RESEARCH ARTICLE

The Multifactorial Background of Helping Professionals' Vital Exhaustion and Subjective Well-Being During the First Wave of COVID-19 in Hungary: A Cross-Sectional Study

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Introduction: Vital exhaustion and the well-being of helping professionals are important issues regarding the sustainability of services, especially in a critical situation such as the COVID-19 pandemic.

Aims: The purpose of this study was to investigate helping professionals' vital exhaustion and well-being, concerning different groups of background variables during the COVID-19 pandemic.

Methods: In the spring of 2020, Hungarian helping professionals (N = 931) were contacted with an online questionnaire.

Results: Our results show that indicators of physical well-being are strongly associated with vital exhaustion and subjective well-being (sleeping quality (χ^2 (2) = 251.062, p < .001); frequency of meals (χ^2 (2) = 99.454, p < .001)). Health and social care workers were more exhausted than members of other helping professions (χ^2(4) =37.782, p < .001). There were statistically significant negative correlations between the Vital Exhaustion and Well-being Score and satisfaction with work conditions (r_s (929) = –.418, p < .001), satisfaction with family life (r_s (806) = –.342, p < .001) and its change (r_s (807) = –.287, p < .001), family-work balance (r_s (675) = –.444, p < .001) and its change (r_s(786) = -.515, p < .001). In the prediction of the Vital Exhaustion and the Well-being Score, the addition of physical well-being indicators to the regression model led to the strongest increase in R^2 of .344, p < .001.

Conclusion: A clear and consensual framework for life and work provides security amid unpredictable external changes.

Keywords: vital exhaustion, well-being, health care workers, social workers, helping professionals

Introduction

Several studies have already addressed the mental health and well-being issues of front-line helping professionals in the COVID-19 pandemic period. In the different waves of the pandemic, professionals working in health care (Alharbi et al., 2020; Barello & Graffigna, 2020; Comfort et al., 2021; Shah, Chaudhari, et al., 2020), social welfare (Banks et al., 2020; Miller et al., 2021; Truell, 2020), education (Collie & Martin, 2020; Hart & Nash, 2020; Randall et al., 2021; Sokal et al., 2020), and religion (Greene et al., 2020; Osei-Tutu et al., 2021) have encountered a comprehensive level of stress and vital exhaustion. Although some research studies investigated

well-being during COVID-19, few of them focused on multiple professions or had a holistic approach. Thus, it is necessary to conduct a deep research into the helping professionals' well-being, also considering the physical, psychological, family, and workplace aspects.

Vital Exhaustion

The psychological construct of vital exhaustion describes a state which can be interpreted as a human response to long-lasting, uncontrollable stress (Appels et al., 1987). The phenomenon can be defined by a specific observable and measurable triad: feelings of excessive mental and physical fatigue (energy loss), increased irritability, and demoralization. Vital exhaustion is associated with other psychological constructs, such as the somatic affective dimension of depression, chronic fatigue syndrome, and burnout, all of which have links to the occurrence of coronary heart disease (De Miranda Azevedo et al., 2014). A strong connection exists between the concept of burnout syndrome and vital exhaustion. Besides specific physical and psychological symptoms, burnout also has three key components: emotional exhaustion, cynicism, and feelings of work inefficacy, and it can be interpreted as a long-term response to chronic stress (Kudielka et al., 2006). According to the WHO International Classification of Diseases 11th Revision (ICD-11; WHO, 2018), burnout is characterized by three dimensions, one of which is the "feelings of energy depletion or exhaustion."

According to two recently published systematic reviews and meta-analyses (Cohen et al., 2017; Frestad & Prescott, 2017), three-decades of research provide the empirical evidence that vital exhaustion stands an independent predictor and risk factor (relative risk: 1.5–2.6) for the incident of first and also recurrent cardiovascular diseases, acute myocardial infarction, and cerebrovascular events.

Mental Well-Being

Well-being is a complex, multidimensional construct, which is based on a holistic view and the biopsychosocial-spiritual model of development and mental health (Saad et al., 2017). This term is used to describe the mental state and, more broadly, a defining characteristic of social relationships, health behaviors, and work-related indicators. Personal well-being means that an individual can cope with difficulties of private life or workplace and can live a balanced and full life as a result of successful coping (Dodge et al., 2012; Headey & Wearing, 1989). In his reflections on the quality of life and the COVID-19, Shek (2021) also emphasizes the importance of psychological, social, and spiritual health in addition to physical health.

