HOW DO ONLINE VOLUNTEERS MANAGE THEIR HEALTH?
HEALTH-PRESERVING PRACTICES AND BEHAVIORAL RISKS*

Natalya L. Antonova–Alina V. Kulminskaya

Introduction

In recent decades, volunteer activities have been actively developed and promoted in public systems as voluntary work based on selfless service to society. Participation in volunteer activities has no political, economic, or cultural boundaries, and volunteers as a social group are guided in their work by kindness and responsiveness, promoting the ideas of humanism and mercy. Modern research has given a positive assessment of volunteering in general on the social well-being of people. (Herzog et al. 1998). More than one billion people volunteer globally (Adam–Alhendawi 2020). There are 1.8 billion young people worldwide, and a third of them are volunteering (Al-Hammadi 2019).

Volunteering is often the first experience of social activity for young people (Jardim–Marques da Silva 2008; Bartal 2018), who are characterized by an active life position (Antonova et al. 2020), including students, because they are an important resource for the future development of society, determining its trajectory. Studies of students' attitudes towards volunteering show that service to society (Wondimu 2024; Tóth–Bakos 2024) and maintaining a subjective assessment of one's own well-being (Mersianova I. et al. 2024) are important motivations for young people to participate in volunteer activities. Researchers have found that regular and long-term volunteer activity brings great benefits not only to society but also to the volunteer (Pevnaya–Drozdova 2022). Participation in volunteer activities contributes to the personal growth of the students, since already during the university years students develop such important life skills as leadership, communication, and cooperation. The experience of volunteering gives a sense of

confidence that allows them to successfully cope with problems in their personal life and studies. (Adila et al. 2023).

Modern transformations of institutions and organizations, occurring under the influence of new information technologies, also affect volunteering as a type of social practice. Researchers note that in modern social systems, the range of volunteer activities is expanding (Hustinx–Lammertyn 2003; Koolen-Maas et al. 2022), including online volunteering (Amichai-Hamburger 2008), which allows strengthening existing models of social participation in a digital society (Acker-mann–Manatschal 2018; Pevnaya et al. 2021). According to the researchers, online volunteering practices comprise administering the club's website, moderating a Facebook group, contributing to a Wikipedia entry, and recording a non-profit educational video on YouTube (Ackermann–Manatschal 2018; Baruch et al. 2016, Cox et al. 2018). This approach is also used by international organizations (Become an Online Volunteer 2022). Today the Internet is becoming a platform for the implementation of prosocial attitudes (Wright–Li 2011), including student youth, which, according to the Twenge concept, is classified as iGen (Internet generation) (Twenge 2017), and which was formed under the influence of gadgets through which young people communicate with the outside world.

Online volunteers representing the iGen generation are undoubtedly better than older generations at using new technologies in their daily lives, but young people of the iGen generation also experience a wide range of negative physical and mental health consequences from daily long-term use of a computer/lap-top/tablet/smartphone: research convincingly shows that adolescents and young adults experience eye discomfort (Kim et al. 2016), physical pain (Can–Karaca 2019), anxiety and depression (Elhai 2017). In addition, constant exposure to smart-phones, tablets, and personal computers increases the risk of obesity and leads to cardiovascular diseases, including hypertension, as well as insulin resistance, high sympathetic arousal, and cortisol dysregulation. (Lissak 2018; Nakshine et al. 2022). Hence, the key focus for online volunteers should be preventive actions to reduce health risks. In this paper, we study the self-rated health of online student volunteers, determine their health behavior, including compliance with ergonomic requirements and physical activity, and also examine behavior during information overload.

Literarure rewiew

Online volunteering as a type of helping unpaid behavior

Online volunteering (virtual/electronic volunteering) has been actively develop-ing since the 2000s (Cravens J. 2000) and is associated with the use of the Internet in volunteer activities (Silva F. et al. 2018). Online volunteering is any voluntary and unpaid activity that is carried out via the Internet.

According to D. Mukherjee, online volunteering is a type of civic engagement in which volunteers perform their tasks using the Internet either from home or other locations outside the office (Mukherjee 2011). Online volunteering practices do not require additional territorial movements, which is important for those who do not have financial resources or have physical (bodily) limitations. (Seddighi–Salmani 2019). Almost anyone with some free time and access to the Internet can become an online volunteer. In addition, proactivity on the Internet allows one to plan work independently (Cravens 2000) and implement skills and abilities in the area that is of interest to the volunteer. J. Ihm and M. Shumate found that online volunteers identify themselves not only with volunteer organizations but also with social problems and are willing to provide assistance to those in need (Ihm–Shumate 2022).

Researchers note that, on the one hand, online volunteering simplifies joining the ranks of pro-activists, since it does not require direct contact with people, and it is through online activities that the younger generation comes to the classic volunteer movement (Kulminskaya 2019), but, on the other hand, online volunteering is a continuation of traditional forms of helping behavior (Pena-Lopez 2007). Since online volunteering primarily involves the younger generation, which spends a lot of time in the digital environment (Molchanov et al. 2021), it is also important to implement the socialization function, which ensures the personal growth of the younger generation, the development of self-esteem and self-realization, strengthening social ties and relationships between people. Thus, online volunteering benefits both society as a whole and the volunteer himself.

Online volunteering, as a way to strengthen existing models of social participation in an increasingly digital society (Ackermann–Manatschal 2018), expands the scope of proactive behavior of volunteers and includes such types as fundraising, technological support, communications, marketing, providing consulting services (Nor et al. 2019), as well as developing applications, creating and moderating websites (Xu 2009). To this list, we can also add such unpaid activities as online tutoring, public journalism, psychological assistance, and support.

