



Mental well-being of teachers working at home during the COVID-19 pandemic

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ABSTRACT

Introduction: Teachers in Bosnia and Herzegovina had insufficient skills in educational technology but had to lead the introduction of online teaching and adapt all aspects of the educational process to the online environment, which placed a great burden on them. The main objective of this research was to identify the challenges faced by teachers during the lockdown period. The sudden shift to online teaching, lack of preparation, and social isolation resulted in significant changes in job demands, perceived control, and social support in the workplace.

Methods: A correlational study was conducted with a sample of 345 employees in the education sector in Bosnia and Herzegovina. Descriptive analysis, multiple regression analysis, and *t*-tests were performed using SPSS version 20.0.

Results: The results indicate that teachers who did not have adequate workspace at home experienced greater workload but remained highly motivated. High job demands and low social support at work are associated with increased stress and decreased psychophysical functioning, while higher social support is associated with higher life satisfaction. In addition, higher job demands and stronger social support were related to greater intrinsic and extrinsic motivation at work.

Conclusion: Results show that teachers lacking proper home workspaces reported their work as notably more demanding and stress-inducing, with a reported decline in their overall psychophysical well-being. Moreover, they expressed a reduced sense of control over their work, diminished social support, and lower levels of life satisfaction. These findings provide a valuable foundation for developing recommendations to address crisis situations in education, particularly when teachers transition from physical classrooms to virtual spaces, which is also important for online teaching and learning in typical times.

Keywords: Pandemic; well-being; motivation; working from home; physical and psychosocial factors

INTRODUCTION

The COVID-19 pandemic radically changed every aspect of our lives, from the global economy to social rituals (1). Businesses and employers have had to adapt quickly to the new reality, moving from traditional office work to work from home. Before the pandemic, working from home was mostly voluntary, less common, and less dramatic (2,3), making it difficult to draw conclusions about employee well-being based on previous evidence. The unexpected nature of the pandemic forced millions of people to adapt to new digital forms of communication. While certain industries, such as IT, are naturally inclined to telework, industries that have traditionally struggled to adapt to the online environment, such as education, have also been forced to embrace remote work. The demands of modern

education make digitization a necessity, and the pandemic has accelerated the process of integrating digital tools into teaching and learning. In the post-pandemic period, education stakeholders are taking advantage of the lessons learned and working diligently to digitize teaching and learning to encourage more hybrid and distance learning activities in the future. However, it is very important to consider the challenges and consequences that teachers face during this time to better prepare for the future.

Pérez Pérez et al. (4) defines home-based work as “work organization using information and communication technologies that allow workers and managers to access their work activities from remote locations.” It is beneficial for maintaining work capability and providing essential services during and after the outbreak of a severe pandemic. Despite evidence of the benefits of remote work, however, it must be acknowledged that not all occupations or workers are equally flexible or willing to adapt to this form of work (5). Many workers face significant challenges, especially when their primary tasks require face-to-face contact. Difficulties include work-life balance, increased workload,

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lower productivity, limited social interactions, inadequate space and equipment, and a lack of digital skills. Individuals who work from home often encounter communication barriers such as internet connectivity issues or unavailability of electronic devices, feelings of isolation, anxiety due to 24/7 accessibility to supervisors, increased work demands, and unhealthy habits. These findings highlight the urgent need for targeted support to increase the efficiency of individuals who work from home (6). This is particularly important in the education sector. The closure of schools due to the pandemic COVID-19 occurred at a time when digitalization in education was well advanced. However, schools in Bosnia and Herzegovina have lagged behind EU countries in adopting new teaching methods and providing equipment and Internet access, leading to significant challenges in online teaching and learning. Teachers in Bosnia and Herzegovina had insufficient skills in educational technology but had to lead the introduction of online teaching and adapt all aspects of the educational process to the online environment, which placed a great burden on them.