Vital exhaustion can be interpreted as the negative end of a continuum where *vitality* is the positive sense of *physical and psychological well-being*. From this perspective, vital exhaustion is a response to prolonged stress (Richman et al., 2009), and after Thayer (1990), we can refer to it as "tense tiredness."

Helping Professionals at Risk

In the helping professions, demanding work and burnout can be more frequent (Shanafelt et al., 2015). In these professions, where long and unsociable hours (often at nights and on weekends), physically and emotionally intensive work is typical, balancing between work and family demands presents a real challenge, especially for women (Karhula et al., 2018). It seems that among female doctors, burnout occurs significantly more frequently (Walsh, 2013). The highest risk for exhaustion and burnout is observed in health care professionals, among physicians (Fralick & Flegel, 2014; Patel et al., 2018; Tucker et al., 2015; Walsh, 2013), medical students (IsHak et al., 2013), and nurses (Galletta et al., 2016; Gorgievski et al., 2019). Compared to other professions, doctors bear approximately twice the risk of burnout and work-family conflict (Shanafelt et al., 2012). Besides health care professionals, those working in other stressful fields such as social work (Geisler et al., 2019; Hricová et al., 2020) education (García-Carmona et al., 2019; Sokal et al., 2020), and religion (Lewis et al., 2007; Weaver et al., 2002) also experience these conditions. The extreme work demands of helping professionals can also affect their general health behavior (insufficient sleep, irregular and unhealthy food intake, rare physical activity) (Tucker et al., 2015).

Vital Exhaustion and Well-Being During COVID-19

COVID-19 was identified in Wuhan city, China, in December 2019. So far, it has spread to more than 200 countries (https://www.worldometers.info/coronavirus). The WHO declared a pandemic on March 11, 2020.

Authorities announced the first COVID-19 cases in Hungary on March 4, 2020, and registered the first coronavirus-related death on March 15th. Since then, citizens have faced restrictions and varying degrees of confinement.

Unexpected social isolation and lockdowns in communities already in the first waves of COVID-19 caused some general changes in people's *mood and health behavior* (Lu et al., 2021). Some had opportunities to be more flexible and get more sleep, eat healthier, and engage in more exercise than before (Arora & Grey, 2020) and reported an increased level of health and well-being (Recchi et al., 2020). In a UK survey, however, 49% of the respondents reported higher stress levels (anxious and depressed mood), 38% reported sleeping less or less well than before the pandemic, and 35% have eaten more food or less healthy food than usual (Duffy et al., 2020). In the general population, those working women who raised children aged 0–5 years reported work-family balance as the most difficult to maintain. It was especially difficult for those women who had to work outside their home during the pandemic (in Italy: Del Boca et al., 2020; in the UK: Sevilla & Smith, 2020).

During the COVID-19 crisis, an increasing number of helping professionals are being affected. In the different waves of the pandemic, professionals working in health care (Alharbi et al., 2020; Barello & Graffigna, 2020; Shah, Chaudhari, et al., 2020), social welfare (Banks et al., 2020; Truell, 2020), education (Collie & Martin, 2020; Hart & Nash, 2020; Sokal et al., 2020), and religion (Greene et al., 2020) have encountered a comprehensive level of stress. Those colleagues most exposed work in health care – and especially hospital care – and they are facing huge physical and psychological demands (physical, emotional, and mental exhaustion, fear, and uncertainty regarding infection processes). According to previous experiences with similar outbreaks of SARS, MERS, and H1N1, health care workers can experience burnout quickly. In these situations, several further contributors can be identified: lack of control over processes and procedures, poor communications and guidelines, lack of psychological support, as well as the experience of prolonged suffering and fatal events (Shah, Chaudhari, et al., 2020; Shah, Kamrai, et al., 2020).

Our study was conducted in Hungary, in Central-Europe. Recent studies suggest that burnout and emotional exhaustion appear to be moderate to severe in a significant proportion of Hungarian helping professionals (Győrffy, 2019; Mák et al., 2020). We believe that our results are relevant beyond Hungary, as our study is the first to examine the constellation of these variables.

We conducted this study to determine the correlation between vital exhaustion, subjective well-being and socioeconomic background variables, physical well-being, work-related and family-related issues during the first wave of the COVID-19 pandemic in a sample of helping professionals.

