*, no 3, pp. 55–60.
- Fink G. (2009) Stress: Concepts, Definition and History. *Encyclopedia of Neuroscience* (ed. L. R. Squire), New York: Academic Press, pp. 549–555.
- Fry P.S. (1995) Perfectionism, Humor, and Optimism as Moderators of Health Outcomes and Determinants of Coping Styles of Women Executives. *Genetic, Social, and General Psychology Monographs*, vol. 121, no 2, pp. 211–245.
- Griffith J., Steptoe A., Cropley M. (1999) An Investigation of Coping Strategies Associated with Job Stress in Teachers. *British Journal of Educational Psychology*, vol. 69, no 4, pp. 517–531.
- Guglielmi R. S., Tatrow K. (1998) Occupational Stress, Burnout, and Health in Teachers: A Methodological and Theoretical Analysis. *Review of Educational Research*, vol. 68, no 1, pp. 61–99.
- Gurieva S. D., Afanasyeva Ju. A. (2019) Koping-povedenie pedagoga v kontekste professional'nogo stressa [Coping -Behavior of Teacher in the Context of Professional Stress]. *Mir pedagogiki i psikhologii*, no 5 (34), pp. 162–168.
- Haan N. (1963) Proposed Model of Ego Functioning: Coping and Defense Mechanisms in Relationship to IQ Change. *Psychological Monographs: General and Applied*, vol. 77, no 8, pp. 1–23.
- Ingersoll R. M. (2003) Why Schools Have Difficulty Staffing their Classrooms with Qualified Teachers. *Educational Leadership*, vol. 60, no 8, pp. 30–33.
- Kharlamenkova N., Bykhovets Yu., Dan M., Nikitina D. (2020) *Perezhivanie neopredelennosti, trevogi, bespokojstva v usloviyakh COVID-19* [Experiencing Uncertainty, Anxiety, and Worry in the Context of COVID-19]. Moscow: Institute of Psychology of Russian Academy of Sciences. Available at: [http://www.ipras.ru/cntnt/rus/institut\\_p/covid-19/kommentarii-eksp/har-1.html](http://www.ipras.ru/cntnt/rus/institut_p/covid-19/kommentarii-eksp/har-1.html) (accessed 12 January 2021).
- Kokkinen L., Kouvonen A., Koskinen A., Varje P., Väänänen A. (2014) Differences in Hospitalizations between Employment Industries, Finland 1976 to 2010. *Annals of Epidemiology*, vol. 24, no 8, pp. 598–605.
- Kryukova T. L. (2004) *Psikhologiya sovladayushchego povedeniya* [Psychology of Coping Behavior]. Kostroma: Avantitul.
- Kuiper N. A., Martin R. A. (1998) Laughter and Stress in Daily Life: Relation to Positive and Negative Affect. *Motivation and Emotion*, vol. 22, no 2, pp. 133–153.
- Kukhterina G. V., Fedina L. V. (2016) Strategii zashchitno-sovladayushchego povedeniya pedagogov v zavisimosti ot stazha professional'noy deyatel'nosti [Strategy Protective-Coping Behavior of Teachers with Different Experience of Professional Activities]. *World of Science. Pedagogy and Psychology*, vol. 4, no 2, pp. 57–65.
- Lazarus R. (1970) Teoriya stressa i psikhofiziologicheskie issledovaniya [Theory of Stress and Psychophysiological Research]. *Emotsionalny stress* [Emotional Stress] (ed. L. Levi), Leningrad: Meditsina, pp. 178–208.
- Lazarus R. S., Folkman S. (1984) *Stress, Appraisal, and Coping*. New York: Springer.
- Leonova A. B., Bagriy M. A. (2009) Sindromy professional'nogo stressa u vrachey raznykh spetsializatsiy [Occupational Stress among Different Doctor's Specializations]. *Moscow University Psychology Bulletin*, no 3, pp. 44–53.
- Liao C.-W., Chen C.-H., Tien L.-C., Lai F.-P. (2012) A Study on Teaching Problems and Coping Strategies of Social Study Field Teachers. *Workshop on Learning Technology for Education in Cloud (LTEC'12)*, pp. 121–129.
- Maslach C., Schaufeli W. B., Leiter M. P. (2001) Job Burnout. *Annual Review of Psychology*, vol. 52, pp. 397–422.
- Nartova-Bochaver S. K. (1997) Coping behavior v sisteme ponyatiy psikhologii lichnosti [Coping Behavior in the System of Concepts of Personality Psychology]. *Psikhologicheskii zhurnal*, vol. 18, no 5, pp. 20–30.