Health behaviors of online volunteers

Health behavior is defined as any activity undertaken with the purpose of preventing or detecting disease or improving health and well-being. (Conner–Norman 1996). The main tool in the work of an online volunteer is a computer/laptop/tablet, accordingly, for this group, special actions are relevant, aimed at caring for health, and related to the prevention of somatic and mental illnesses caused by prolonged work at the computer and information overload.

First of all, it should be noted that online volunteers need to follow ergonomic requirements. People who spend a lot of time at a computer/laptop and do not follow ergonomic guidelines experience pain in the wrists, shoulders, elbows, cervical

and lumbar spine. Disorders in the functioning of the musculoskeletal system occur when muscles and ligaments are under constant tension: a person either makes monotonous movements or is in a static position (Vulović et al. 2012). To avoid unwanted consequences, it is recommended to do warm-up exercises every 2–3 hours.

Another problem area may be diseases of the visual system since a person who spends much time at the computer is subject to significant stress on the eyes (brightness of the monitor, flickering discrete units (pixels)), which leads to a number of diseases: spasm of the eye muscles, dry eye, astigmatism, myopia, computer vision syndrome (Rosenfield 2016). Recommendation to reduce the load is good ergonomic practice (Alemayehu–Alemayehu 2019): do eye exercises and keep a distance of 50–60 cm between the monitor and the eyes.

A person working at a computer moves little and consequently burns a few calories, which leads to obesity and increases the risk of developing cardiovascular diseases. For example, Warren and colleagues found that in men, a sedentary lifestyle is a significant predictor of mortality from cardiovascular diseases (Warren 2010). Taking breaks from computer work with physical exercise, as well as playing sports and walking, are becoming tools for combating obesity and preventing cardiovascular disease. In addition, physical activity develops endurance, which is necessary not only for manual labor but also for intellectual activity (Antonova–Merenkov 2020), including in the work of online volunteers.

Working at a computer is often accompanied by stressful situations (stress at work, pressure from management, fast pace) and information overload. This entails psychosocial and emotional stress, and nervous system disorders, which can ultimately lead to mental illnesses (Berg-Beckhoff et al. 2017). A correct way to avoid such risks is to follow a daily routine, e.g. allocate time for healthy sleep and rest (Chin et al. 2019), and physical activity. Doing exercises releases endorphins in the body, which help to improve well-being and mood (Fox 1999), as well as to become happier (Zhang–Chen 2019). At the same time, as researchers note, a number of people turn to deviant stress relief practices (Wittgens et al. 2022).

In general, taking care of health entails following ergonomic requirements, active physical exercise, and giving up bad habits. Despite the fact that volunteering increases life satisfaction (Jenkinson et al.2013), has a positive effect on self-assessment of health (de Wit et al.2022), reduces the likelihood of deviant behavior in young people (drug use) (Wilson 2000), reduces the risk of cognitive impairment in old age (Sharifi et al. 2024), mitigates the impact of stress on health (Han 2018), we nevertheless believe that it is important for online volunteers to use everyday practices to take care of their own health and minimize behavioral health risks during information overload.

Research process

Our research was conducted at the Ural Federal University (Russia, Yekaterinburg). Federal University is an institution of higher education in the Russian Federation with a special status. Each federal university solves the problems of strengthening the links between higher education, the real sector of the economy, and the social sphere, improving the human capital of territories. Ural Federal University is developing as a scientific, educational, and innovative center of the Ural Federal District. It is a point of attraction for applicants, students, and employers of the Sverdlovsk, Kurgan, Chelyabinsk, Tyumen regions, the Khanty-Mansiysk Autonomous Okrug, and a number of other regions. As of 2024, 45,000 students are studying at the Ural Federal University, there are 15 creative groups, 33 sports teams, and 32 student groups. The university accumulates the most active and motivated young people, which makes it relevant to study online volunteering here.

The survey of students of the Ural Federal University of all levels of study (bachelor's, master's) was conducted by questionnaire method on a standardized survey form in the fall of 2023 (N=1170), the sample type is quota, the sampling error does not exceed 3% with a confidence probability of 0.95. The questionnaire was created in the Google Forms service and distributed via social networks and through the official mailing list at the university. The obtained quantitative data were processed in the IBM SPSS Statistic 22 program. The frequency method and the cross-tabulation (conjugation) method were used for statistical analysis of the information.

The sample was based on such characteristics as gender and field of study. The sample population was calculated in accordance with official statistics (Results of Monitoring the Activities of Educational Organizations in the Sverdlovsk Region) and university data.

The sample structure by areas of study was controlled and fully corresponded to the general population. The data are presented in *Table 1*.

Table 1. Data on the structure of the sample population by areas of study

Directions	Frequency	% of respondents
Mathematics and natural sciences	117	10
Engineering and technical sciences	577	49
Social and economic sciences	334	29
Humanities	142	12
Total	1170	100

The sample structure by gender was a flexible quota and had minor differences. The data are presented in *Table 2*.

Table 2. Data on the structure of the sample population by gender.

Gender	Number in sample	% in sample	% in the general population
Male	572	49	47
Female	598	51	53
Total	1170	100,0	100

A student of any year could take part in the survey. The sample structure by year was not controlled when selecting respondents, but it turned out to be close to the structure of the general population *(Table 3)*.

Table 3. Data on the structure of the sample population by level of education

Level of education	Number in sample	% in sample	% in the general population
Bachelor's degree	1031	88	84
Master's degree	139	12	16
Total	1170	100	100

To identify online volunteers among students of the Ural Federal University, a multi-choice question was used, including online volunteering practices: have you done any of the following for free on the Internet? Every second (52.5%) respondent had done at least one online volunteering activity in the last 12 months *(Table 4)*. Thus, a subsample of 614 people was formed for further analysis.

