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Relationship Between Stress, its Management and Public Well-being in Lithuania: Effect of Sociodemographic and Clinical Factors

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Abstract. *The aim of the study was to assess the individual stress intensity and its management in Lithuania in the context of public well-being, concentrating on the effects of socio-demographic and clinical factors on stress intensity. To reach the aim, a quantitative study was conducted. 1137 residents of Lithuania participated in the online survey. A visual analogue scale (1–10, VAS) was used to determine stress intensity and management, and the Arizona Integrative Outcome Scale was used to determine the sense of well-being. The research results indicate that 98% of respondents experience stress with an average stress intensity and only 50% of respondents experience a higher-than-average sense of well-being formed by physical, mental, emotional, social and spiritual state. The measured relationships between stress, socio-demographic and clinical factors suggest that the marital status, education, profession, nature of work, salary, work experience, duration of work and rest, consequences of COVID-19 have the greatest potential for perceived stress. High-intensity stress is prevalent in Lithuania with moderate management. In the study it was identified, that the main tools for reducing stress are communication with supportive persons, daily regimen and sleep, leisure time for a hobby and rehabilitation, avoiding bad habits, appropriate medical SPA treatments or wellness practices.*

Keywords*: public well-being, stress, stress intensity, stress management, socio-demographic factors, clinical factors.*

Introduction

Researchers worldwide study the effects of stress on the health of populations and on specific socio-demographic groups. A healthy state is described as a state of balance and equilibrium, and its disruption results in pathology. Selye suggested two general situations of health, balanced and imbalanced/disordered (Selye, 1959). Stress could be defined as a subjective feeling of inadequacy and inability to cope, as an expression of maladaptation of an individual or a system; accordingly: a stressor is any perturbation from the outside world that disrupts homeostasis (Halbreich, 2021). Stressful challenges can be of acute or chronic nature, may occur once or take place in a repetitive manner. Stress can be unpredictable and uncontrollable, mild or severe, and occurring in or out of context (Lucassen et al., 2014); responses to stress are ultimately based on the predispositions of the organism (Jason, 2011). The way we respond to stress, however, makes a big difference to our overall well-being.

Socio-demographic factors (age, gender, marital status, work status, education, etc.) are important factors to consider when evaluating individual stress intensity. Studies from all over the world (Rodríguez et al., 2020; Viseu et al., 2018; Marmot, 2015; Torp and Reiersen, 2020; Lakhan, Agrawal and Sharma, 2020, etc.) measured relationships between stress intensity and sociodemographic factors. The results point that the age, gender, marital status, education, work conditions and income level are the variables with the greatest potential for perceived stress. The scientific studies conclude that married people generally are more stressed as compared to unmarried ones, as far as women are obviously believed to have more stress because the entire responsibility

of household in many cases falls upon women's heads. According to the American Psychological Association (APA), people in the 18–33 age group suffer the highest levels of stress; women are more stressed-out than men; work conditions are among the top three sources of stress for Americans.

Global socio-political developments such as increasing globalization and advances in information and communication technology, and new types of contract terms and arrangements for employees have led to increased work-related stress. According to Workplace Stress Statistics (2019) 83% of US workers suffer from work-related stress. EU-OSHA's workers' survey shows that more than four out of ten workers (44%) in Europe say that their work stress has increased as a result of the pandemic (Flash Eurobarometer – OSH Pulse survey, 2022). These global stressful situations in past years led to changes in lifestyle, such as overeating, drinking, physical inactivity. These factors increase the risk of physical and mental health conditions, including cardiovascular disease, emotional exhaustion, depression, etc. (Katta et al., 2023; McEwen, 2022; Masa'Deh et al., 2017).

The prevalence of mental health problems are higher in countries with a low to medium human development index (HDI), high gender inequality index, low to medium hospital beds per 10,000 people, low to medium current health expenditure, estimated percent change of real GDP growth 2020 below 3.0, low resilience of business environment, high economic vulnerability –inbound tourism expenditure (Nochaiwong et al., 2021). Mental health disorders play a major role in suicidal behaviors. According to OECD report (2018) and completed study in 2017, 83% of the population of Lithuania has experienced a lot of stress in the year 2016–2017, the state of health was rated the worst, 17.9% population had mental health problems, leading by the number of suicides (OECD report, 2018). According to "Headway 2023 – Mental Health Index" Report (2023), country with the highest suicide rate is Lithuania, 26 cases each 100,000 inhabitants. Lithuania reports the highest number of suicides per 100,000 in all the age groups.