Our research question was: What is the predictive power of the different groups of background variables on the scores of vital exhaustion and subjective well-being?

Methods

Participants

Participants included 931 professionals (Table 1) who worked in health care (21.2%), in social care (38.4%), in education (22.6%), or in the field of religion (7.4%), and one-tenth of the respondents were employed in more fields simultaneously (e.g. education and field of religion; education and social care). Participants were aged 23–77 years (*M* = 45.3, *SD* = 9.8). Further, 77.7% of the respondents had partners, 32.6% lived in the capital, and the vast majority (93.6%) had a higher education degree. In terms of total family income, most respondents (22.3%) fell into the € 1101–1377 (per month) category, and the subjective financial well-being stood around 2 ("they got along with a frugal attitude") on a 5-degree ordinal scale.

Procedure

We collected the sample using an online survey platform tool (LimeSurvey). The questionnaire remained available for 10 days, from the 8th to 17th of May, 2020, in the first wave of COVID-19, during the last week of curfew in Hungary, and was distributed using the snowball sampling method via various professional mailing lists and other group platforms. Helping professionals from health and social care, education, and the religion field were invited to fill out the questionnaire. In total, 1,535 respondents opened the questionnaire and started to fill it in. 751 participants answered all questions, and 784 partially completed the survey. We applied no exclusion criteria; as a result, 931 observations remained after data cleaning.

Table 1. Sample Characteristics and Socio-Demographic Background Variables

	N	Valid percent / Mean ± SD
Background variables I.: Socio-economic characteristics		
Age (years)	927	45.3 ± 9.79
Sex*		
Female	289	91.2
Male	28	8.8
Education		
Secondary school or lower	59	6.4
Higher education	815	87.9
Locality		
Capital	301	32.6
Country	622	67.4
Living in partnership		
Yes	673	77.7
No	223	22.3
Number of children		
0	351	39.1
1	190	21.2
2	203	22.6
3 or more	154	17.1
Age of children (years)		14.72 ± 8.61
Family income**		
Under 1120 €	505	55.5
Over 1121€	405	44.5
Subjective financial well-being (1- without problems; 5- financial deprivation)	920	1.97 ± .79

Notes:
* Due to a data collection error, the gender distribution is known only in a smaller part (n =317) of the sample. The deficiency is discussed in detail in the limitations.
** Family income was measured using a question in which we specified ten categories. For the analyses, we divided the sample into two, based on the median category.

Measures

Maastricht Vital Exhaustion Questionnaire. Vital exhaustion is a mental and physical state as well as a personal experience characterized by chronic fatigue, a significant decrease in energy levels, and increased irritability, sometimes accompanied by depressive mood. We used a Hungarian 5-item short version of the Maastricht Vital Exhaustion Questionnaire to measure vital exhaustion (Appels et al., 1993; Kopp et al., 1998); e.g., *"Do little things irritate you more lately than they used to?"; "Do you often feel tired?"*. Instead of the original scoring of the scale, we used a 5-point Likert-type scale (1-not at all; 5-completely) to get a more differentiated distribution of the construct. The scale had good internal consistency (α = .83) (Appels et al., 1993).

Subjective Well-being. We measured the experience of well-being during the pandemic by using two single-item questions: *"How stressful was the period since the outbreak of the pandemic for you?"; "All in all, how would you rate your current general well-being?"* which were scored on a 10-point Likert-type scale (1-not at all; 10-completely).

Physical well-being variables. We asked about sleep, eating habits, and physical activity. The questions addressed facts of lifestyle (eg., *"During the past week, what was your average sleep time in hours?"; "How many meals did you have before the outbreak of the pandemic per day?"; "How many times a week did you do physical activities before the outbreak of the pandemic, on average?"),* and the changes compared to the pre-pandemic practices (e.g., *"How often do you do intensive exercises compared to the pre-pandemic period?").* Also, we asked about the subjective perception of health (*"How would you rate your health now?").* Respondents answered each question on a 3, 4, or 5-degree ordinal scale.

Work-related variables. We asked about working hours and work schedules concerning the present and, retrospectively, the pre-pandemic situation. Two questions were asked related to job satisfaction. The first one was about the professional activity (*"How satisfied are you with your current job, professional activity – your tasks and their practical value, etc.?"*), and the other one about the working conditions (*"How satisfied are you with your current working conditions – schedule, workload, communication, etc.?"*). The questions were scored on a 10-point Likert-type scale (1-not at all; 10-completely).