According to Karasek and Theorell (7), work strain is the result of three psychosocial factors at work: Job demands, job autonomy, and social support at work. Job demands include quantitative demands (too much work, demands to work overtime, the fast pace of work), learning demands (acquiring new skills and knowledge), and decision demands (demands to make quick and complex decisions). Work demands are not always perceived as negative factors, but if they become too much of a burden and require too much adaptation, they will become stressors (8,9). Autonomy at work refers to the autonomy of the employee to decide about the amount and pace of work, while social support is the “total level of useful interactions available at work from supervisors and coworkers” (7). The work strain is the result of the interaction of the three, where the highest strain is expected for workers who perceive high demands, low autonomy, and low social support, while the best outcome happens when workers have high demands, but also a high level of autonomy and high levels of social support. The level of work strain is connected to employees’ psychological well-being.

Psychological well-being is usually defined as the overall effectiveness of psychological functioning (10). Numerous studies over the past 50 years (11,12) have shown that psychosocial factors at work, such as time pressure, work overload, and emotional demands, have a significant impact on individual well-being, including occupational burnout. Conversely, resources such as autonomy and social support have a positive impact on work engagement and job satisfaction (13,14). Trust in colleagues is often associated with positive indicators of psychological well-being and other motivational factors such as perceived self-efficacy and commitment to students (15).

Collie et al. (16) have reported that teachers who have positive relationships with their colleagues and students tend to experience higher levels of well-being at work and in life in general. However, Alves et al. (17) indicated that the pandemic has diminished teachers’ perceptions of well-being and raised new concerns about their professional futures, highlighting the need to prioritize protecting teachers’ mental health by reducing work stress and increasing available social support.

Work motivation is explained by various theories, and one of the currently dominant theories is the self-determination theory (18). This theory proposes a continuum ranging from amotivation to intrinsic motivation, with four types of extrinsic motivation (external, introjected, identified, and integrated regulation) in between. External regulation is considered closer, and relatively related to amotivation, while integrated regulation is closer to intrinsic motivation. Employees who work from home often report lower motivation due to loneliness and difficulty coordinating activities (2) and are significantly less motivated compared with workers who work in the office, especially when they do not have a choice about their mode of work. This decline in motivation can be attributed among other factors, to the economic and emotional pressures associated with the challenges of working from home, especially during the pandemic (19). Motivation plays a critical role in teachers’ sense of accomplishment, satisfaction, and well-being (20). In addition to personal well-being, job satisfaction consistently negatively correlates with lower levels of organizational absenteeism and turnover (21-24). Working from home during the pandemic has led to significant changes in teacher motivation, with changes in the environment impacting their enthusiasm for work-related activities. Maintaining high motivation among teachers during remote work is crucial for successful performance, as the complex nature of teaching in the online environment requires them to quickly overcome challenges. Therefore, their motivation should remain stable in the dynamically evolving teaching environment. Thus, the main objective of this research was to determine the levels of well-being and motivation of teachers in remote work conditions and explore their relationship with physical and psychosocial work characteristics, including job demands, job control, and support from colleagues and superiors.

Two hypotheses are defined:

1. Workers who did not have adequate physical space at home for remote work during the pandemic will report lower well-being and motivation than those who reported having adequate space at home for remote work.
2. Higher job demands, lower job control, and lower social support from colleagues and supervisors will be negatively correlated with teachers’ well-being and work motivation.

METHODS

The initial number of participants was 360 teachers from preschools, elementary schools, high schools, and universities in the Sarajevo and Zenica regions. Fifteen participants were excluded because they did not work from home, so the final sample size was 345. Among the participants, 298 (86.4%) were women and 47 (13.6%) were men. The average age of the respondents was 40.7 years (Standard Deviation [SD] 9.30). A total of 286 (83.1%) respondents worked in a hybrid model (office and remote), while 58 (16.9%) worked exclusively online and remotely. Regarding the availability of adequate space for undisturbed work at home, 202 (59.2%) respondents reported having adequate space, while 139 (40.8%) reported not having adequate space.