So, the mental health issues and public welfare in nowadays stressful world can be considered as a country's health concern that still has insufficient attention. The rates of individual stress, anxiety, and depression are high, the management of stress is struggling and does not meet the rising demand (Katta et al., 2023). Some countries, like Lithuania, are characterized by a particularly worrisome situation in this context. During recent years the demand for research on individual stress and its management has grown. It is obvious that the topic became more relevant because of the new global stressors such as the COVID-19 pandemic, the war in Ukraine, global economic crises, etc. It is important to understand that due to the accelerated pace of people's everyday life, the studies on stress will not decrease for a long time. However, it is important to investigate not only the factors causing individual stress and their expression, but also to analyze stress intensity by different socio-demographic characteristics and clinical predictors. This would allow to discover how to overcome individual stress expression,

how to reduce and manage stress and to preserve society's well-being. Moreover, there is a lack of country-specific research. Countries have unique historical, economic and social conditions, as well as different health policies implementation, which lead to different societies' health and well-being situation.

In this work, the factors affecting the intensity of stress are studied. **The aim of the study** was to assess the individual stress intensity and its management in Lithuania in the context of public well-being, concentrating to the effect of socio-demographic and clinical factors on stress intensity. The obtained results can help to apply measures that would contribute to the management of stress by reducing it.

Theoretical background

In 1984 Richard Lazarus and Susan Folkman defined stress as the body's internal reaction to any external stimulus that is deemed harmful. They defined stress as "the relationship between an individual 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, 1993). Definitions of stress in the scientific literature vary considerably. According to Kinman and Jones (2005) there is a lack of consensus on conceptualizations of stress, and several different personal, social, environmental and work-related factors are used to define the meaning of stress. World Health Organization describes stress as "a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being."

There are various stressors, both physical and psychological, that affect people well-being globally today. According to Weierstall-Pust, Schnell, Heßmann et al. (2022), stressors include natural disasters, outbreaks of infectious diseases, or violent crises. Such factors can be identified as stressors: family issues, financial issues, personality traits, change in life, work-related issues, illness or injury and many others. In the past years, as a source of psychological distress and anxiety can be named the COVID-19 pandemic and its consequences, the brutal war in Ukraine and "war fatigue," which generates stress and have gained attention in the scientific literature (Weierstall-Pust, Schnell, Heßmann, 2022; Katta et al., 2023; von Hülsen et al., 2023, etc.). The authors emphasize the correlations between the stress experienced by individuals in crisis situations and the expression of clinical factors, and sociodemographic characteristics of individuals are also highlighted as an important factor in this aspect.

Relationship between stress and socio-demographic factors are analyzed in scientific studies, caried out by Rodríguez et al. (2020), Lakhan, Agrawal and Sharma (2020), Torp and Reiersen (2020), etc. Gender differences in levels of clinical symptoms, e.g., depression, anxiety, and adjustment disorder have been reported before and during the COVID-19 pandemic. The measured relationship between stress and gender shows

higher levels of distress, depression, and anxiety symptoms for women compared to men (von Hülsen et al., 2023; Bretschneider et al., 2018; McLean et al., 2011; Dragan et al., 2021; Rossi et al., 2020, etc.). According to Weierstall-Pust et al. (2022), young people and women show more stress reactions during global crisis.

Work-related stress is identified as one of the most often. According to Karatepe et al. (2018) study, more than half of all employees undergo intense stress, and two-thirds encounter difficulties focusing on their jobs due to stress. Work-related stress is a physical or emotional response that occurs when work environment and job requirements do not match the employee's capabilities, resources, needs. This could affect work productivity, efficiency, personal health (Kamaldeep et al., 2016; Sohail and Rehman, 2015; Tongchaiprasit and Ariyabuddhiphongs, 2016, etc.). Work-related stress can also be defined as a situation when certain factors interact with the employee, thus influencing person's psychological and physiological state in such a way, that a person is forced to deviate from normal activities (Sarafis et al., 2016). According to Saparniene, Strukcinskiene, Mineviciute et.al. (2023) the more often individuals felt stressed at work, the more their physical and emotional health disturbed their usual social life, the more often they felt aches that interfered with their normal work routine.