Family-related variables. We used two single-item questions about family life and family-work balance (Clarke et al., 2004); we measured these on a 10-point Likert-type scale (1-not at all; 10-completely). We also asked how these had changed as a result of the pandemic (-3- much less; +3- much more).

Data Analysis

Participants who did not answer the vital exhaustion and well-being questions were removed from the database. In the cleansed dataset, the rate of missing data in the examined variables was acceptable (max. 10% of values, and less than 2% in the dependent variables – vital exhaustion and general well-being). To deal with problems of missing data, we used the Multiple Imputation (MI) method, except for variables where the lack of data was systematic. In the case of family-related questions, the analyses were run with a smaller sample of partnered persons ($N = 652$), as the questions could not be interpreted in the case of singles.

As a first step, we examined the variables' descriptive statistics, and we tested the normality of distributions using Kolmogorov-Smirnov and Shapiro-Wilk tests. Since many variables had a significantly different distribution from the normal one, non-parametric tests were used for further analyses. The relationships between socioeconomic and other background variables and the Principal Component Score of vital exhaustion and general well-being were examined using the Kruskal-Wallis Test and Spearman's rank-order correlations. Then a Hierarchical Linear Regression Model was constructed to explain the variance of the dependent variable (PCA score of psychological well-being and vital exhaustion). We built the model in four steps using the Enter method to examine the explanatory power of different groups of variables (socioeconomic variables, physical well-being variables, work-related variables, and family-related variables).

Ethical Considerations

Before starting the study, an ethics committee approval from the Medical Research Council's Scientific and Research Ethics Committee (IV/4005-2/2020/EKU), was obtained. All participants were informed, and each of them provided written informed consent.

Results

Descriptive Statistics

Descriptive statistics of background (independent) and dependent variables are shown in Table 2. For some variables of change (amount of sleep, eating regularity, satisfaction regarding family life, family-work balance), we found that approximately the same proportion of respondents reported negative and positive change. On the other hand, in terms of sleep quality and physical activity, we observe a shift to the negative.

The "Vital exhaustion and Well-being Score"

Due to the high correlations between the scores of Vital Exhaustion and the two single-item questions (Feeling of stress – $r_s(931) = .641$ $p < .001$; General Well-being – $r_s(931) = .712$, $p < .001$) a principal component analysis was run with these three variables. The Kaiser-Meyer-Olkin (KMO) measure was .71, Bartlett's test of sphericity stood statistically significant ($p < .001$), indicating that the data were suitable for principal component analyses. PCA revealed one component that had an eigenvalue greater than one; the one-component solution explained 76% of the total variance. For further analysis, we used the principal component score as a dependent variable. We refer to this score as the "Vital Exhaustion and Well-being Score" (VEWBS).

Table 2. Descriptive Statistics of Physical Well-Being, Work-Related Variables, Family-Related Variables, and the Dependent Variables

	N	Valid percent / Mean ± SD
Background variables II: Physical well-being		
An average day before the pandemic…		
I could sleep less than now	252	27.2
I slept the same as now	423	45.8
I could sleep more than I do now	250	27
During the pandemic (now)		
I sleep worse	341	36.8
I sleep the same way, neither better nor worse	28	8.8
I sleep better	100	10.8
Before the pandemic…		
I could eat 1-2 times a day	210	22.8
I could eat 3-5 times a day	711	77.2
During the pandemic (now)		
I can eat more irregularly than that	137	14.8
I can eat with the same regularity as before	612	66.2
I can eat more regularly than that	176	19
How often did you do physical activities intensively before the pandemic?		
I did not	130	14
1-2 times in a month	152	16.4
1-2 times per week	395	42.7
3-4 times per week or more	249	26.9
During the pandemic (now)		
I do physical activities less often than before	387	42.4
I do physical activities as regularly as before	308	33.7
I do physical activities more times than before	218	23.9
How many hours a day did you sleep on average in the last week? (hours)	925	6.91 ± 1.09
How healthy do you usually eat? (1- not at all; 5- completely healthy)	927	3.38 ± .88
How is your health? (1- very bad; 5- very good)	926	3.55 ± .72
Background variables III: Work-related variables		
Field of work		
Health care	165	21.2
Social care	299	38.4
Education	176	22.6
Field of religion	58	7.4
Mixed	81	10.4
Work schedule		
only during the day	719	90.8
also at night	73	9.2
Work experience (years)	814	16.6 ± 10.91
How many hours have you been working since the pandemic? (hours)	821	39.3 ± 18.44
Satisfaction with the job, professional activity (1- not at all; 10- completely)	821	7.22 ± 2.33
Satisfaction with the working conditions (1- not at all; 10- completely)	823	6.15 ± 2.63

