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THE IMPACT OF RESTRICTIVE MEASURES TO PREVENT THE SPREAD OF COVID-19 ON STUDENTS' LIFESTYLE

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Ключові слова: *COVID-19, обмежувальні заходи, спосіб життя, студенти*

Abstract. The impact of restrictive measures to prevent the spread of COVID-19 on students' lifestyle. Vinogradov O.O., Guzhva O.I. *The need to develop effective strategies to overcome the social, economic, physiological and psychological consequences of the COVID-19 pandemic requires targeted research on the impact of restrictive measures on the lifestyle of people of different ages and socio-demographic groups, including youth, as the most able and active population. The article presents the assessment results of the peculiarities of the restrictive measures impact aimed at preventing the spread of acute respiratory disease COVID-19 on the territory of Ukraine on the lifestyle of student youth. The assessment of the general attitude of the respondents to the COVID-19 pandemic, as well as the peculiarities of the lifestyle before and after the introduction of restrictive measures, was conducted by interviewing students using a specially designed questionnaire. The survey involved 86 people (58.1% – women, 41.9% – men) aged 17 to 35. The majority of respondents (79.1%) were urban residents and had a household size ranging from 2 to 4 people (2.7±0.15 people). The results of the survey showed that the majority of students consider COVID-19 a dangerous infection (48.8%), feel anxiety / worry about their own health (58.1%) and the health of their loved ones (83.7%), support the establishment of quarantine (53.5%) and adhere to the recommended preventive measures (97.7%). The majority of students observe the statistics of COVID-19 in Ukraine (79.1%) and the world (81.4%). The most authoritative sources of information for the majority of respondents are official international (53.5%) and official Ukrainian sources (39.5%); however, a significant proportion of respondents also trust unofficial sources of information (23.3%). Most students do not adhere to the regime of self-isolation (51.2%), every day going outside their place of residence, daily contact with an average of 2.7±0.19 people. After the introduction of restrictive measures, the distribution of time for different types of activity has changed. There was a significant increase in time spent by students watching movies and TV series and a decrease in time for walking ($p < 0.05$). The duration of sleep was not changed after the introduction of restrictive measures, however, the time frame of sleep shifted by about an hour – respondents began to fall asleep later on average and wake up later.*

Реферат. Вплив обмежувальних заходів, спрямованих на запобігання поширенню COVID-19, на спосіб життя студентів. Виноградов О.О., Гужва О.І. *Необхідність розробки ефективних стратегій подолання соціальних, економічних, фізіологічних та психологічних наслідків пандемії COVID-19 вимагає проведення цілеспрямованих досліджень особливостей впливу обмежувальних заходів на спосіб життя людей різних вікових і соціально-демографічних груп, зокрема молоді, як найбільш дієздатної та активної частини населення країни. У статті представлено результати оцінки особливостей впливу обмежувальних заходів, спрямованих на запобігання поширенню територією України гострої респіраторної хвороби COVID-19, на спосіб життя студентської молоді. Оцінку загального ставлення респондентів до пандемії COVID-19, а також особливостей способу життя до та після запровадження обмежувальних заходів проводили шляхом опитування студентів за допомогою спеціально розробленої анкети. В опитуванні взяло участь 86 осіб (58,1% – жінки, 41,9% – чоловіки) віком від 17 до 35 років. Більшість респондентів (79,1%) були мешканцями міст і мали розмір родини в межах від 2 до 4 осіб (2,7±0,15 осіб). Результати опитування показали, що більшість студентів уважає COVID-19 небезпечною інфекцією (48,8%), відчуває хвилювання / тривогу за власне здоров'я (58,1%) та здоров'я своїх близьких / родичів (83,7%), підтримує встановлення карантину (53,5%) і дотримується рекомендованих профілактичних заходів (97,7%). Більшість студентів спостерігає за статистикою захворюваності на COVID-19 в Україні (79,1%) і світі (81,4%). Найбільш авторитетними джерелами інформації для більшості респондентів є офіційні міжнародні (53,5%) та офіційні українські джерела (39,5%); проте значна частина респондентів довіряє й неофіційним джерелам інформації (23,3%). Більшість студентів не дотримується режиму самоізоляції (51,2%), кожен день виходячи за межі свого місця проживання, щодня контактуючи в середньому з 2,7±0,19 особами. Після введення обмежувальних заходів розподіл часу на різні види активності змінився. Установлено достовірне збільшення часу, що витрачають студенти, на перегляд фільмів і серіалів та зменшення часу на прогулянки ($p<0,05$). Тривалість сну, після запровадження обмежувальних заходів, не змінилась, проте приблизно на годину зсунулись часові рамки сну – респонденти почали в середньому пізніше засинати й пізніше прокидатись.*