Table 4. Distribution of respondents' answers to the question about selfless activity over the past 12 months (the sum of the answers is greater than 100% since each respondent could choose any number of answers)

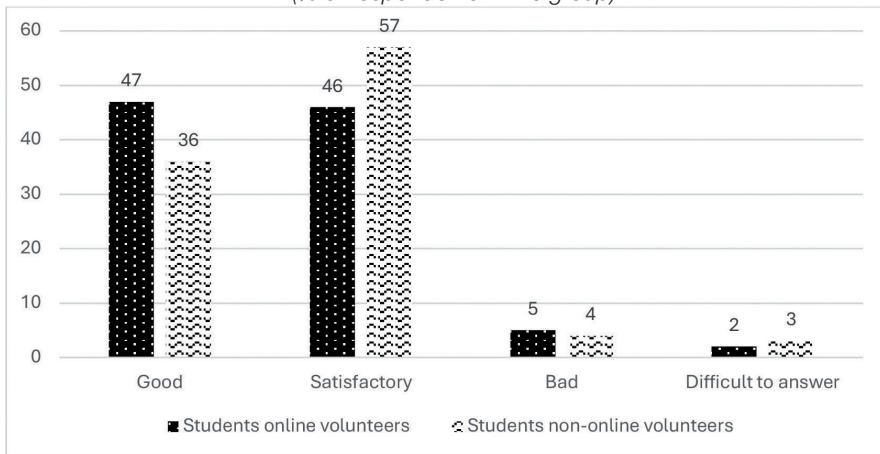| Practices	Number of responses	% of respondents
Created/managed a website for an association or non-profit organization	193	17
Published articles/notes on Wikipedia or other resources implemented on Wiki principles	294	25
Created/moderated thematic groups on social networks	356	30

Published a practical video guide on YouTube or other video-hosting sites	148	13
Provided online consultations or acted as an online expert	75	6
Didn't do any of the above	494	42

Results

Assessment of health status and reasons to care for it

In order to find out the students' opinions about their health, a closed question was asked: "How do you rate your health?" Students generally rate their health quite low. Among online volunteers, almost every second person chose the answer "good" or "satisfactory". Among those who are not online volunteers, only every third person believes that they have good health. The results show and confirm the data presented in the literature review that the overall health assessment of online volunteers is higher than that of other students, i.e. it can be argued that volunteering has a positive effect on self-rated health. (Pearson's chi-quadrate=17,772, p-value=0,000) The data are presented in *Figure 1*.

Figure 1. Distribution of respondents' answers to the question "How do you rate your health?" (% of respondents in the group)
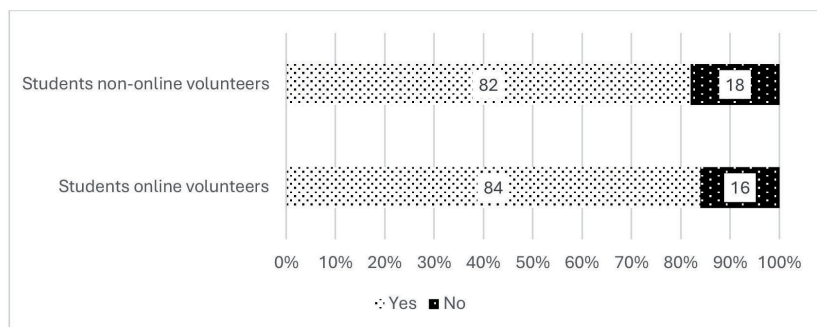

To understand the attitude towards one's health, a dichotomous question was asked: "Do you care about your health?".

Despite the differences in health assessment, the answers to this question in the selected subgroups differ by only 2%[1]. The overwhelming majority of students care about their health (84% among volunteers, 82% among those who do not practice this activity). The data are presented in *Figure 2.*
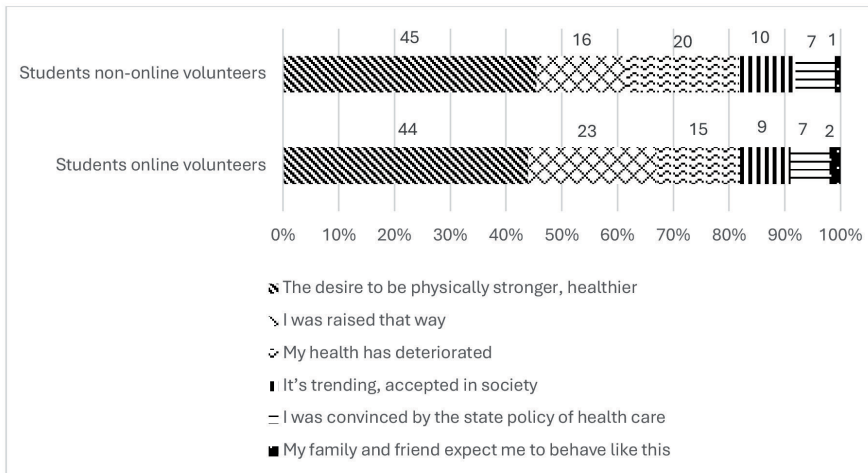
Figure 2. Distribution of respondents' answers to the question "Do you rate your health?"
(% of respondents in the group)