Role of clinical factors in evaluating individual stress intensity is an important aspect. Global statistics show that an increasing amount of people are struggling with mental health issues. In the first global study (2014) estimated lifetime prevalence for all mental disorders was 29.1%, 9.6% for mood disorders, 12.9% for anxiety disorders, and 3.4% for substance use disorder (Steel, 2014). In 2021, 4 in 10 adults worldwide said they experienced a lot of worry (42%) or stress (41%), and slightly more than 3 in 10 experienced a lot of physical pain (31%); More than 1 in 4 experienced sadness (28%), and slightly fewer experienced anger (23%) (Ray, 2022). Medical research highlighted that up to 90% of illness and disease are related to stress (APA). Some stress-related disorders and conditions: brain (post-traumatic stress disorder, adjustment disorders, depression, anxiety, sleep disorders, premature dementia, migraine headache, neck and shoulder pain, muscle tension), cardiovascular (hypertension, CHD, sudden cardiac arrest, stroke), immune system (infections, cancer, autoimmune disorders), metabolic disorders (diabetes type 2, thyroid diseases, obesity), asthma, allergies, problems with reproductive system (fertility, pregnancy, menstrual cycle, erectile dysfunction), dermatological conditions (acne, eczema), gastrointestinal problems (stomach upset, digestion problems, constipation, irritable bowel syndrome) (Halbreich, 2021; Yang et al., 2019). Various symptoms emerge once a source triggers individual's stress. Most common reported symptoms of stress are: anger and irritability (45%), low energy (41%), lack of motivation or interest in things (38%), worry or anxiety (36%), headaches (36%), feeling depressed or sad (34%), acid reflux, upset stomach, or indigestion (26%), muscle tension (23%), appetite changes (21%) sexual problems, weight changes, constipation or diarrhea, lack of attention (Zauderer, 2023).

There are different ways to manage stress. Since stress plays such a significant role in various diseases, the patient must be treated accordingly using both pharmacological (medications and/or nutraceuticals) and nonpharmacological (change in lifestyle, daily exercise, healthy nutrition, and stress reduction programs) therapeutic interventions. It has been proven that relaxation techniques such as behavioral therapy, meditation, yoga, breathing exercises, reflexology, massages, Reiki, water therapy are useful for reducing stress (Rapolienė et al., 2016). All individuals vary in their response to stress, so a particular treatment strategy or intervention appropriate for one patient may not be suitable or optimal for a different patient (Yaribeygi, 2017). However, using effective coping skills to manage stress is a solution that works for many stressed-out individuals. WHO's stress management guide could help with the self-help techniques such as: keep a daily routine, get plenty of sleep, connect with others, eat healthy, exercise regularly, limit time following news (WHO, 2020).

Research Methodics

Research organization and instruments. In order to assess the prevalence and management of stress in Lithuania in 2022/12–2023/01, a one-time questionnaire survey was conducted as an initial part of the scientific study "Efficiency and safety of using Lithuania's unique natural resources to improve the body's mental and physical health related to stress (LUGISES)." The permission of the Kaunas Regional Biomedical Research Ethics Committee (2022-11-28 No. BE-2-87) was obtained to conduct the study. ClinicalTrial.gov Identifier: NCT06018649. 1137 adults living in Lithuania voluntarily participated in the survey. The questionnaire consisted of 23 questions related to age, work activity, lifestyle, illness. A visual analogue scale was used to determine stress intensity and management (1–10, VAS). For stress intensity: 1 score was rated as no stress, 2–3 – low, 4–6 – medium, 7–9 – high, 10 – unbearable stress; for the stress management value: 1 score – does not manage stress at all, 2–3 – manage it poorly, 4–6 – moderately, 7–9 – well, 10 – extremely well. The Arizona Integrative Outcome Scale (AIOS) was used to determine the sense of well-being. One-item visual analogue AIOS assesses self-rated global sense of spiritual, social, mental, emotional, and physical well-being over the past 24 hours and the past month. The AIOS can distinguish relatively sicker from relatively healthier individuals, and correlates in expected directions with a measure of distress and indicators of positive and negative affect and positive states of mind. The questionnaire was placed on the website (www. apklausa.lt) and distributed through the institution's website, the social network Facebook, in the regional press, and medical SPAs' websites.