Coronavirus disease COVID-19, which is caused by the SARS-COV-2 virus, is a major public health concern [2, 4, 7, 8, 10]. Appearing for the first time in December 2019 in Wuhan (Hubei Province, China), the disease later spread throughout China and beyond [9]. Based on the rapid increase in the number of dead people and injured countries, on January 30, 2020, the World Health Organization declared a global health emergency, and on March 11, 2020, assessed the situation regarding COVID-19 as a pandemic [6].

In Ukraine, from March 12, 2020, the Resolution of the Cabinet of Ministers of Ukraine of March 11, 2020 No. 211 "On prevention of the spread of acute respiratory disease COVID-19 caused by virus SARS-CoV-2" introduced a number of restrictive measures, which included a ban on holding mass events and quarantine in educational institutions.

Restrictions on communication and movement, the need to spend the vast majority of time at home have significantly affected the normal lifestyle of most people. At the same time, the need to develop effective strategies to overcome the social, economic, physiological and psychological consequences of the COVID-19 pandemic requires targeted research on

the impact of restrictive measures on the lifestyles of people of different ages and socio-demographic groups, including youth as the most able and active population in the country [3].

The purpose of the study – to assess the impact of restrictive measures aimed at preventing the spread of acute respiratory disease COVID-19 in Ukraine on the lifestyle of student youth.

MATERIALS AND METHODS OF RESEARCH

During May 10-12, 2020, with the help of the Google Forms service, a remote survey of 86 first- and fourth-year students of the Institute of Physical Education and Sports of the Luhansk Taras Shevchenko National University (Kreminna, Luhansk region) was conducted. The survey used a specially designed questionnaire, which included questions characterizing the general attitude of respondents to the COVID-19 pandemic, as well as questions about the peculiarities of lifestyle before and after the introduction of restrictive measures.

The research was conducted in accordance with the principles of bioethics set out in the WMA Declaration of Helsinki – "Ethical principles for medical research involving human subjects" and "Universal Declaration on Bioethics and Human Rights" (UNESCO).

After verification, removal of blank questionnaires and assignment of the appropriate serial number, statistical processing of the received information was performed using the license package of Microsoft Excel 2016 MSO software (16.0.4266.1001). Relative values, mean values (M), the error of mean values (±m) were calculated, the reliability of values by Student's t-test was evaluated. [1, 5].

Among the respondents, 58.1% were women and 41.9% were men; the average age of respondents was 22.9±0.56 years (from 17 to 35 years). The majority of respondents (79.1%) were urban residents. The household size in the majority of respondents (69.8%) ranged from 2 to 4 people; the average household size was 2.7±0.15 people. Almost half (46.52%) of respondents live with people at risk (more prone in severe COVID-19).

RESULTS AND DISCUSSION

The results of the survey showed that the majority of respondents consider COVID-19 a dangerous infection (48.8%) and fully support the introduction of restrictive measures (53.5%). Also, the majority of surveyed students feel anxious / worry about their own health (58.1%) and the health of their relatives (83.7%) due to the spread of coronavirus disease.

At the same time, among those who consider the introduction of restrictive measures on COVID-19 unjustified, the majority assume that the danger of COVID-19 is greatly exaggerated (71.4%), do not feel anxious about their own health (57.1%), but are worried about the health of their relatives (57.1%).