The main factor motivating health care was identified using the alternative question "If you care about your health, what is the main reason for this? (Select one main reason)". The question was asked only to those respondents who answered affirmatively to the previous question. The main difference between the subgroups was revealed by such a factor as "upbringing". Among online volunteers, almost every fourth person noted this factor as the main one, while in the second subgroup, only every sixth person considered this factor the main one. Here again, we can speak more of similarities than differences: Pearson's chi-quadrate=12,712, p-value=0,048. The data are presented in *Figure 3.*

---

1 Pearson's chi-quadrate=0,938, p-value=0,333.

Figure 3. Distribution of respondents' answers to the question "If you care about your health, what is the main reason for this?" (% of respondents in the group)

Compliance with ergonomic requirements

Taking care of your health when working at a computer primarily includes proper organization of your workplace and work process. We measured the practice of following ergonomic requirements using a multi-variant question: "What recommendations for working with a monitor screen do you follow?". Every second respondent, regardless of their involvement in online volunteering practices, takes breaks from working at the computer. For the subgroup of respondents not involved in online volunteering, this is the most popular answer. Further in descending order of responses for this group are such practices as reducing monitor brightness and airing out the rooms (48% each), installing the monitor at a safe distance for the eyes (46%), and working in the dark with diffuse artificial lighting (39%). The remaining practices are relatively rare. The average number of ergonomic requirements that this group of respondents follows is 3.1. It should be noted that 12% of respondents do not follow any recommendations at all.

Online volunteers are more attentive to the organization of their workplace. Almost two-thirds (61%) of respondents in this group set the monitor at a safe distance, every second respondent takes a break from working at the computer, reduces the brightness of the monitor, and ventilates the work area. Respondents in this group more often control their posture and use special glasses for working at the computer. The average number of ergonomic requirements that this group of respondents follows is 3.5, and only 6% of respondents do not follow any recommendations. (Pearson's chi-quadrate=40,207, p-value=0,000). The data on compliance with workplace ergonomics requirements are presented in *Table 5.*

Table 5. Distribution of respondents' answers to the question "What recommendations for working with a monitor screen do you follow?". (% of respondents in the group)
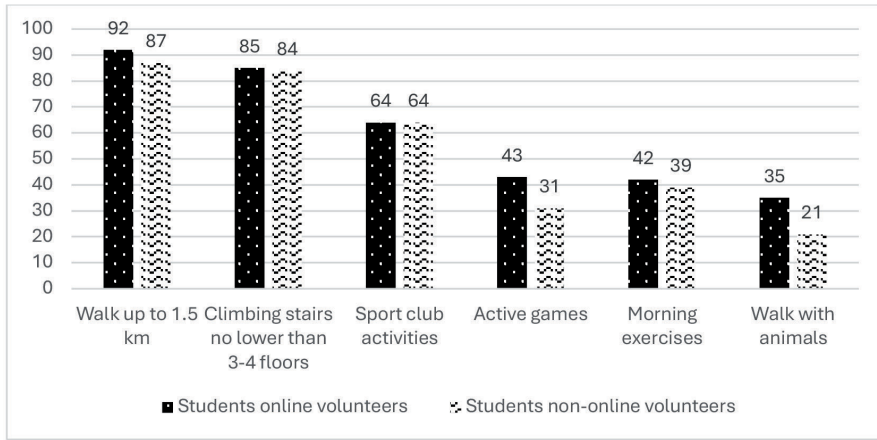
Ergonomic requirements	Students online volunteer	Students non-on-line volunteer
I place the monitor screen at a distance of at least 50 cm from my face	**61**	46
I take breaks from working on the computer	55	55
I set the brightness of the monitor screen so that it is not maximum	**53**	48
I regularly ventilate the room where I work at the computer	**52**	48
In the dark, I work under diffused artificial lighting	44	39
I watch my posture and don't slouch	**38**	33
I use a computer chair	29	28
Ergonomic requirements	**Students online volunteer**	**Students non-on-line volunteer**
I use special glasses to work on the monitor	**18**	11
Average number of practices per respondent	*3,5*	*3,1*
I don't follow any recommendations.	6	**12**

When analyzing the responses to the question about the time students spend in front of the monitor, no differences were found.

Physical activity

The level of physical activity was measured using a table question that included various types of activities: from everyday activities (walking, climbing stairs, etc.) to activities that require separate time (club activities, active games). The ordinal scale included five items: daily; 2–3 times a week; 1–2 times a month; less than 1–2 times a month; never. For convenience, the scale was enlarged: the first three items were combined into the category "practices", and the fourth and fifth – "does not practice". The most common activities among online volunteers are walking (92% practice it, 41% of them daily) and climbing stairs (85%, 51% of them daily). The third most popular type of physical activity is sports club training, practiced by two-thirds of online volunteers. Differences in physical activity practices between online volunteers and other students are almost insignificant. Differences in involvement in active games and walks with animals are beyond the sampling error. (Pearson's chi-quadrate=22,202, p-value=0,000). The data are presented in *Figure 4.*

Figure 4. Summary data on respondents' answers to the question "How often do you engage in physical activity?" (% of respondents in group)

Behavioral health risks

Online volunteer activities involve large amounts of information. In our research strategy, we considered information overload as the main factor causing risk situations in the study group. To determine the risks, we used the table question "When faced with information overload, do you turn to the following things...?" Respondents assessed the frequency of drinking coffee, smoking cigarettes, and having energy drinks on an ordinal scale: in most cases; in some cases; never. For analysis, the scale was enlarged according to the "agreement-negation" principle.

