

THE INFLUENCE OF DISTANCE LEARNING ON CHANGES IN THE EATING HABITS OF UNIVERSITY STUDENTS UNDER THE CONDITIONS OF THE QUARANTINE RESTRICTIONS OF COVID-19

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Анотація

Мета: визначити тенденції змін моделей харчування студентської молоді при переході на тривалі періоди дистанційного навчання в умовах карантинних обмежень, зумовлених епідемією коронавірусної хвороби (COVID-19).

Методи. В основі було двокомпонентне соціологічне дослідження, де використано два онлайн-опитувальники: «Інтернет залученість» та «Модель харчування» з використанням сервісу Google-форми. Для аналізу даних використано медико-статистичний методи. Цільова група дослідження - студенти Ужгородського національного університету денної форми навчання. Обробка результатів дослідження проводилася з використанням пакету прикладних програм MS Office.

Результати. Респонденти за рівнем залученості до мережі Інтернет сформовані у 3 групи: I група - низька залученість (2-3 години на добу), II група – середня залученість (4-6 годин) та III група – висока залученість до інтернету (більше 7 годин на добу). Результати проведеного розподілу отриманих анкет за групами під час очного і дистанційного навчання та аналіз відповідей на визначені питання анкети відображають перехід респондентів з групи низької залученості до мережі Інтернет в період очного навчання в групи середньої та високої залученості під час дистанційного навчання. Аналіз особливостей харчування студентської молоді у різні періоди карантинних обмежень виявив, що 66,3% опитаних (124 особи) відмітили зміни в режимах і видах харчування у порівнянні очного та дистанційного навчання та 33,7% (63 особи) не вказали таких змін. 35,3% опитаної студентської молоді відмічають часті перекуси під час дистанційного навчання. Однак, тільки 10,7 % (20 осіб) опитаних відмітили, що під час дистанційного навчання вживають більше їжі фаст-

фуд, а 33,2 % (62 осіб) – відмічають харчування фаст-фудом більше під час очного навчання. 16,6 % опитаних відчують негативний вплив на стан здоров'я, 23,5 % (44 осіб) відчують позитивні зміни у стані власного здоров'я. При цьому потрібно відмітити, що 57,2% опитаних відмітили, що їхня фізична та рухова активність під час дистанційного навчання зменшилась.

Висновок. Моделі харчування студентської молоді під час очного і дистанційного навчання мають суттєві відмінності, що може бути пов'язано із збільшенням часу роботи в мережі Інтернет. Значна частка вказує на збільшення обсягу спожитої їжі під час дистанційного навчання та зниження фізичної і рухової активності. Негативний вплив харчування на здоров'я під час дистанційного навчання відмічає лише 16,5 % опитаних. Питання впливу дистанційного навчання на стан здоров'я студентської молоді залишається відкритим, оскільки тут потрібні додаткові дослідження

Ключові слова: Дистанційне навчання, карантин, студентська молодь, модель харчування

Abstract

The Aim: of the following study is to determine the changes in the eating habits of university students during the transition to long periods of distance learning in the conditions of quarantine restrictions caused by the epidemic of the coronavirus disease (COVID-19).

Methods: It was based on a two-component sociological study, where two online questionnaires were used: "Internet involvement" and "Food model" using the Google form service. Medical and statistical methods were used for data analysis. The target group of the study is day time students of the Uzhhorod National University. The processing of the research results was carried out with the help of the MS Office application program package.

Results: Respondents were divided into 3 groups according to the level of their involvement in the Internet: Group I - low involvement (2-3 hours per day), Group II - medium involvement (4-6 hours) and Group III - high involvement in the Internet (more than 7 hours per day). The results of the distribution of the received questionnaires by groups during face-to-face and distance learning and

the analysis of answers to certain questionnaire questions reflect the transition of respondents from the group of low involvement in the Internet during face-to-face education to groups of medium and high involvement during distance education. The analysis of the eating habits of students during different periods of quarantine restrictions revealed that 66.3% of respondents (124 people) pointed out certain changes in their diet and types of food compared to face-to-face and distance learning, whereas 33.7% (63 people) did not indicate such changes. 35.3% of surveyed students mentioned having frequent snacks during distance learning. However, only 10.7% (20 people) of the respondents pointed out that they were eating more fast food during distance learning, and 33.2% (62 people) noted that they were eating fast food more during face-to-face learning. 16.6% of respondents experienced a negative influence on their health, while 23.5% (44 people) experienced some positive changes. At the same time, it should be mentioned that 57.2% of respondents pointed out that their physical and motor activity decreased during distance learning.