- Osadchaya E. A. (2018) Osobennosti koping-strategiy pedagogov [Features of Teachers' Coping Strategies]. *Molodoy ucheny*, no 30, pp. 154–157.
- Ozerov D. B. (2011) Osobennosti koping-strategiy u pedagogov s raznyim tipom subjektivnoy regulyatsii i stazhem raboty [Features of Coping Strategies for Teachers with Different Types of Subject Regulation and Work Experience]. *Aktualnye voprosy pedagogiki i psikhologii: Materialy Mezhdunarodnoy zaochnoy nauchno-prakticheskoy konferentsii (Novosibirsk, 1 avgusta 2011 g.)* [Topical Issues of Pedagogy and Psychology: Materials of the International Correspondence Scientific and Practical Conference (Novosibirsk 2011, 1 August), Novosibirsk: ENSKE.
- Petrikov S. S., Kholmogorova A. B., Suroegina A. Yu. et al. (2020) Professionalnoe vygoranie, simptomy emotsionalnogo neblagopoluchiya i distressa u meditsinskikh rabotnikov vo vremya epidemii COVID-19 [Professional Burnout, Symptoms of Emotional Disorders and Distress among Healthcare Professionals during the COVID-19 Epidemic]. *Konsultativnaya psikhologiya i psikhoterapiya / Counseling Psychology and Psychotherapy*, vol. 28, no 2, pp. 8–45.
- Rasskazova E. I., Gordeeva T. O. (2011) Koping-strategii v psikhologii stressa: podkhody, metody i perspektivy issledovaniy [Coping Strategies in the Psychology of Stress: Approaches, Methods, Perspectives]. *Psikhologicheskies issledovaniya*, no 3, p. 4.
- Rasskazova E. I., Leontiev D. A., Lebedeva A. A. (2020) Pandemiya kak vyzov subyektivnomu blagopoluchiyu: trevoga i sovladanie [Pandemic as a Challenge to Subjective Well-Being: Anxiety and Coping]. *Konsultativnaya psikhologiya i psikhoterapiya / Counseling Psychology and Psychotherapy*, vol. 28, no 2, pp. 90–108.
- Rean A. A., Baranov A. A. (1997) Faktory stressoustoychivosti uchiteley [Factors of Stress Resistance of Teachers]. *Voprosy psikhologii*, no 1, pp. 45–54.
- Rean A. A., Kolominskiy Ya. L. (2000) *Sotsialnaya pedagogicheskaya psikhologiya* [Social Pedagogical Psychology]. Saint-Petersburg: Piter.
- Regush L. A., Rean A. A., Rogov E. I. (2007) Praktiko-orientirovannaya kontseptsiya psikhologicheskoy podgotovki pedagogov [Practice-Oriented Concept of Psychological Training of Teachers]. *Vestnik prakticheskoi psikhologii obrazovaniya / Bulletin of Psychological Practice in Education*, no 1, pp. 39–42.
- Sandilos L. E., Goble P., Rimm-Kaufman S. E., Pianta R. C. (2018) Does Professional Development Reduce the Influence of Teacher Stress on Teacher–Child Interactions in Pre-Kindergarten Classrooms? *Early Childhood Research Quarterly*, vol. 42, March, pp. 280–290.
- Schonfeld I. S., Bianchi R., Luehring-Jones P. (2017) Consequences of Job Stress for the Mental Health of Teachers. *Educator Stress. Aligning Perspectives on Health, Safety and Well-Being* (eds T. McIntyre, S. McIntyre, D. Francis), Springer, pp. 55–75.
- Schonfeld I. S., Farrell E., Ganster D. C., Perrewé P. L. (2010) Qualitative Methods Can Enrich Quantitative Research on Occupational Stress: An Example from One Occupational Group. *New Developments in Theoretical and Conceptual Approaches to Job Stress*, vol. 8, pp. 137–197.
- Selye H. (1979) *Stress bez distressa* [Stress without Distress]. Moscow: Progress.
- Sergienko E. (2007) Subyektivnaya regulyatsiya i sovladayushchee povedenie [Subject Regulation and Coping Behavior]. *Psikhologiya sovladayushchego povedeniya. Materialy Mezhdunarodnoy nauchno-prakticheskoy konferentsii (Kostroma, 16–18 maya 2007 g.)* [Psychology of Coping Behavior. Proceedings of the International Scientific and Practical Conference (Kostroma, May 16–18 2007)], pp. 64–66.
- Sokolova E. T. (2007) Fenomen psikhologicheskoy zashchity [The Phenomenon of Psychological Defense]. *Voprosy psikhologii*, no 4, pp. 64–66.
- Vachkov I. V., Savenkova M. A. (2019) Osobennosti emotsionalnogo vygoraniya pedagogov s raznymi vidami koping-strategiy [Features of Emotional Burnout of Teachers with Different Types of Coping Strategies]. *Vestnik of Moscow City University. Series «Pedagogy and Psychology»*, no 3 (49), pp. 84–95.
- Zareskii Yu. V. (2020) Opyt psikhologicheskogo konsultirovaniya uchiteley, rabotayushchikh v rezhimakh onlain i oflain [Psychological Counseling of Teachers Working



Online and Offline]. *Konsul'tativnaya psikhologiya i psikhoterapiya / Counseling Psychology and Psychotherapy*, vol. 28, no 2 (108), pp. 137–150.

Zausenko I.V. (2013) Psikhologicheskoe blagopoluchie shkolnikov i pedagogov v period vvedeniya Federalnogo gosudarstvennogo obrazovatel'nogo standarta [Psychological Well-Being of Pupils and Teachers during the Period of Introduction of the Federal State Educational Standard]. *Pedagogical Education in Russia*, no 4, pp. 196–199.

Zausenko I.V. (2012) Psikhologicheskoe blagopoluchie pedagoga [Psychological Well-Being of a Teacher]. *Pedagogical Education in Russia*, no 2, pp. 28–31.