It should be noted that among women the number of people who consider COVID-19 a dangerous infection is higher (60.0%) compared to men (33.3%); the introduction of restrictive measures is supported by almost equal numbers of men and women.

Almost equal number of surveyed students observe the statistics of coronavirus infection in Ukraine (79.1%) and the development of the COVID-19 pandemic in the world (81.4%). The most authoritative sources of information for the majority of respondents are international (53.5%) and official Ukrainian sources (39.5%); unofficial sources of information, in particular social networks, are used by 23.3% of respondents.

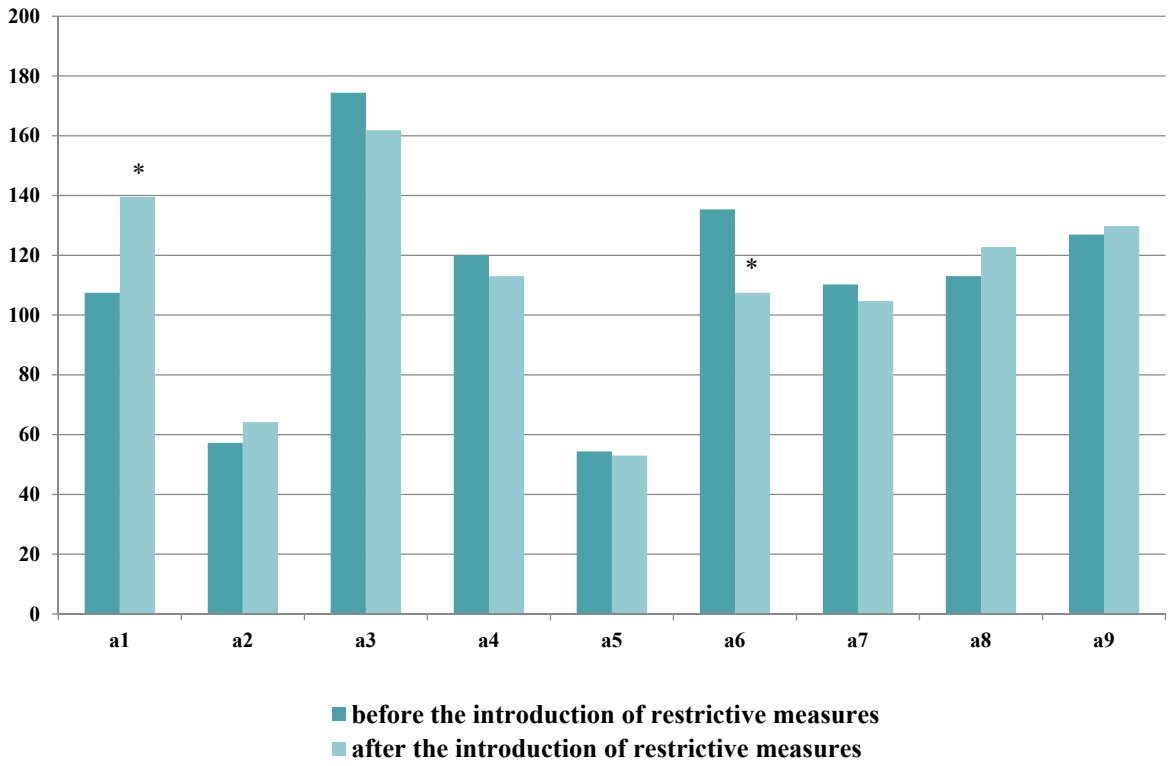
The majority of respondents (51.2%) do not adhere to the regime of self-isolation, going outside their place of residence every day. According to this indicator, men are more active (72.2%) compared to women (36.0%).