For data collection, we used a questionnaire that included several measures. All scales were translated using a back-translation procedure, where a bilingual researcher translated the scales into the new language, and another independent researcher not acquainted with the study topic or objectives translated it back to the original language to see how the scales compare. There were no significant semantic or stylistic differences found between the original and translated form (25). The sociodemographic questionnaire included questions on age, gender, and employment status. Ergonomic characteristics of the workplace were assessed with a question: "Did you have adequate space for uninterrupted work while working from home?" Possible responses were "yes" and "no." The "work demands" and "work control" subscales from The Nordic Questionnaire for Psychological and Social Factors at Work (26) were adapted to the educational context and used for data collection. The Work Demands scale contained 13 items measuring quantitative demands, decision-making demands, and learning demands. However, in the data analysis, these subscales were not taken into consideration separately, and only the global construct of work demands was used. Cronbach α for this scale was 0.92. The job control scale included 7 items and measured control over decision-making and control over the subject of the job. Only the global job control measure was used in the analysis. Reliability analysis yielded a high Cronbach α coefficient of 0.85. In both scales, each item is rated on a Likert-type scale of 1–5 (1 very rare or never; 5 very frequent or always). A higher score on the scales indicates a higher degree of control, i.e. autonomy at work, as well as job demands. For the purpose of examining perceived social support, items from two different scales were used – support of work colleagues (27), and support of supervisor at work (28). The final scale consisted of 11 items measuring emotional, instrumental, technical, and technological support from colleagues and supervisor. Items are rated on a Likert-type scale 1–5 (1 = strongly disagree; 5 = strongly agree). A higher score on the scale indicates greater support from work colleagues and superiors. The α index for this scale is 0.90. Work motivation was measured by the Multidimensional Work Motivation Scale (29). The scale consists of 19 items that represent five constructs: amotivation, external regulation, introjected regulation, identified regulation, and intrinsic motivation. In this research, a translated and validated version of the scale in the Croatian language was used (30). Reliability analysis showed that the value of the α -coefficient was 0.87. Stress symptoms (perceived stress at work) were measured with the Perceived Stress Scale, which was created as a sum of selected items from three stress subscales included in the Copenhagen Psychosocial Questionnaire (31). The scale is composed of a total of 12 items divided into three subscales: behavioral, cognitive, and somatic stress. Respondents were asked to rate each item on a 5-point scale ranging from 1 (never) to 5 (very often or always). A higher score indicates a higher level of stress. Reliability analysis showed that Cronbach α for this scale was 0.93. A short version of the General Health Questionnaire-12 (32) was used to examine the state of general psychophysical functioning. The questionnaire consists of 12 questions. In each of these questionnaires, respondents rate the severity of a psychological problem in a specific past period using a 4-point scale.

A higher score indicates a worse condition. Reliability analysis showed that the α -coefficient for this scale was 0.83. Life satisfaction was measured with the satisfaction with life scale (33). The scale includes five items and is designed to measure a general cognitive assessment of a person's life satisfaction. Respondents indicate how much they agree or disagree with each of the items using a 7-point Likert-type scale ranging from 7-I completely agree to 1-I completely disagree. A higher score on the scale indicates greater life satisfaction. The reliability analysis showed a high result with an α -coefficient of 0.93.

The online survey was conducted in the spring of 2021. The link to the survey was distributed to teachers through email. Participants were guaranteed anonymity and informed that they could withdraw from the research at any time. As an incentive for participating in the survey, respondents were offered the opportunity to enter a prize draw for a gift voucher as a token of gratitude from the researchers. In addition, participants had the opportunity to request feedback on their own results, which were sent to them upon completion of the study. The data were statistically analyzed using SPSS version 20.0 software.

Ethical approval was obtained from the Ethics Committee of the Faculty of Philosophy of the University of Zenica.

RESULTS

Descriptive analysis was performed to describe the sample, the reliability of the scales was tested by reliability analysis, and multiple regression analysis was performed to test the hypotheses. To analyze the differences in the measured variables depending on the presence of an adequate workspace in the home office, the *t*-test was performed.