According to the data obtained, online volunteers have significantly higher health risks in conditions of information overload. Almost every second online volunteer in such a situation has coffee[2], every third one - cigarettes[3] or energy drinks[4]. Despite the differences in percentages, statistically the differences in energy drink consumption are virtually insignificant. Figure 5 compares the proportion of online volunteers and other students who at least occasionally turn to coffee, cigarettes, and energy drinks when faced with information overload.
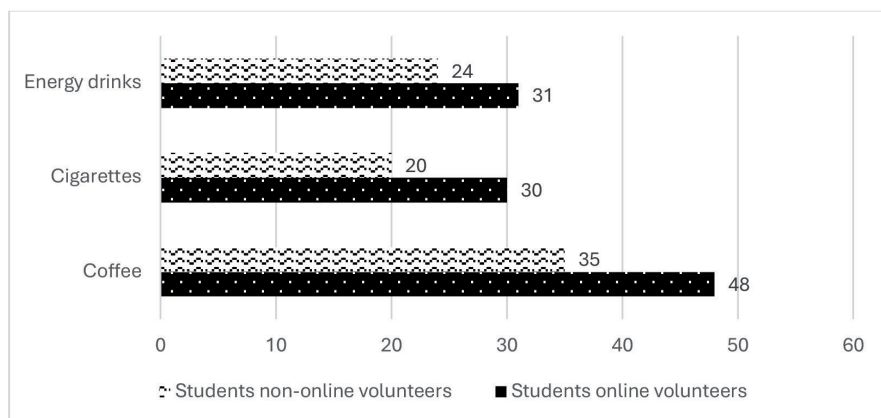
---

2 Pearson's chi-quadrate=12,621, p-value=0,000.
3 Pearson's chi-quadrate=7,081, p-value=0,008.
4 Pearson's chi-quadrate=4,845, p-value=0,028.

Figure 5. Summary data on respondents' answers to the question: "When faced with information overload, do you turn to the following things...?" (% of respondents in the group)

Discussion

Online volunteers have a high resource capacity. We share the opinion of J. Ihm and M. Shumate, who believe that the high social potential of online volunteering requires new approaches to managing it (Ihm–Shumate 2022). Young online volunteers, due to their age, assess their health quite highly and use ergonomic principles in their activities as a healthcare tool. It should be noted that the students involved in online volunteering showed a high level of adherence to ergonomic standards, which are not always followed even by specialists whose work is directly related to information technology. Thus, a study by M. Jasmine and colleagues found a high prevalence of musculoskeletal problems among Indian software engineers, a low level of awareness of workplace ergonomics, and an extremely low prevalence of adherence to ergonomic principles. (Jasmine at al 2020).

The results of our study showed that student youth include physical activity practices in their daily life. Thus, in general, it can be assumed that they implement the health-saving principles proposed by the World Health Organization (WHO), according to which it is recommended for people aged 18 to 64 years to accumulate at least 150 minutes of moderate physical activity or 75 minutes of intense physical activity every week (World Health Organization 2010). Modern research convincingly proves the positive effects of physical education and sports: improved cognitive abilities and mental health/emotional state, increased life satisfaction, and better academic performance of students (Shaw et al 2007; Burton–Vanheest 2007; Mora et al. 2019). Despite high motivation for health care among student volunteers, researchers note difficulties in sports due to the lack of facilities (Ferreira Silva 2022).

This raises the issue of creating a special environment in the city, residential area, and university for additional physical activity as a way to maintain and develop health. According to the study, online volunteers experience information overload, which they try to neutralize with coffee, cigarettes, or energy drinks. But it's not just information overload that can be a health risk factor. For example, A. Rathbone and colleagues found that moderation of online mental health chats was emotionally draining because, without specialized medical knowledge, online volunteers found it impossible to help people in crisis (Rathbone et al. 2024). We believe that in such situations online volunteering is associated with behavioral risks in relation to health, and given that students combine educational, volunteer, and other activities, they need help and support. We consider this aspect of the problem to be relevant, since, as noted by S. Nyangiwe and colleagues, the lifestyle during university studies continues into adulthood (Nyangiwe et al. 2020). Hence, smoking, excessive consumption of coffee and energy drinks, coupled with physical inactivity and ignoring ergonomic rules when working with a computer/tablet can have negative consequences for health in the long term.

Student youth, on the one hand, are already adults and can bear full responsibility for their lives, health, lifestyle, work, and rest regime. On the other hand, they have little experience and need more serious support and advice when choosing their activities. In our opinion, the obtained data destroys the myth about the ease of this activity. Online volunteering is not associated with physical work or interaction with complex groups of the population, but intensive intellectual activity is no less difficult.

Conclusions

Our study contributes to the conceptual framework of online volunteering (Mahmoudi–Saberi 2023; Ackermann–Manatschal 2018; Urrea–Yoo 2023). The results of the study allowed us to come to the following conclusions. As digital technologies have expanded into all spheres of human life, the movement of online volunteers, whose activities partially or completely take place on the Internet, has evolved. The development of online volunteering is important both for society as a whole, contributing to the creation of civil society and the formation of socially responsible individuals and groups, and for the volunteers themselves, promoting self-realization, acquiring new knowledge, and affirming social significance and usefulness. In this regard, it seems important to address the issues of self-rated health of online volunteers and practices for its improvement.

Our research shows that only half of the respondents assess their health as good, while the majority of respondents take care of it. Since the activities of online volunteers are associated with working on a computer/tablet, care for it is manifested in following ergonomic requirements and including physical activity in the lifestyle.

At the same time, the survey materials showed that, when faced with information overload, online volunteers, compared to students not involved in online helping behavior practices, more often turn to coffee, cigarettes, and energy drinks.