The main goals of leaving the apartment / house are visiting the store (51.2%), the need to work (37.2%) and walking (20.9%). At the same time, 69.8% of respondents follow the rules of physical distancing. The average number of people with whom respondents come in contact during the day (excluding those who live with them) is 2.7±0.19 people. The majority of respondents (30.2%) are in contact with more than five people during the day; only 11.6% try to completely avoid any contact with other people.

Almost all respondents follow the recommended preventive measures: wash their hands or use antiseptic after returning home (97.7%), use a protective mask in public places (97.7%); the vast majority of respondents (72.1%) wash purchased products and things.

Before the introduction of restrictive measures on COVID-19, respondents spent most of their time studying (174.4 minutes per day), walking in the fresh air (135.4 minutes per day), communicating with relatives (127.0 minutes per day) and Internet surfing or social networks (120.0 minutes per day). Respondents spent the least time reading books (57.2 minutes per day; 30.23% of students do not read at all) and computer games (54.4 minutes per day; most students (62.8%) do not spend time on computer games at all) (Fig.).

After the introduction of restrictive measures, the distribution of time for different types of activity has changed (Fig.). Thus, respondents spent most of their time studying (161.9 minutes per day), watching movies and TV series (139.53 minutes per day, $p<0.05$), doing housework (122.8) and communicating with relatives. (129.8 minutes per day). At the same time, the time spent by respondents on walks probably decreased (107.44 min per day, $p<0.05$).



Notes: a1 – watching movies, TV series, a2 – reading books, a3 – learning, a4 – Internet surfing or social networks, a5 – computer games, a6 – walking in the fresh air, a7 – physical activity, a8 – housework, a9 – communication with relatives, * – $p < 0.05$.

The average amount of time (min) that respondents estimate they spend on different types of activity before and after the introduction of restrictive measures

During the analysis of the night sleep regime, it was found that its duration after the introduction of restrictive measures almost did not change and before the establishment of quarantine it was 8 hours 38 minutes, after the establishment of quarantine – 8 hours 25 minutes. However, the time frame of sleep shifted by about an hour - respondents began to fall asleep later on average (average fall asleep time shifted from 22:07 to 23:11; +64 min) and wake up later (waking time shifted from 6:45 to 7:36; +51 min). Also, the number of people who fall asleep after 0:00 (from 25.6 to 34.9%) and wake up after 09:00 (from 9.3 to 34.9%) has increased.

The number of respondents who have daytime sleep has slightly increased after the introduction of restrictive measures (from 62.8 to 69.8%); the duration of daytime sleep remained unchanged (102 minutes in average).

CONCLUSIONS

1. Most students consider COVID-19 a dangerous infection, feel anxious / worry about their own health and the health of their loved ones, support quarantine, and follow recommended preventive measures.
2. Most students observe the statistics of COVID-19 in Ukraine and around the world. The most authoritative sources of information for most respondents are international (World Health Organization) and official Ukrainian sources (Ministry of Health, Center for Public Health, etc.); however, a significant proportion of respondents also trust unofficial sources.
3. Most students do not adhere to the regime of self-isolation, every day going outside their place of residence, daily contact with an average of 2.7±0.19 people, which may contribute to the spread of coronavirus COVID-19.
4. After the introduction of restrictive measures, a significant increase in the time spent by students watching movies and TV series and reducing the time for walks ($p < 0.05$) was established.
5. After the introduction of restrictive measures, the duration of sleep was not changed, however, the time frame of sleep shifted by about an hour – respondents began to fall asleep later on average and wake up later.
6. In general, the results of the study showed a slight impact of restrictive measures on the lifestyle of students, in the context of the division of time into different activities, which may be due to non-compliance of self-isolation measures with the majority of respondents. Given that almost half of the

respondents live with people who can be classified as at risk, the relatively large number of social contacts during the day is a cause for concern. At the same time, the identified trends in changing the lifestyle of students need further research in the long run.

Contributors:

Vinogradov O.O. – conceptualization, methodology, validation, writing – review & editing, supervision, project administration, funding acquisition;

Guzhva O.I. – investigation, investigation, writing – original draft, funding acquisition.

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