The data was collected during the project "The effectiveness and safety of unique natural resources of Lithuania for the improvement of stress-related mental and physical state" (LUGISES). The desire to participate in the project could have an impact on respondents' stress assessment. The results are more applicable to the regions of the

West, Central and South of Lithuania, because the respondents' place of residence had an influence on their participation in the further part of the project. For a deeper analysis of the different work and life factors' influence on stress intensity and management, the questionnaire should be expanded.

Participants. 1137 adult residents of Lithuania participated in the online survey. Most of respondents were women (83.2%), man (16.4%), married participants (67.7%), having a university education (56.4%), living in the city (71.8%), working in public sector (44.8%), sedentary work (30.4%), earning 500–1000 euro/month (41%), over 20 years work experience (53.8%), working time up to 12 hours/day (45.3%), rest time 7–8 hours/day (44.7%). The surveys were attended by persons representing quite a wide spectrum of demographic characteristics.

Clinical characteristic. More than half of respondents (56.9%) had at least one illness, most often cardiovascular (16.5%), musculoskeletal (13.1%), endocrine system (12.1%); as much as 24% were polymorbid – had at least 2 diseases. 82% were sick (or probable) with COVID-19; almost a third of them felt its consequences.

The most frequent health complaints after COVID-19 were cardiovascular problems (heart rhythm disturbances, BP fluctuations) (18.7%), fatigue (9.7%), weakness (7.1%), memory impairment (6.2%), joint pain (5.3%), anxiety (3.9%).

The lifestyle habits of participants are showing that majority consumed alcohol from 2–3 times per month to several times a year, did not smoke, and exercised 2–3 times per week; only a third follow healthy eating recommendations.

Statistical Analysis. Descriptive statistics were used to summarize the results of the questionnaire and determine the stress intensity averages used to manage stress intensity. Descriptive data are presented as means and standard deviations. Independent 2-tailed t-tests for continuous variables were used. Analysis of variance (ANOVA) comparing of more than 2 groups with Tukey HSD post-hoc multiple comparison tests were used to assess the differences between mean values of stress intensity across the combined groups of demographic and clinical variables. The correlation analysis was used to assess the linear statistical relationship between the variables. The strength of the relationships between the variables was assessed by the Pearson correlation coefficient.

Analyses were performed with the SPSS (Statistical Package for the Social Sciences for Windows). Version 28.0 SPSS Inc., Chicago, IL.

Research Results

Sense of well-being, stress intensity and effect of socio-demographic and clinical factors. The study showed that only 50% of respondents experience a higher-than-average **sense of well-being** formed by physical, mental, emotional, social and spiritual state. The average feeling of well-being was 5.6 points. The sense of well-being correlated highly (Pearson's) with stress intensity (moderate, -0.437, $p<0.001$) and stress management (moderate, 0.466, $p <0.001$).

During the study, it was found that 98% of respondents experienced stress. Average **stress intensity** was 6.72 (VAS); 8% experience low, 32% – medium, 51% – high, 7% – unbearable stress. According to ANOVA (F-test) comparison, the stress experienced by the participants was reliably related to marital status, education, profession, nature of work, salary, work experience, duration of work and rest, relapse of COVID-19 and its consequences. The greatest stress (Mean statistic) was felt by unmarried people, those with a university education, those who are studying, public sector workers, those who have a sedentary job, who earn 2000–3000 eur/month, who have 6–10 yrs. of work experience, working 13–16 hours/day, resting less than 6 hours/day, sick with COVID-19 or having consequences related to COVID-19. Relationship of stress intensity with socio-demographic and clinical factors are presented in Table 1.