Table 2., continued

	N	Valid percent / Mean ± SD
Background variables IV: Family-related variables		
Satisfaction with family life (1- not at all; 10- completely)	808	7.47 ± 2.09
How did this change due to the pandemic? (-3- much less; +3- much more)	809	.08 ± 1.39
Family-work balance (1- not at all; 10- completely)	677	6.1 ± 2.03
How has this been changed due to the pandemic? (-3- much less; +3- much more)	788	−.07 ± 1.54
Dependent variables		
Vital exhaustion (5-25)*	931	13.96 ± 5.48
How stressful have you been feeling since the outbreak of the pandemic situation? (1-not at all, 10 - completely)	911	6.45 ± 2.51
All in all, how do you evaluate your current general well-being? (1-very good; 10-very bad)	914	4.47± 1.81

Note: * The original items of the scale were data imputed.

Differences in the "Vital exhaustion and Well-being Score" regarding different background variables

Kruskal-Wallis tests were conducted to determine whether there were differences in the VEWBS between groups corresponding to different background variables. No significant difference existed accounting for the following variables: sex, relationship status (partnered or not), number of children, age of children, location, frequency of meals before the pandemic, exercise frequency pre-pandemic, and working hours before the pandemic. We found that the median VEWBS of younger employees ($\chi^2(4) = 9.565$, $p = .048$) and people with low level of education ($\chi^2 (2) = 8.383$, $p = .015$) registered significantly higher; there was also a difference between the objective ($\chi^2 (1) = 8.141$, $p = .004$) and the subjective ($\chi^2 (3) = 53.173$, $p < .001$) financial well-being categories and the change in family income due to the pandemic ($\chi^2 (2) = 10.360$, $p = .006$). A worse financial situation was accompanied by a higher VEWBS. In the indicators of physical well-being, we can see that with negative changes in the amount ($\chi^2 (2) = 162.107$, $p < .001$) or quality ($\chi^2 (2) = 251.062$, $p < .001$) of sleep time, the frequency of physical activity ($\chi^2 (2) = 68.634$, p < .001), and the frequency of meals ($\chi^2 (2) = 99.454$, $p < .001$) the VEWBS also decreased. Those who consider themselves healthier ($\chi^2 (3) = 136.936$, $p < .001$) and who eat healthily ($\chi^2 (2) =45.704$, $p < .001$), have a lower VEWBS. Health and social care workers were found to be more exhausted than professionals of other fields ($\chi^2 (4) =37.782$, $p < .001$); those who also worked night shifts during the pandemic had higher VEWBS ($\chi^2 (1) =8.801$, p = .003). Additional working hours ($\chi^2 (2) =58.319$, $p < .001$), and changes in shift schedules (if night shift also appeared) ($\chi^2 (2) =13.857$, $p = .001$) resulted in an increase in the VEWBS.

Spearman's rank-order correlations were run to assess the relationship between the VEWBS and the continuous background variables. There were statistically significant negative correlations between VEWBS and sleeping hours ($r_s (929) = -.309$, $p < .001$), satisfaction with professional activity ($r_s (929) = -.232$, $p < .001$), satisfaction with work conditions ($r_s (929) = -.418$, $p < .001$), satisfaction with family life ($r_s (806) = -.342$, $p < .001$) and its change ($r_s (807) = -.287$, $p < .001$), family-work balance ($r_s (675) = -.444$, $p < .001$) and its change ($r_s (786) = -.515$, $p < .001$).