Our results can be used to determine criteria for assessing the work of online volunteers and to develop new strategies for preserving their health. Shifting focus from computer hygiene to the prevention of mental stress associated with information overload is the main objective. In this regard, it is necessary to organize mobile health care services at universities, which can help student volunteers cope with difficulties when providing help on the Internet. Moreover, the presented results are useful for developing a new approach to managing online volunteers, taking into account intellectual and information overload, their lifestyle, and healthcare practices.

Bibliography

Ackermann, K.–Manatschal, A. (2018): Online volunteering as a means to overcome unequal participation? The profiles of online and offline volunteers were compared. *The New Media and Society,* 20., (12.), pp. 4453–4472. DOI: 10.1177/1461444818775698

Adam, O.–Alhendawi, A. (2020, May 26): *Three things to consider before volunteering.* https://www.unv.org/Success-stories/three-things-consider-volunteering (2024. 09. 18).

Adila, A.–Samat, A.–Norhanim, Zorobi M.–Redzuan, I.–Hisam, M.–Jaafar, S.–Kassim, A.–Farhan, A.–Patar, M.–Zaid, N.–Ayob, M.–Tanakaran, H.–Ederose, N. (2023): Exploring the Impact of Volunteerism in University CSR Initiatives. *International Journal of Academic Research in Business and Social Sciences,* 13., pp. 5917–5927. DOI: 10.6007/IJARBSS/v13-i12/18573.

Alemayehu, A.–Mogess, M. A. (2019): Pathophysiologic Mechanisms of Computer Vision Syndrome and its Prevention: *Review, World Journal of Ophthalmology & Vision Research,* 2., (5.), pp. 1–7. DOI: 10.33552/WJOVR.2019.02.000547

Al-Hammadi, A. (2019, August 12): *Young people enhance education by volunteering.* https://www.unv.org/Success-stories/young-people-enhance-education-volunteering (2024. 09. 18).

Amichai-Hamburger, Y. (2008): Potential and promise of online volunteering. *Computers in Human Behavior,* 24., pp. 544–562. DOI: 10.1016/j.chb.2007.02.004

Antonova, N. L.–Abramova, S. B.–Polyakova, V. V. (2020): The Right to the City: Daily Practices of Youth and Participation in the Production of Urban Space, Monitoring of Public Opinion: *Economic and Social Changes,* 3., pp. 443–462. DOI: 10.14515/monitoring.2020.3.1597

Antonova, N.–Merenkov, A. (2020): Perceived Personal Attractiveness and Self-Improvement Practices. *Changing Societies & Personalities,* 4., (1.), pp. 91–106. DOI: 10.15826/csp.2020.4.1.091

Bartal, A. M. (2019) «Vissza a jövőbe» – A magyar önkéntesség harminc évéről három tételben. *Civil szemle*, 16., (1.), pp. 15–32.

Baruch, A.–May, A.–Yu, D. (2016): The motivations, enablers, and barriers for voluntary participation in an online crowdsourcing platform. *Computers in Human Behavior,* 6., pp. 923–931. DOI: 10.1016/j. chb.2016.07.039

Berg-Beckhoff, G.–Nielsen, G.–Ladekjær, Larsen E. (2017): Use of information communication technology and stress, burnout, and mental health in older, middle-aged, and younger workers–results from a systematic review, *International Journal of Occupational and environmental health,* 23., (2.), pp. 160–171. DOI: 10.1080/10773525.2018.1436015

Burton, L. J.–Vanheest, J. L. (2007): The Importance of Physical Activity in Closing the Achievement Gap. *Quest,* 59., (2.), pp. 212–218. DOI: 10.1080/00336297.2007.10483549

Can, S.–Karaca, A. (2019): Determination of musculoskeletal system pain, physical activity intensity, and prolonged sitting of university students using smartphone. *Biomedical Human Kinetics,* 11., (1.), pp. 28–35. DOI: 10.2478/bhk-2019-0004

Chin, M. K.–Anderson, E.–de Ridder, J. H.–Uvinha, R. R.–Durstine, J. L. (2019): BRICS to BRICSCESS – A perspective for practical action in the promotion of healthy lifestyles to improve public health in five countries. *Journal of Sport and Health Science,* 8., (6.), pp. 520–523. DOI: 10.1016/j.jshs.2019.07.008

Conner, M.–Norman, P. (Eds.) (1996): *Predicting Health Behaviour.* Buckingham: Open University Press.

Cox, J.–Oh, E. Y.–Simmons, B.–Graham, G.–Greenhill, A.–Lintott, C.–Masters, K.–Woodcock, J. (2018): Doing Good Online: The Changing Relationships Between Motivations, Activity, and Retention Among Online Volunteers. *Nonprofit and Voluntary Sector Quarterly,* 47., (5.), pp. 1031–1056. DOI: 10.1177/0899764018783066

Cravens, J. (2000): Virtual volunteering: online volunteers providing assistance to human service agencies. *Journal of Technology in Human Sciences,* 17., (2–3.), pp. 119–136. DOI: 10.1300/J017v17n02_02

De Wit, A.–Qu, H.–Bekkers, R. (2022): The health advantage of volunteering is larger for older and less healthy volunteers in Europe: a mega-analysis. *European Journal of Ageing,* 19., (4.), pp. 1189–1200. DOI: 10.1007/s10433-022-00691-5

Elhai, J. D.–Dvorak, R. D.–Levine, J. C.–Hall, B. J. (2017): Problematic smartphone use: a conceptual overview and systematic review of relations with anxiety and depression psychopathology. *Journal of Affective Disorders,* 207., pp. 251–259. DOI: 10.1016/j.jad.2016.08.030

Fox, K. R. (1999): The influence of physical activity on mental well-being. *Public Health Nutrition,* 2., pp. 411–418. DOI: 10.1017/s1368980099000567