Table 1

Relationship of stress intensity with socio-demographic and clinical factors

Variable	N	Mean (SN)	Effect size	F	Lower PI	Top PI	p
Gender							
Male	186	6.3 (2.4)	-0.130	3.596 (t-test)	-.626	.060	0.106*
Female	941	6.6 (2.1)					
Marital Status							
Married	766	6.5 (2.2)	0.016	5.948	6.30	6.61	<0.001
Unmarried	148	6.9 (2.0)			6.55	7.21	
Divorced	163	6.7 (2.1)			6.42	7.07	
Widow	53	5.5 (2.5)			4.81	6.21	
Education							
Unfinished high school	10	5.9 (2.6)	0.034	9.947	4.07	7.73	<0.001
High school	151	6.1 (2.3)			5.76	6.49	
Higher school	156	5.7 (2.5)			5.29	6.07	
College	176	6.6 (2.0)			6.32	6.90	
University	638	6.8 (2.1)			6.62	6.95	
Residence							
Urban area	812	6.5 (2.2)	0.002	0.825	6.37	6.67	0,480
Small town	155	6.7 (2.2)			6.33	7.02	
Urban area	141	6.3 (2.3)			5.90	6.67	
Sparsely populated area	24	6.4 (1.9)			5.61	7.22	
Professional field							
Farming	20	6.2 (1.9)	0.048	8.005	5.32	7.08	<0.001
Industry	87	6.3 (2.3)			5.84	6.82	
Public sector	506	6.7 (2.1)			6.52	6.88	
Service area	396	6.5 (2.2)			6.32	6.75	
Studying	23	7.6 (1.6)			6.89	8.24	

House wife	36	6.4 (2.3)			5.62	7.16	
Retired	51	4.5 (2.4)			3.82	5.16	
Unemployed	11	6.5 (2.5)			4.80	8.11	
Nature of work							
Sedentary	447	6.9 (2.1)	0.017	6.005	6.71	7.10	<0.001
Sedentary / physical	310	6.5 (2.2)			6.30	6.78	
Physical	225	6.2 (2.2)			5.94	6.52	
Intensive physical	39	6.1 (2.4)			5.27	6.83	
Salary (netto. Eur/month)							
<500	85	6.2 (2.3)	0.014	2.568	5.67	6.68	0.018
500-1000	461	6.4 (2.3)			6.15	6.56	
1000-1500	351	6.5 (2.1)			6.30	6.73	
1500-2000	139	6.8 (2.2)			6.44	7.18	
2000-2500	51	7.2 (2.0)			6.62	7.77	
2500-3000	21	7.3 (1.5)			6.64	8.03	
>3000	16	6.8 (1.6)			5.98	7.64	
Work experience (years)							
<1	25	6.4 (2.1)	0.014	4.001	5.53	7.27	0.003
2-5	71	6.7 (2.1)			6.16	7.14	
6-10	109	6.9 (1.9)			6.56	7.28	
11-20	318	6.8 (2.0)			6.57	7.01	
>20	609	6.3 (2.3)			6.10	6.47	
Work time (hours/day)							
<=8	528	6.1 (2.2)	0.035	10.019	5.94	6.31	<0.001
9-12	505	6.9 (2.1)			6.67	7.04	
13-16	54	7.4 (1.9)			6.88	7.90	
>16	27	6.7 (2.5)			5.69	7.65	
Leisure time (hours/day)							
<6	288	7.1 (2.2)		13.493	6.88	7.38	<0.001
7-8	503	6.5 (2.0)			6.30	6.65	
9-10	180	6.1 (2.2)			5.75	6.39	
>10	155	6.0 (2.5)			5.61	6.40	
COVID-19							
Had in 6 months period	164	7.1 (1.6)	0.022	8.583	6.80	7.30	<0.001
Had more than 6 months ago	642	6.6 (2.1)			6.41	6.74	
Did not have	193	5.9 (2.5)			5.52	6.23	
Not sure	129	6.5 (2.2)			6.06	6.83	
COVID-19 consequences							
No	813	6.3 (2.3)	-0.364	25.151 (t-test)	-1.047	-0.496	<0.001
Yes	318	7.1 (1.9)					

It was revealed that COVID-19 consequences – memory deficit (small), fatigue (small), anxiety (intermediate), joint pain (small), weakness (intermediate), headache, dizziness (intermediate), mood disturbances (intermediate), loss of appetite (large) – have significant effect on stress intensity.

In evaluating the influence of illness on stress intensity, it has been found that nervous ($p<0.001$, Cohen's d-0.4), haematology diseases ($p=0.042$, Cohen's d=-0.5) significantly increase stress, while there is no notable impact of cardiovascular, musculoskeletal, endocrine, digestive tract, endocrine, respiratory, skin, eye, ear-nose-throat, reproductive tract, urologic diseases, as well allergy (see Annex 1).