Explaining the variance of Vital Exhaustion and Well-being Score by groups of background variables

We ran hierarchical multiple regression to determine how the addition of socio-demographical characteristics, physical well-being indicators, work- and family-related variables improved the prediction of the VEWBS. Four models were run separately for each domain of background variables, which showed a significant association with VEWBS in previous analyses. We constructed the final model using variables that remained significant in the separate models (see the first column in Table 3). The full model (Step 4) was statistically significant, $R^2 = .551$, $F(22, 652) = 35.117$, $p < .001$; adjusted $R^2 = .535$. The addition of physical well-being indicators led to the strongest increase in R^2 of .344, $F(11, 652) = 37.439$, $p < .001$, although each set of variables strengthened the model's predictive power. We can see the highest predictive power for the following variables: change in family-work balance ($\beta = .279$), change in the quality of sleep (reference: no change, $\beta_{worse} = .249$; $\beta_{better} = -.070$), and subjective health ($\beta = -.192$).

Table 3. Hierarchical Multiple Regression predicting Vital Exhaustion and Well-being Score

	Vital Exhaustion and Well-being Score											
	Step 1			Step 2			Step 3			Step 4		
Variable	B	SE	Beta	B	SE	Beta	B	SE	Beta	B	SE	Beta
Constans	−.122	.191		1.554	.319		1.811	.329		1.898	.310	
423	423	423	423	423	423	423	423	423	423	423	423	423
Socio-demographical												
Age	−.007	.004	−.072	−.007	.003	−.076**	−.005	.003	−.050	−.002	.003	−.022
Subjective financial wellbeing	.260	.047	.210**	.042	.040	.034	.009	.038	.007	.016	.035	.013
Physical well-being												
Sleeping hours				−.057	.031	−.065	−.050	.029	−.058	−.046	.027	−.053
Change in amount of sleeping (ref.: No change) [a]												
less				−.066	.082	−.031	−.028	.080	−.013	.019	.073	.009
more				.121	.084	.058	.067	.080	.032	.055	.073	.027
Change in sleep quality (ref.: No change) [a]												
worse				.632	.074	.334**	.587	.070	.310**	.471	.065	.249**
better				−.344	.110	−.110**	−.348	.104	−.111**	−.220	.096	−.070*
Change in eating frequency (ref.: No change) [a]												
less				.352	.086	.137**	.306	.083	.119**	.232	.076	.090**
more				.003	.077	.001	.010	.074	.004	.064	.068	.027
Subjective health				−.320	.044	−.236**	−.271	.042	−.200**	−.260	.039	−.192**
Work-related variables												
Field of work (1-Social and Health Care; 0–other) [a]							.096	.057	.051	.052	.053	.027
Satisfaction with work conditions							−.096	.011	−.257**	−.061	.011	−.163**
Change in work schedule (ref.: No change) [a]												
No night shift any more							−.220	.221	−.029	−.399	.203	−.052*
Night shift as well day to night							.177	.138	.038	.037	.127	.008
Change in working hours (ref.: No change) [a]												
less							−.041	.070	−.020	.079	.065	.039
more							.014	.079	.006	−.048	.073	−.023
Family-related variables												
Satisfaction with family life										−.035	.014	−.076*
Family-work balance										−.043	.015	−.095**
Change in family-work balance										−.183	.023	−.279**
R²	.048			.391			.463			.554		
F	16.568**			41.978**			32.802**			40.077**		
ΔR²	.048			.343			.072			.092		
ΔF	16.568**			46.075**			12.385**			44.131**		

Note. N = 652. * p < .05, ** p < .01; a Variable built in the model as a dummy.

Discussion

We conducted this study in order to determine and predict the differences in individual levels of vital exhaustion and subjective well-being with four groups of variables (socioeconomic, physical well-being, work, and family) among helping professionals in health care, social care, education, and the field of religion. As a public health emergency, the COVID-19 pandemic has fundamentally changed the pace of life for individuals, communities, and society as a whole. These pandemic-induced changes affect mental health and result in a crisis for both a shorter and a longer period (Liu et al., 2020; Pfefferbaum & North, 2020). Our research focused on helping professionals who are exposed to even more changes and new sources of stress. We can detect effective coping when a new balance is achieved in the changed circumstances (Chew et al., 2020; Rettie & Daniels, 2021). The results of our research suggest that, to avoid deteriorating trends in indicators of well-being and vital exhaustion, the key is the ability to adapt to change.