Han, S. H.–Kim, K.–Burr, J. A. (2018): Stress-buffering effects of volunteering on salivary cortisol: results from a daily diary study, *Social Science & Medicine,* 201., pp. 120–126. DOI: 10.1016/j.socscimed. 2018.02.011

Herzog, A. R.–Franks, M. M.–Markus, H. R.–Holmberg, D. (1998): Activities and Well-Being in Older Age: Effects of Self-Concept and Educational Attainment. *Psychology and Aging,* 13. (2.), pp. 179–185. DOI: 10.1037//0882-7974.13.2.179

Hustinx, L.–Lammertyn, F. (2003): Collective and Reflexive Styles of Volunteering: A Sociological Modernization Perspective. Voluntas: *International Journal of Voluntary and Nonprofit Organizations,* 14., pp. 167–187. DOI: 10.1023/A:1023948027200

Ihm, J.–Shumate, M. (2022): How Volunteer Commitment Differs in Online and Offline Environments. *Management Communication Quarterly,* 36., (4.), pp. 583–611. DOI:10.1177/08933189211073460

Jardim, C.–Marques da Silva, S. (2008): Young people engaging in volunteering: Questioning a generational trend in an individualized society. *Societies,* 8., (1.), pp. 1–11.

Jasmine, M.–Fasna, L.–Chellaiyan, V. G.–Pragadeesh, R. V.–Ravivarman, G. (2020): A study on knowledge and practice of Ergonomics among the Software Engineers in a private firm, Chennai, Tamil Nadu. *Journal of Family Medicine and Primary Care,* 9., (8.), pp. 4287–4291. DOI: 10.4103/jfmpc. jfmpc_848_20

Jenkinson, C. E.–Dickens, A. P.–Jones, K.–Thompson-Coon, J.–Taylor, S. R.–Rogers, M.–Bambra, L. C.–Lang, I.–Richard, H. S. (2013): Is volunteering a public health intervention? A systematic review and meta-analysis of the health and survival of volunteers. *BMC Public Health,* 13., pp. 1-–0. DOI: 10.1186/1471-2458-13-773

Kim, J.–Hwang, Y.–Kang, S.–Kim, M.–Kim, T. S.–Seo, J.–Ahn, H.–Yoon, S.–Yun, J. P. et al. (2016): Association between exposure to smartphones and ocular health in adolescents. *Ophthalmic Epidemiology,* 23., pp. 269–276. DOI: 10.3109/09286586.2015.1136652.

Koolen-Maas, S. A.–Meijs, L. C. P.–van Overbeeke, P. S. M.–Brudney, J. L. (2022): Rethinking volunteering as a natural resource: A conceptual typology. *Nonprofit and Voluntary Sector Quarterly,* 52., pp. 353–377. DOI: 10.1177/08997640221127947

Kulminskaya, A. V. (2019): Volunteering on the Internet: Identification Problems. *Bulletin of Surgut State Pedagogical University,* 5., (62.), pp. 169–178.

Lissak, G. (2018): Adverse Physiological and Psychological Effects of Screen Time on Children and Adolescents: Literature Review and Case Study. *Environmental Research,* 164., pp. 149–157. DOI: 0.1016/j.envres.2018.01.015

Mahmoudi, H.–Saberi, M. (2023): The Comparison of Offline and Online Volunteering Activities among Students with an Emphasis on Libraries. *Library and Information Sciences,* 25., (4.), pp. 73–94. DOI: 10.30481/lis.2022.363521.2008

Mersianova, I.–Ivanova, N.–Briukhno, A. (2024): Subjective Well-Being and Participation in Volunteering in Russia. *Changing Societies & Personalities,* 8., (1.), pp. 78–92. DOI: 10.15826/csp.2024.8.1.264

Molchanov, S. V.–Almazova, O. V.–Poskrebysheva, N. (2021): Digital Volunteering in Representations in Youth. *Intelligent Memory Systems, Dblp computer science bibliography,* https://ceur-ws.org/Vol-3090/paper41.pdf

Mora, J. I.–Ventura-Vall-Llovera, C.–Hernández-Mosqueira, C. (2019): Level of physical activity, eating habits, and their relationship with academic performance in adolescent students at COMEDUC foundation, chile. *Journal of Physical Education and Sport,* 19., (4.), pp. 2397–2404. DOI: 10.7752/jpes.2019.04363

Mukherjee, D. (2011): Participation of older adults in virtual volunteering: A qualitative analysis. *Ageing International,* 36., (2.), pp. 253–266. DOI: 10.1007/s12126-010-9088-6

Nakshine, V. S.–Thute, P.–Khatib, M. N.–Sarkar, B. (2022): Increased Screen Time as a Cause of Declining Physical, Psychological Health, and Sleep Patterns: *A Literary Review, Cureus,* 14., (10.). DOI: 10.7759/cureus.30051

Nor, N. M.–Othman, N.–Bahari, A. (2019): From traditional volunteering to online volunteering: Moving beyond real border. *International Journal of Muamalat,* 3., (1.), pp. 26–30. Retrieved from https://ijm.unishams.edu.my/images/pdf_file/2019/4_From_Traditional_Volunteering_to_Online_Volunteering_Moving_Beyond_Real_Border.pdf

Nyangiwe, S.–Mgwambane, T.–Malema, M. J. (2020): Perceptions of Physical Activity among Students Living on and off Campus in a University in the Western Cape. *The Open Public Health Journal,* DOI: 10.2174/1874944502013010705 https://openpublichealthjournal.com/VOLUME/13/PAGE/705/FULLTEXT/

Pena-Lopez, I. (2007): Online volunteers: knowledge managers in nonprofits. *The Journal of Information Technology in Social Change,* 1., pp. 142–159.