As well, study revealed that alcohol consumption ($p=0.0001$) and smoking ($p<0.001$) were related to stress intensity. Physical activity and eating habits had no impact on the intensity of stress (see Annex 2).

Stress management. Study results revealed the level of stress management, the average score was 5.74 points (VAS): do not manage stress at all – 1%, manage it poorly – 18%, manage it moderately – 50%, manage it well – 34%, only 2% of the studied persons manage it extremely well.

To reduce stress, the respondents mostly used communication with supportive persons, sleep, regulation of the regime, time for hobbies. Most frequently used methods were communication (56%), sleep (45%), regimen (41%), hobby (40%), healthy eating (39%), animal therapy (36%), sport (28%). Least frequently used useful measures were stress coping therapies (13%), rehabilitation (8%) and psychotherapy (5%). Bad habits for stress relief were: alcohol consumption (4.2%), smoking (7.4%), emotional eating (30.3%), and medicines (9.7%).

According to survey results, work and rest regimen control ($p<0.001$), time for hobby, sleep and rest, rehabilitation procedures, pharmaceuticals, alcohol and eating while stressed out make a significant impact on stress intensity, while no impact on stress level by sport activity, pet care, healthy nutrition, communication with supporting persons, antistress practices, visiting a psychotherapist, smoking is revealed (see Annex 3).

Conclusions

The study results revealed that majority Lithuanian feels stress, therefore stress management is an essential aspect of people well-being. In this study we indicate that 98% of respondents experienced stress with an average stress intensity: 8% experience low, 32% – medium, 51% – high, 7% – unbearable stress. Average stress intensity was 6.7, stress management was 5.7, and sense of well-being was 5.6 points. It is also important that 58% of respondents evaluated their stress as high or unbearable; well or extremely well-managed stress just over a third of cases. Only half felt a higher-than-average sense of well-being formed by physical, mental, emotional, social, and spiritual state moderately affected by stress intensity and its management, weakly affected by age and morbidity.

Research results identify the effect of socio-demographic and clinical factors on stress intensity. The surveys of stress were taken by people representing quite a wide spectrum of demographic characteristics. Stress intensity is reliably related to marital status, education, profession, nature of work, salary, work experience, duration of work and rest, relapse of COVID-19 and its consequences. The greatest stress was felt by unmarried people, those with a university education, those who are studying, public sector workers, those who have a sedentary job, who earn 2000–3000 eur/month, who have 6–10 yrs. of work experience, working 13–16 hours/day, resting less than 6 hours/day, sick with COVID-19 or have consequences related to COVID-19.

Relationship of stress intensity with clinical factors mostly lie on the consequences of the COVID-19 pandemic. It should be noted that the study occurred just after the weakening and end of the COVID-19 pandemic wave. Therefore, our results on stress can be worse than the world's level possibly because of the COVID-19 pandemic and its consequences, poor lifestyle, and stress management. It was determined that 83% of the participants were definitely or possibly infected with COVID-19, 28% still had post-COVID conditions consisting mainly of cardiovascular complaints, fatigue, weakness, memory impairment, joint pains, and anxiety.

We found that diseases, related with nervous, endocrine, haematology system have a significant impact on stress. Alleviating these health problems could help with stress management. At the same time, it is necessary to understand that in the presence of these diseases and complaints, it is important to assess the person's stress level, to give them recommendations for stress reduction, which could help in the treatment of the main diseases as well.

High-intensity stress is prevalent in Lithuania with moderate management and impairment of well-being. Country could face a national mental health crisis that could yield serious health and social consequences for years to come. Proper daily regimen and sleep, everyday time for a hobby and rehabilitation, avoiding bad habits, appropriate medical SPA treatments or wellness practices, treatment of nervous, endocrine, and haematology system disorders, and post-COVID-19 condition could help to reduce stress.

Conducted research on stress and its intensity in Lithuania in connection with different demographic situations, well-being, as well as post-COVID-19 feelings confirms that the role of demographic and clinical factors in evaluating individual stress intensity are important aspects. Given the findings of the study and other official statistics indicating a growing prevalence of mental health issues within the population, national health policy should be prioritized toward the strategies for stress management and reduction.