Descriptive results (Table 1) indicate that respondents reported perceiving demands at work as moderate (mean 3.36, SD 0.80), having a lower level of control over work (mean 2.48, SD 0.84), and moderate support at work (mean 3.2, SD 0.88). However, analysis of the perceived support subscales shows that although emotional (mean 3.46, SD 0.98), instrumental (mean 3.53, SD 1.04), and superior support (mean 3.24, SD 1.33) were reported at similar levels, the technical and technological aspects of support were reported significantly lower (mean 2.66, SD 0.95). Extrinsic motivation was reported as moderate (mean 3.9, SD 1.05), whereas intrinsic motivation reports were significantly higher (mean 5.46, SD 1.5) and amotivation was extremely low (mean 1.4, SD 0.88). The respondents reported their general psychophysical functioning as relatively high (mean 2.02, SD 0.45), as a lower score on this scale indicates a lower presence of psychological and physical difficulties. On average, respondents reported perceiving stress symptoms very rarely to sometimes during the past school year (mean 2.44, SD 0.84), with emotional stress being reported as the highest, followed by cognitive and somatic stress being the lowest. Life satisfaction was reported as relatively high, as respondents on average partially agreed with items indicating high life satisfaction (mean 4.86, SD 1.42). Regarding the normality of distributions, generally, the values for asymmetry and kurtosis between -2 and $+2$ are considered acceptable to prove normal univariate distribution, and some authors argue that it

is considered to be normal if skewness is between -2 and +2 and kurtosis is between -7 and +7. Based on the values in Table 1, it can be concluded that the distributions of each variable can be considered normal. Table 2 shows that correlations among constructs vary from low to high, mostly being statistically significant.

For examining the differences between means of measured constructs between respondents who did and did not have adequate physical space for undisturbed work, a *t*-test for independent samples was performed (Table 3). The assumption of homogeneity of variance was met on all scales except the Scale of Work Demands ($p = 0.041$; $p < 0.05$). Therefore, Welch's *t*-test for unequal variances was used to examine the differences between group means on this scale, while *t*-test was performed for other scales. Significant differences were found between the groups on all scales, except on the Work Motivation Scale ($t [339] = -1.28$, $p > 0.05$, $d = -0.13$). The respondents who reported not having adequate physical space for uninterrupted work also reported

perceiving higher demands at work ($t [339] = -3.13$, $p < 0.05$, $d = -0.33$), less control ($t [339] = 4.17$, $p < 0.05$, $d = 0.46$) and less support in the workplace ($t [339] = 2.77$, $p < 0.05$, $d = 0.31$), lower life satisfaction ($t [339] = 2.99$, $p < 0.05$, $d = 0.33$), higher stress in the workplace ($t [339] = -3.35$, $p < 0.05$, $d = -0.37$), and had lower general psychophysical functioning ($t [339] = -3.82$, $p < 0.05$, $d = -0.41$). Cohen's *d* values indicate medium effect sizes for all variables except work motivation, which is in line with other results obtained in this study.

The second hypothesis was tested using separate multiple regression analyses for five criterion variables (intrinsic motivation, extrinsic motivation, life satisfaction, perceived stress, and general psychophysical functioning), while for each criterion the defined predictors were work demands, work control, and social support. The assumptions considered prerequisites for performing this type of analysis were met, that is, there is a linear relationship between the dependent and independent variables, there is no multicollinearity

TABLE 1. Descriptive statistics for all scales

Scales	Min.	Max.	Mean	SD	Skewness	Kurtosis
Work demands	1	5	3.36	0.80	-0.413	-0.153
Work control	1	5	2.48	0.84	0.340	-0.398
Support at the workplace	1	5	3.2	0.88	-0.254	-0.537
Emotional*	1	5	3.46	0.98		
Instrumental*	1	5	3.53	1.04		
Technical and technological*	1	5	2.66	0.95		
Supervisor support*	1	5	3.24	1.33		
Work motivation	1	6	3.8	0.9	-0.318	-0.058
Intrinsic motivation*	1	7	5.46	1.5		
Extrinsic motivation*	1	7	3.9	1.05		
Life satisfaction	1	7	4.86	1.42	-0.705	-0.287
Perceived work stress	1	5	2.44	0.84	0.316	-0.476
General psychophysical functioning	0.59	3.25	2.02	0.45	-0.025	-0.652

*Skewness and kurtosis values were not calculated for subscales

TABLE 2. Point-Biserial correlation coefficients between variables

Variable	1	2	3	4	5	6	7	8
1. Workspace adequacy	-	0.16**	-0.22**	-0.15**	0.07	-0.16**	0.18**	0.21**
2. Job demands		-	-0.28**	-0.19**	0.18**	0.09	0.44**	0.34**
3. Work control			-	0.2**	0.04	0.09	-0.24**	-0.28**
4. Support at the workplace				-	0.29**	0.22**	0.2**	-0.29**
5. Work motivation					-	0.13*	0.18**	0.21**
6. Life satisfaction						-	-0.25**	-0.41**
7. Perceived work stress							-	0.75**
8. General psychophysical functioning								-