The hierarchical regression analysis indicated that every group of variables (sociodemographic background, physical well-being, work, and family) examined in our study had a significant association with vital exhaustion and subjective well-being. In every step of the model, we could identify the significant predictive power for every group of background variables, but physical well-being presented the strongest one. In the final model, the change in the quality of sleep and the frequency of meals, subjective health, satisfaction with work conditions, change in work schedule, satisfaction with family life, family-work balance, and the change in family-work balance had a significant relationship with vital exhaustion and well-being.

Research on subjective well-being and vital exhaustion takes into account not only the self-characterization of the mental state but also other factors arising from lifestyle, health behaviors and social relationships, and provides an overall picture of an individual's quality of life (Anderson & Fowers, 2020; Shi et al., 2019). Although well-being remains a slowly changing indicator, the COVID-19 pandemic constitutes a multi-level threat that can easily upset the previous balance or exacerbate problems that have caused only minor difficulties before. Our research results indicate that in a crisis, focusing on basic needs (eating, sleeping) and maintaining/establishing balance are closely related.

For physical and mental well-being, sleep stands as one of the most important factors since sleep quality and quantity significantly affect physical and mental health (Fu et al., 2020; Kripke et al., 2002). This has been confirmed by our research revealing that individuals with poor sleep quality suffered greater vital exhaustion, and changes in sleep quality had the highest impact on well-being. In our sample, a remarkable proportion (36.8%) reported a deterioration in sleep quality. On the other hand, individuals with good sleep quality showed better physical well-being (Huang & Zhao, 2020). In addition to personal implications, deterioration in sleep quality also bears economic consequences due to the declining job performance (Metlaine et al., 2005). Work quality and sleep are interlinked and interdependent. It has been demonstrated that regular physical activity can help to maintain good sleep quality (Ferris et al., 2005). And it is important to underline that nearly 60% of the respondents were at least as physically active during the first wave of the pandemic as before, although a significant proportion of helping professionals consider the lack of physical activity to be a risk factor. Our results confirm that physical activity is also associated with good sleep quality, highlighting the protective effect of regular physical activity (Ferris et al., 2005; Metlaine et al., 2005).

Since sleep, diet, and physical activity have a self-affirming transactional cycle: each habit can affect the other positively but also negatively. A healthy circle of these factors is necessary to prevent diet-driven chronic diseases (Arora & Grey, 2020; Ingram et al., 2020). Chronic time pressure and disturbed sleep can cause vital exhaustion and burnout (Rozanski & Cohen, 2017). Sleep and recovery processes can mediate work stress and burnout. Impaired (reduced or fragmented) sleep cannot support recovery after daily activity and can contribute to allostatic load and somatic morbidity (Grossi et al., 2015; Söderström et al., 2012). Disruption of the circadian rhythm due to very long working hours, sometimes extreme ones (12–24 hr shifts) (Koy et al., 2020), can put pressure on several physiological parameters of the body as well as cognitive functions (Caruso, 2014; Rhéaume & Mullen, 2018).

Another important result of our research is that during the COVID-19 pandemic, several work- and family-related variables (satisfaction with working conditions, changes in work schedule, satisfaction with family life, changes in family and work balance) also demonstrated a significant association with well-being. In our sample, the extra burdens of work and changes in work-life balance had a repercussion on well-being and changes in vital exhaustion.

Ethical challenges, compassion fatigue, and secondary traumatic stress remain very important issues for nurses and doctors, teachers, social workers, and those working in the religious field during the time of disasters such as

the COVID-19 pandemic. In addition to more frequently encountering suffering and death, decision making on resource rationing and utilization, lacking emotional communication and support can contribute to developing compassion fatigue, psychological trauma, and moral injury (Alharbi et al., 2019, 2020; Barello & Graffigna, 2020; Janeway, 2020; Morley & Vellas, 2020). Also, major ethical issues regularly occur in the field of social work (Banks et al., 2020), as well as in the healthcare system (Rosenbaum, 2020). In our research, we concluded that health and social care workers were found to be more exhausted than other professionals. Although in Hungary the focus was on the availability of hospital resources – both the number of beds and hospital staff – those working in social welfare found themselves on the front line and hence felt stressed and overworked. Ethical issues, psychological trauma, and moral injury are frequent risk factors for the deterioration of well-being for religious leaders of faith-based communities, as well (Greene et al., 2020). Mental health professionals have to cope with perceived stress, compassion fatigue, secondary traumatic stress, and therapeutic effectiveness in the new context (Joshi & Sharma, 2020). For teachers, the challenge involves managing physical distancing and maintaining social connectedness at the same time with children as well as with colleagues (Collie & Martin, 2020).