Author Contributions

Conceptualization, writing, L. R., D.Š.; methodology, L. R, A. M.; software, A. M., D.R.; investigation, L.R., G.K., A.B.; and editing, I.D., D.Š., D.R.; visualization, L.R., I.D., D.Š. All authors have read and agreed to the published version of the manuscript.

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Annex 1

Table. Relationship of stress intensity with morbidity

Diseases		Mean	Std. Deviation	Mean difference	F	t	2-sided p	Cohen's effect size
Cardiovascular	No	6.58	2.123					
	Yes	6.32	2.247	.258	.865	1.502	.133	0.1
Musculoskeletal	No	6.55	2.144					
	Yes	6.45	2.152	.103	.027	.547	.584	0.1
Digestive tract	No	6.50	2.142					
	Yes	6.90	2.154	-.393	.248	-1.721	.086	-0.2
Nervous	No	6.47	2.132					
	Yes	7.38	2.141	-.908	.005	-3.713	<.001	**-0.4**
Endocrine	No	6.52	2.173					
	Yes	6.62	1.929	-.096	2.920	-.492	.623	**-0.1**
Respiratory	No	6.51	2.145					
	Yes	7.03	2.092	-.525	.347	-1.834	.067	-0.3
Skin	No	6.51	2.152					
	Yes	6.97	1.975	-.458	.748	-1.648	.100	-0.2
Ear	No	6.53	2.148					
	Yes	6.65	2.019	-.121	.014	-.284	.777	-0.1
Reproductive	No	6.53	2.146					
	Yes	6.66	2.134	-.128	.502	-.389	.698	-0.1
Eye	No	6.50	2.171					
	Yes	6.99	1.684	-.482	11.443	-1.872	.062	-0.2
Urology	No	6.54	2.131					
	Yes	6.46	2.702	.076	2.768	.179	.858	0.04
Haematology	No	6.52	2.148					
	Yes	7.56	1.688	-1.036	4.302	-2.036	.042	**-0.5**
Allergies	No	6.50	2.162					
	Yes	6.93	1.887	-.424	2.867	1.746	.081	-0.2

Annex 2

Relationship of stress intensity with lifestyle

Parameters	N	Mean (SD)	ANOVA effect size	F	df	95% CI Lower bound	95% CI Upper bound	p
Alcohol consumption								
Everyday	5	7.6 (2,3)	0.009	1.928	5	4.74	10.46	0.0001
2–3 times/week	78	6.3 (2.2)				5.81	6.78	
Once a week	120	6.9 (1.9)				6.53	7.22	
2–3 times/month	384	6.7 (2.0)				6,45	6.86	
Several times/year	392	6.5 (2.2)				6.27	6.70	
Never	147	6.2 (2.5)				5.82	6.64	
Smoking								
Everyday	1041	6.6 (2.1)	0.018	6.894	3	6.50	6.75	<0.001
Frequently	1	6.0				.	.	
Rarely	8	4.9 (2.5)				2.81	6.94	
Nonsmoker	77	5.6 (2.0)				5.19	6.09	
Physical activity								
Everyday	67	5.9 (2.3)	0.011	2.074	6	5.33	6.47	0.054
4–6 times/week	91	6.2 (2.3)				5.70	6.67	
2–3 times/week	357	6.5 (2.1)				6.30	6.73	
1 time/week	195	6.6 (2.1)				6.25	6.85	
2–3 time/month	155	6.7 (2.0)				6.42	7.05	
Several times/year	179	6.7 (2.1)				6.39	7.02	
Never	83	6.8 (2.3)				6.33	7.31	
Eating habits								
Ordinary diet	783	6.6 (2.2)	0.002	0.635	3	6.44	6.75	0.592
Healthy nutrition	329	6.4 (2.1)				6.18	6.63	
Vegetarian/vegan	16	6.4 (2.2)				5.25	7.62	