* $p < 0.05$; ** $p < 0.01$

TABLE 3. Differences in measured variables between teachers who did have and did not have adequate workspace – *t*-test

Scales	Adequate workspace at home		No adequate workspace at home		<i>t</i> -test	Cohen's <i>d</i>
	M	SD	M	SD		
Work demands	3.24	0.84	3.51	0.74	-3.13*	-0.33
Work control	2.63	0.86	2.25	0.77	4.17*	0.46
Social support	3.31	0.88	3.04	0.87	2.77*	0.31
Work motivation	3.75	0.9	3.87	0.9	-1.28	-0.13
Life satisfaction	5.04	1.35	4.56	1.48	2.99*	0.33
Perceived work stress	2.32	0.83	2.63	0.84	-3.35*	-0.37
General psychophysical functioning	1.94	0.46	2.13	0.42	-3.82*	-0.41

* $p < 0.05$. M: Mean, SD: Standard deviation

(high correlation between the independent variables), and the conditions of homoscedasticity, normality of distribution, and independence of errors are met.

The results of five regression analyses performed (Table 4) show that three major psychosocial factors at work explain 10.3% of the variance in intrinsic work motivation ($F [3,338] 12.95, p = 0.05$) and 14.9% of the variance in extrinsic work motivation ($F [3,339] 19.73, p = 0.05$). For life satisfaction, these predictors explained 5.5% of the variance ($F [3,331] 6.45, p = 0.05$). The proportion of explained variance was highest for perceived stress -21.7% ($F [3,328] 30.3, p = 0.05$), followed by general psychophysical functioning -19.6% ($F [3,333] 27.12, p = 0.05$).

Table 5 gives an overview of standardized beta coefficients obtained in regression analyses and details the significance of each predictor within the model in predicting outcomes for the criterion variables. For criterion "intrinsic motivation" and "extrinsic motivation," the main predictor is social support ($\beta = 0.31; p < 0.05$ and $\beta = 0.33; p < 0.05$), followed by work demands ($\beta = 0.13; p < 0.05$ and $\beta = 0.27; p < 0.05$), which means that both type of motivation tend to be higher if the worker perceive more social support and more work demands which is in line with Karasek's model stating that more demands are motivational if the worker perceives that he or she can rely on social support from colleagues and supervisor. The criterion "Life satisfaction" is significantly predicted by social support ($\beta = 0.21; p < 0.05$) which means that the more quality in social connection a worker has, the more life satisfaction will be perceived. On the other hand, perceived stress and general psychophysical functioning are predicted significantly with all three major psychosocial factors which is also in line with additive hypothesis of Karasek's model - if the worker perceive more demands ($\beta = 0.39; p < 0.05$ and $\beta = 0.25; p < 0.05$), less control ($\beta = -0.11; p < 0.05$ and $\beta = -0.17; p < 0.05$), and less social support ($\beta = -0.1; p < 0.05$ and $\beta = -0.21; p < 0.05$), he or she will tend to perceive more stress and more challenges in general psychophysical functioning.

DISCUSSION

The results of the study indicate that employees who did not have adequate workspace in their homes during the pandemic experienced higher job demands, lower job control, weaker social support at work, lower life satisfaction,