Strengths and Limitations

Due to a data acquisition error, gender was identified only for 317 respondents, and an analysis of gender differences was performed on this subsample. We did not find significant differences in the dependent variables (vital exhaustion, subjective well-being) or in most of the background variables between men and women. We only found gender differences in working hours before COVID-19 and changes in family income: men worked longer hours than women before the pandemic, and their incomes fell to a greater extent.

Our sample was not representative for helping professionals, and not all sectors were represented equally. Another limitation consisted in the cross-sectional study design: we cannot imply causality between the examined constructs.

We did not examine whether the respondents had a direct relationship with an infected person or whether the respondents were infected. These would have been important pandemic-related questions that can associate with vital exhaustion and subjective well-being.

In editing the questionnaire, we aimed to measure more dimensions of well-being and many aspects of them. On the other hand, we had to reduce the number of items per each examined construct to have a questionnaire that remains easy to handle and fill in. Thus, in several topics, we used single-item questions instead of multi-item scales.

To garner a better understanding of the issue, it would be important to also use other methods than the self-report questionnaire and to study these questions longitudinally.

Conclusion, Implications and Future Directions

Since the beginning of 2020, it has become clear that the COVID-19 pandemic is not a single, unexpected, and quickly-passing challenge that lends itself to rapid crisis interventions. Consistent attention and multi-layered interventions are required to strengthen the resilience of individuals and communities. The standing where the resilience of individuals and communities is strengthened can be reached with permanent attention and necessary interventions at several levels. These experiences can then be used to develop resilience and coping with similar situations in the future with the least possible loss. Based on the results of our research, we could formulate suggestions that address different levels: the individual, the workplace, and policymaking.

From the results of our study, it became apparent that the conscious maintenance and nurturing of basic physical well-being is crucial in a crisis among helping professionals. Proper quality and quantity of sleep, regular meals, and physical activity not only bear a preventive significance but also bestow a stabilizing effect in an acute crisis.

Beyond the individual sphere, it seems necessary for the workplace community to adhere to workplace practices even more consciously and to clarify or modify those, if necessary. A clear framework accepted by all provides security amid unpredictable external changes. Concerning the leadership of an institution, personalized leadership should come to the fore, as the employees react differently to the changed circumstances. Also, the rethinking and planning of formal and informal communication channels can be of crucial importance to the workplace community, as the predictable communication of external information and sharing internal, primarily emotional reactions is a key issue in this situation. These aspects are perhaps even more important in the helper professions than in other jobs.

The COVID-19 pandemic is challenging not only at the individual and community levels. Policies also need to be reconsidered to support the care system to adapt as flexibly as possible to unexpected challenges. Over-regulation can be an obstacle to quick and efficient decisions. Recent measures have highlighted the importance of lower-level decision making, following the principle of subsidiarity, in addition to swift and decisive central measures. Besides this, however, sectoral governance must also communicate operational guidelines quickly and clearly.

Last but not least, we mention the importance of interdisciplinarity. The COVID-19 pandemic has made it obvious that a global pandemic is not just a health issue, since it affects all functions of society. Therefore, it remains essential that cooperation and communication between the various sectors be as effective as possible to carry out a complex analysis of the phenomenon and take appropriate action.

Due to the protracted nature of the COVID-19 pandemic, we also suggest the collection of longitudinal data on the well-being of the general population as well as specific target groups. Longer-term follow-ups of multidimensional well-being indicators can greatly contribute to the identification of protective factors and the planning of interventions.

Author contributions

Attila PILINSZKI: conceptualization, design, methodology, investigation, project administration, data management, formal analysis, interpretation, supervision, writing original draft, writing review and editing.
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Gábor TÖRÖK: conceptualization, design, methodology, investigation, project administration, interpretation, supervision, writing original draft, writing review and editing.
All authors gave final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Declaration of interest statement

The authors have no conflicts of interest to disclose.

Ethical statement

This manuscript is the authors' original work.
The study was reviewed and approved by the Medical Research Council's Scientific and Research Ethics Committee (IV/4005-2/2020/EKU).
All participants participated in the research voluntarily and anonymously, and provided their written informed consent to participate in this study.
Data are stored in coded materials and databases without personal data, and the authors have policies in place to manage and keep data secure.

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