Pevnaya, M. V.–Drozdova, A. A. (2022): Cultural Volunteering of University Students: Assessment of Participation Experience and Potential for Development. *Higher Education in Russia,* 31., (8–9.), pp. 41–57. DOI: 10.31992/0869-3617-2022-31-8-9-41-57

Pevnaya, M. V.–Kulminskaya, A. V.–Shirokova, E. A.–Shuklina, E. A. (2021): Volunteering Youth During the Pandemic: A Portrait of a Hero of a Difficult Time. Monitoring of Public Opinion: *Economic and Social Changes,* 3., pp. 492–510. DOI: 10.14515/monitoring.2021.3.1930.

Rathbone, A. L.–Clarry, L.–Prescott, J.–Hanley, T. (2024): Digital altruism: the motivators for, effects of and support received when moderating mental health online. *Mental Health and Digital Technologies,* 1., (1.), pp. 37–52. DOI: 10.1108/MHDT-12-2023-0004

Rosenfield, M. (2015): Computer vision syndrome (aka digital eye strain). *Optometry in Practice,* 17., (1.), pp. 1–10.

Seddighi, H., Salmani, I. (2019): Online Volunteering, A Way to Reduce Health Inequalities: A review study, *Journal of Community Health Research,* 7., (4.), pp. 256–264. DOI: 10.18502/JCHR.V7I4.273

Sharifi, S.–Khorzoughi, K. B.–Mahmoud, R. (2024): The relationship between volunteering and cognitive performance in older adults: A systematic review. *Geriatric Nursing,* 55., pp. 89–96. DOI: 10.1016/j.gerinurse.2023.10.020

Shaw, S. R.–Gomes, P.–Polotskaia, A.–Jankowska, A. M. (2015): The relationship between student health and academic performance: Implications for school psychologists. *School Psychology International,* 36., (2.), pp. 115–134. DOI: 10.1177/0143034314565425

Silva, F.–Proença, T.–Ferreira, M. R. (2018): Volunteers' perspective on online volunteering – a qualitative approach. *International Review on Public and Nonprofit Marketing,* 15., pp. 531–552 DOI: 10.1007/s12208-018-0212-8

Silva, R. M. F.–Mendonça, C. R.–Azevedo, V. D.–Memon, A. R.–Noll, P. R.–Noll, M. (2022): Barriers to high school and university students' physical activity: a systematic review, *PLOS ONE,* 17., (4.). DOI: 10.1371/journal.pone.0265913

Tóth-Bakos, A. (2024): The place and role of the civil sector in the inclusive education and development of children with Williams syndrome (also) through music. *Civil Szemle,* 21., (1.), pp 89–104, DOI:10.62560/csz.2024.01.06

Twenge, J. M. (2017): iGen: *Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy and Completely Unprepared for Adulthood and What That Means for the Rest of Us.* New York: Atria.

Urrea, G.–Yoo, E. (2023): The role of volunteer experience on performance on online volunteering platforms. *Production and Operations Management,* 32., (2.). DOI: 10.1111/poms.13879 https://journals.sagepub.com/doi/abs/10.1111/poms.13879

Vulović, R.–Papić, Ž.–Stanković, N.–Papić, M. (2011): Ergonomics and health issues caused by working with computer. *Metalurgia International,* 17., (7.), pp. 155–160.

Warren, T. Y., Barry, V., Hooker, S. P., Sui, X., Church, T. S., et al. (2010): Sedentary behaviors increase risk of cardiovascular disease mortality in men. *Medicine and Science in Sports and Exercise,* 42,. pp. 879–885. DOI: 10.1249/MSS.0b013e3181c3aa7e.

Wilson, J. (2000): Volunteering. *Annual Review of Sociology,* 26., (1.), pp. 215–240. DOI: 10.1146/annurev.soc.26.1.215

Wittgens, C.–Muehlhan, M.–Kräplin, A. et al. (2022): Underlying mechanisms in the relationship between stress and alcohol consumption in regular and risky drinkers (MESA): methods and design of a randomized laboratory study. *BMC Psycholpgy,* 10. DOI: 10.1186/s40359-022-00942-1

Wondimu, H.–Admas, G. (2024): The motivation and engagement of student volunteers in volunteerism at the University of Gondar, *Discover Global Society,* 2., pp. 1–16. DOI: 10.1007/s44282-024-00049-5

World Health Organization (2010): *Global recommendations on physical activity for health.* Geneva: World Health Organization.

Wright, M.–Li, Y. (2011): The associations between young adults' face-to-face prosocial behaviors and their online prosocial behaviors. *Computers in Human Behavior,* 27., (5.), pp. 1959–1962. DOI: /10.1016/j.chb.2011.04.019

Xu, B.–Jones D. R.–Shao, B. (2009): Volunteers' involvement in online community based software development. *Information & Management,* 46., (3.), pp. 151–158. DOI:10.1016/j.im.2008.12.005

Zhang, Z., Chen, W. (2019): A systematic review of the relationship between physical activity and happiness. *Journal of Happiness Studies,* 20., pp. 1305–1322.

Internet source

Become an Online Volunteer (2022 August 5): https://www.unv.org/become-online-volunteer 2024. 09. 18.

Results of Monitoring the Activities of Education Organizations in the Sverdlovsk Region (2023): https://monitoring.miccedu.ru/iam/2023/_vpo/material.php?type=2&id=10804 2024. 09. 18.

Fotó/Németh István Péter