and diminished psychophysical functioning. These findings suggest that the need for adequate home office workplaces for teachers should be emphasized. Increased stress from shared workspace, poor posture, and prolonged sitting can lead to increased discomfort and pain. Working in a place that is not designed for work, combined with the transition to a sedentary job (as opposed to working in a classroom, which allows and requires more movement), can negatively impact physical and mental well-being while reducing work performance. The lack of adequate workspace as a growing problem during the pandemic was also recognized by Xiao et al. (34), who found that only one-third of respondents in their sample had a separate room at home for work at home, while nearly half of the respondents stated that they used their workspace for other purposes and that other people were present within it. Less than one-third had a well-equipped workplace-these are similar findings to those obtained in this study. The authors also found that stress levels were higher among respondents who worked in offices before the pandemic, due to the fact that they had to switch to sharing their workspace with family members, which is consistent with the results of this study - we found that observed stress levels were significantly higher among respondents who did not have adequate physical space for undisturbed work. In addition, the results of this study are consistent with the findings of other authors in terms of overall psychophysical functioning, which includes both mental and physical health. Xiao et al. (34) show that respondents who had a dedicated workroom and adequate equipment had fewer psychological and physical disturbances, while increased work hours and workload and a lack of knowledge about adequate workplace equipment were associated with increased physical problems and lower scores on measures of mental health. Because mental and physical health as well as stress are important components of overall life satisfaction (35,36), significant differences among respondents identified in our study on this measure are also expected.

Intensive work from home necessarily entails greater reliance on information technology to communicate with colleagues and less face-to-face interaction. While these technologies enable communication and collaboration, they lack the warmth of face-to-face interaction that is essential to developing closer social bonds. When people work in offices, their workspace supports interaction and

TABLE 4. Summary of multiple correlation coefficients for criterion variables

Model	Intrinsic motivation	Extrinsic motivation	Life satisfaction	Perceived stress	General psychophysical functioning
	R ²	R ²	R ²	R ²	R ²
Psychosocial factors (demands, control, and social support)	0.103	0.149	0.055	0.217	0.196

TABLE 5. Summary of standardized regression coefficients of psychosocial factors for criterion variables

Variable	Intrinsic motivation	Extrinsic motivation	Life satisfaction	Perceived stress	General psychophysical functioning
	β	β	β	β	β
Work demands	0.13*	0.27*	-0.04	0.39*	0.25*
Work control	0.07	0.04	0.05	-0.11*	-0.17*
Social support	0.31*	0.33*	0.21*	-0.1*	-0.21*

* $p < 0.05$. Predictors: Work demands, work control, social support, Criteria: Intrinsic motivation, extrinsic motivation, life satisfaction, perceived stress, general psychophysical functioning

awareness of colleagues. In contrast, when employees work from home, in a space that prevents them from working undisturbed, the quality of social interactions, and thus workplace support, is obviously lower. This assumption is supported by the results obtained, and such patterns of change suggest that even after returning to office work, employees may face somewhat different, but still significant, challenges in terms of collaboration and communication in the corporate context. Another finding shows that respondents who did not have an adequate workspace experienced higher job demands and lower job control. People who do not have adequate physical space for undisturbed work in their own homes are likely to live with others – be they children, spouses, parents, roommates, etc. These circumstances inevitably lead to an increase in work-family conflict, which in turn contributes to an increased workload and a decreased sense of control over work. Work motivation was the only criterion where both groups had similar results. The explanation for this result lies in the proven stability of motivation over time. Numerous studies (37-40) have consistently shown that motivation remains relatively stable over time. This suggests that the changes brought about by the pandemic were not significant or long-lasting enough at the time of this study to alter the established patterns of motivation that have developed over years of work experience. Another reason explaining the similarity in motivation levels may be the nature of the educator profession itself. Although many companies, especially in the private sector, suffered significant material losses and layoffs during the pandemic, the education sector is somewhat different – job stability and economic security for employees and their families are quite high. Given the strong relationship between economic stability and work motivation (41), even during economic downturns (42), it is possible that the negative economic impact of the pandemic was not as evident in the education sector at the time of this study, resulting in minimal changes in employee motivation patterns.

The results of the regression analysis confirm what other authors have shown, namely, that the psychosocial characteristics of work within Karasek's model (demands-control-support) are significant predictors of both stress and general psychophysical functioning. As work demands increase, control over work decreases, and social support from colleagues and supervisors decreases, stress levels increase, and general psychophysical functioning deteriorates. Given that the constructs of stress and psychological and physical problems were central to Karasek's model, it is not surprising that these findings have been confirmed by decades of scientific research and were entirely to be expected. In general, employees working in high-effort jobs that involve a combination of high demands, low control, and low social support are more likely to develop cardiovascular disease (43,44), more symptoms of fatigue (e.g., psychological distress, job dissatisfaction), and negative affectivity (45). In addition, researchers (46) note that most of the 36 studies on this topic published between 1981 and 1993 found a positive association between work strain (which combines high demands, low control, and low social support) and cardiovascular disease, mortality, and risk factors for cardiovascular disease, such as hypertension.