ANOVA Effect Sizes Eta-squared

Annex 3

Relationship of stress intensity with stress reduction methods

Parameters	N	Mean (SD)	ANOVA effect size	F	df	95% CI Lower bound	95% CI Upper bound	p
Work and rest regimen control								
Never	94	7.0 (2.3)	0.025	8.391	3	6.48	7.41	<0.001
Rarely	407	6.9 (2.0)				6.71	7.11	
Frequently	405	6.4 (2.0)				6.20	6.59	
Everyday	65	5.8 (2.3)				5.25	6.38	
Sports								
Never	190	6.8 (2.2)	0.004	1.386	3	6.47	7.09	0.246
Rarely	450	6.7 (2.0)				6.53	6.90	
Frequently	282	6.5 (2.1)				6.23	6.73	
Everyday	38	6.3 (2.4)				5.50	7.08	
Healthy nutrition								
Never	115	6.51	0.005	1.483	3	6.06	6.97	0.218
Rarely	408	6.80				6.61	6.99	
Frequently	379	6.54				6.34	6.75	
Everyday	58	6.40				5.83	6.96	
Communication with supporting persons								
Never	89	6.4 (2.4)	0.005	1.613	3	5.87	6.87	0.185
Rarely	282	6.8 (2.0)				6.53	7.01	
Frequently	515	6.6 (2.1)				6.46	6.81	
Everyday	122	6.3 (2.1)				5.96	6.73	
Time for hobby								
Never	96	7.0 (2.6)	0,027	9.002	3	6.49	7.53	<0.001
Rarely	448	6.9 (2.0)				6.71	7.07	
Frequently	401	6.3 (2.0)				6.11	6.50	
Everyday	50	5.9 (2.6)				5.12	6.60	
Sleep and rest								
Never	74	6.7 (2.3)	0.018	6.325	3	6.16	7.24	<0.001
Rarely	424	6.9 (2.0)				6.68	7.06	
Frequently	447	6.4 (2.1)				6.19	6.57	
Everyday	67	5.9 (2.4)				5.34	6.54	
Anti-stress practices								
Never	484	6.7 (2.1)	0,003	0,808	3	6.46	6.84	0.489
Rarely	328	6.6 (2.1)				6.39	6.84	
Frequently	114	6.8 (2.0)				6.46	7.20	
Everyday	33	6.2 (2.3)				5.40	7.02	

Rehabilitation								
Never	402	6.8 (2.1)	0.008	2.623	3	6.55	6.96	0.049
Rarely	473	6.6 (2.0)				6.45	6.81	
Frequently	80	6.2 (2.5)				5.63	6.77	
Everyday	7	5.3 (2.8)				2.69	7.89	
Pet care								
Never	390	6.6 (2.2)	0.003	0.866	3	6.41	6.84	0.458
Rarely	176	6.8 (2.0)				6.53	7.12	
Frequently	240	6.7 (2.1)				6.39	6.92	
Everyday	169	6.5 (2.1)				6.15	6.78	
Psychotherapist								
Never	727	6.6 (2.1)	0.007	2.245	3	6.42	6.73	0.082
Rarely	159	6.9 (2.2)				6.54	7.21	
Frequently	55	7.1 (1.8)				6.56	7.55	
Everyday	7	7.7 (1.8)				6.05	9.38	
Pharmaceuticals								
Never	622	6.4 (2.1)	0.030	10.007	3	6.24	6.56	<0.001
Rarely	250	7.0 (2.0)				6.74	7.24	
Frequently	74	7.5 (2.0)				6.99	7.93	
Everyday	36	7.2 (2.2)				6.44	7.90	
Alcohol consumption								
Never	597	6.4 (2.1)	0.029	9.412	3	6.27	6.61	<0.001
Rarely	299	6.9 (1.9)				6.71	7.15	
Frequently	42	7.5 (1.6)				6.99	8.01	
Everyday	4	9.8 (0.5)				8.95	10.55	
Smoking								
Never	787	6.6 (2.1)	0.007	2.352	3	6.46	6.74	0.071
Rarely	80	6.6 (2.0)				6.18	7.09	
Frequently	60	7.2 (2.1)				6.65	7.71	
Everyday	24	7.3 (2.4)				6.31	8.36	
More eating								
Never	259	6.2 (2.1)	0.032	10.501	3	5.98	6.50	<0.001
Rarely	349	6.5 (2.1)				6.28	6.72	
Frequently	303	7.1 (1.9)				6.91	7.33	
Everyday	41	7.2 (2.1)				6.55	7.89	