However, the only significant predictor of life satisfaction was social support at work. The higher the social support at work, the greater the life satisfaction. The previous research (47,48) has shown that social support plays an important role in promoting health and well-being. This is confirmed by Hombrados-Mendieta et al. (49) who have found a positive relationship between workplace support and job satisfaction. It is important to emphasize that these authors have also found an indirect relationship between workplace support and life satisfaction, with job satisfaction as a mediating factor. These findings explain how dissatisfaction with work reduces overall life satisfaction. As social support at work increases, job and life satisfaction increases, and the negative effects of professional burnout decrease. Given the existing evidence that workplace support indirectly affects the quality of life through the mediation of job satisfaction, it would be beneficial for future research to examine the mediating role of job satisfaction within this model, particularly in times of pandemic. Research in this direction is important because when social support is lacking in the workplace, the quality of life outside the workplace declines. Zakaria et al. (50) also analyzed life satisfaction factors and showed that social support clearly predicts and has a significant impact on life satisfaction. Therefore, efforts to increase social support at work should be active and continuous, especially in times of crisis, and lead to higher job and life satisfaction, which will also increase the emotional and psychological well-being of employees during these challenging times.

Looking at the correlation between job demands and work motivation, the results show that the higher the job demands, the higher the motivation of employees. This result is surprising in the context of the hypotheses raised in this study, but not so unexpected in the scientific literature. When high job demands are accompanied by high levels of social support and are consistent with an individual's adaptive capacity, they can have a positive effect on work motivation. Indeed, the literature suggests that work motivation, as well as developmental opportunities, are particularly high when psychological demands, decision-making requirements, and social support are high. This logic has been incorporated into the Job Demands and Resources Model (51), which has emerged as an alternative to the existing demands-control and demands-control-support models, criticizing their limitation to a narrow set of predictor variables, while incorporating a wide range of predictor conditions in the analysis of organizations and employees. Consequently, resources in the theory refer to physical, social, or organizational factors that include autonomy, strong social ties at work, opportunities for advancement, mentoring, development, and learning, among others. This model suggests that work resources and job demands drive two processes – one motivational and one stressful. Regarding motivational processes, social support serves as an important work resource that evokes positive intrapersonal motivational reactions such as work engagement and autonomous motivation. This assumption is based on the premises of resource conservation theory (52), according to which people are motivated to acquire, retain, and protect their resources because they are highly valuable to them. Therefore, resources become most important to individuals when their loss is threatened. This

means that resources in the workplace develop their motivational potential primarily when employees are faced with high work demands. Research within the Job Demands and Resources Model suggests that social support is particularly important in mitigating the negative consequences of situations of high job demands (53), and that support from supervisors and colleagues, along with learning opportunities and freedom to make decisions, are resources that increase employee engagement (54), a concept closely related to work motivation. A sense of appreciation and support from the work collective helps individuals feel comfortable and rewarded in their work environment. In highly stressful jobs with high demands, employees' biggest concern of employees is usually whether they will be able to get the job done. In this context, the perceived availability of instrumental support may increase intrinsic motivation by strengthening employees' belief that the work will get done and developing a sense of connectedness with others. Thus, the presence of social support can transform even very demanding jobs not only into less stressful jobs but also into jobs that increase employees' motivation to work (55). Future researchers are strongly advised to pay more attention to the role of social support, examining its mediating or moderating role in the model.

Although the results are valuable, there are also some limitations related to the research methodology.

Firstly, this is a case of an ex post facto study, which involves no direct manipulation of the independent variable – the presumed “cause” has already occurred. However, this was unavoidable since COVID-19 pandemic was an unexpected event. Therefore, researchers could not do a pre-pandemic data collection and pretest of participants. Although it was unavoidable, this type of study also brings a couple of additional limitations. Besides the inability to manipulate variables, an important limitation is that the researchers could not assign research subjects randomly to different groups. Since the compared groups were not created through randomization, they are likely unequal. In this case, it becomes uneasy to conclude whether the observed differences are due to the independent variable or if both the independent variable and the observed differences are a consequence of some other factor that was not taken into consideration or measured. There are several possible confounding factors, including one's personal organization abilities, efficiency, or mastery level. In a broader context, this suggests that individuals who tend to have less proficiency or effectiveness in managing their personal or professional affairs may encounter challenges in structuring their work environments to optimize their performance and overall productivity. Consequently, this may contribute to a perception of suboptimal working conditions and increased work-related demands. It is worth noting that their level of motivation may be on par with that of their peers who enjoy better working conditions, but motivation alone does not necessarily translate into the capacity or expertise required for efficient task execution. Moreover, the distinction may stem from varying levels of mastery – individuals with less expertise may perceive the same tasks as more demanding compared to their more skilled counterparts. What appears effortless for a master can often prove to be a daunting and stressful undertaking for a novice.

In addition, since this is an ex post facto study, it remains unknown whether these teachers without adequate work conditions might have been experiencing their regular job as a higher workload compared to those who coped adequately with COVID conditions.

Moreover, the questionnaires were delivered online to the respondents and their anonymity was guaranteed. However, due to the online nature of the study, the researchers could not be present in the survey situation, so the respondents could not immediately ask questions or clarify possible ambiguities, which could also change the quality of their answers. Questionnaire responses could have been influenced by situational factors and distractions in the online environment that were beyond the researchers' control. Regarding the questionnaire itself, some respondents provided feedback that referred to too many questions, suggesting that fatigue may also have been present. As for the statistical analyzes and the conclusions derived from them, it is important to emphasize that this research is a correlational study. There is a significant relationship between the variables, but determining causal relationships requires a different research approach. In addition, future research could focus on other workplace factors and their predictive power by using newer theoretical frameworks such as the Job Demands-Resources Model. This would allow for a more comprehensive examination of factors beyond the scope of the demand-control-and demand-control- support models examined in this study.

CONCLUSION

This study provides insights into the challenges of working remotely during the pandemic and offers guidance for future research and action. In summary, the findings indicate that individuals lacking proper workspace during the pandemic reported heightened work demands, diminished job control, and reduced workplace support. This was coupled with lower life satisfaction and a decline in general psychophysical well-being when compared to those who had suitable working environments. A series of regression models designed to predict the key variables in the study revealed that the psychosocial aspects of work outlined in Karasek's model (involving demands, control, and social support) play a crucial role in forecasting both stress levels and general psychophysical functioning. As work demands increased, but the control over work diminished, and support from colleagues and supervisors lowered, stress levels escalated, and overall psychophysical functioning deteriorated. However, the sole significant predictor of life satisfaction was the level of social support in the workplace. Enhanced workplace social support directly correlated with greater life satisfaction.

Employers should prioritize providing adequate work equipment, such as comfortable chairs, appropriate desks, laptops/monitors, and additional resources. These findings can serve as the basis for developing employee training programs on workplace ergonomics, including adjusting lighting, temperature, colors, work position, furniture, and other equipment to create a stimulating environment that promotes both productivity and the physical and psychological well-being of employees. With the anticipated

growth of remote work as a standard practice, such training programs can provide valuable knowledge.

In addition, this study highlights the importance of the psychosocial factors outlined in Karasek's demand-control-support model, which are associated with crucial variables in the work context, particularly motivation and well-being. Organizations should strive to improve employees' control over their work while fostering a supportive social environment, especially in high work-demand situations. Because social support emerged as the only factor that consistently predicted all variables, this study highlights the central role of social support in protecting workers' mental health. Organizations should focus on developing social support programs and strengthening social networks inside and outside the workplace to create safe and supportive work environments.

Organizational response to environmental crises and unexpected situations plays a critical role in overcoming situational obstacles, promoting resilience, and managing environmental uncertainty. An appropriate response not only enables organizations to overcome immediate challenges but also improves their ability to develop sustainable business models. Thus, this research can serve as a foundation for developing effective, work-from-home "strategies. By leveraging their expertise, psychologists can play an important role in the successful implementation of remote work strategies, with a focus on the well-being of the individuals involved.

DECLARATION OF INTEREST

Authors declare no conflict of interests.

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