Conclusion. The eating habits of university students have significant differences during the period of face-to-face and distance learning; this may be related to the increase of the time spent on the Internet. A significant part of students indicates an augmentation in the amount of food consumed during distance learning and a decrease in physical and motor activity. Only 16.5% of respondents noted the negative impact on their health during distance learning. The question of distance learning influence on the health of university students remains open, as some additional research is needed here.

Key words: distance learning, quarantine, university students, food model.

Theoretical starting points: nutrition, in particular, rational nutrition plays an important role in ensuring a high level of health as well as in increasing life expectancy and ensuring people's working capacity. An important element of rational nutrition is a proper diet, i.e. reception and quantitative distribution of food during the day (breakfast, lunch and dinner). During the period of intensive classes (module control, assessments, exams), during either face-to-face or distant studies, young people and students should receive more calories per day. The diet of young people and students should include foods that contain a lot of minerals, as well as proteins and carbohydrates. Carbohydrates provide the body with energy. The longer and greater learning load is the more of them their bodies require. (Polushkin P.M., Rolushina O.H., Mysyk A.O., Khodos D.G.,

2012). The formation of the diet should be specified, in particular, taking into account the socio-biological characteristics of a person: height, age, physical activity, metabolism, mental and nervous activity, etc. In the 21st century century, it is irrational to talk about fractional nutrition or three times a day one as a key to the success of a healthy life.

It is necessary to take into consideration various factors, which a person is surrounded by and their individual influence on his or her health. The proper assessment of the quality of consumed food plays a great role here. There is no doubt that with small meals, provided that they are "food waste", there will be much less positive effect on health than 1-2 times meals rich in micro- and macroelements, which are considered to be much more useful.

The Purpose of the study is to determine the changes of university students' eating habits in the process of transition to long periods of distance learning in the conditions of quarantine restrictions caused by epidemic of the coronavirus disease (COVID-19).

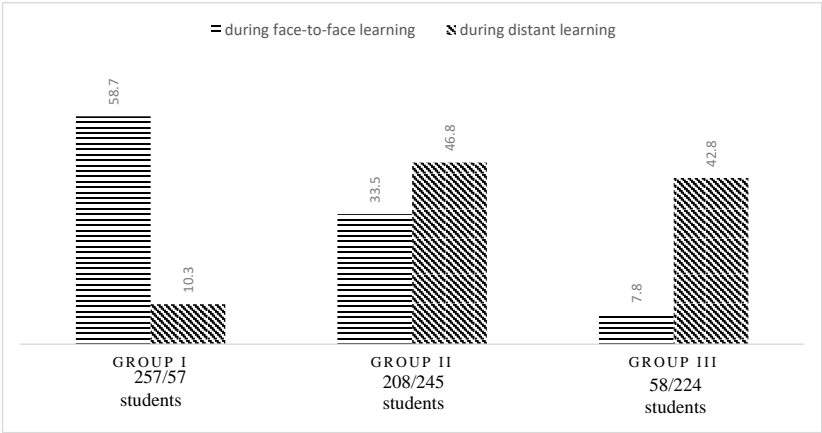
Methods: The study is based on a two-component sociological study, including two online questionnaires such as "Internet involvement" and "Nutrition model" with the help of Google form service. Medical and statistical methods were used for data analysis. The target group of research is day-time students of the Uzhhorod National University. In general, both questionnaires contained 25 closed questions with answer options, which were conditionally divided into two blocks: a group of socio-demographic questions of the respondents characteristics and a block of questions to assess the respondents' daily involvement in the Internet use (in hours per day) during different periods of study under quarantine conditions in different levels of restrictions due to the epidemic of COVID-19 and issues for assessment peculiarities of respondents' nutrition during face-to-face and distance studying. Questionnaires were sent to students of all five courses of the faculty. The "Internet engagement" survey was held in the second half of 2021, "Model food" - in the first half of 2022. The survey took place during the temporary period of distance learning under strict quarantine restrictions. Processing of the research results was conducted with the help of the MS Office application package. (Lepkanych A.O., Mironyuk I.S., 2022).

Results: As a result, a total of 523 questionnaires of respondents were collected according to "The Internet involvement", among them 353 people (67.5% of respondents) are 1-2 year undergraduates, 150 people (28.7%) - 3-4 year

bachelor's degree, 20 people (3.8%) - master's degree students. Regarding the "Nutrition Model questionnaire ", only 187 questionnaires were received, among them - 120 (64.2%) – 1-2 courses, 56 (29.9 %) – 3-4 courses, 11 (5.8%) – master’s degree students. During the analysis of questionnaire No.1, a distribution of respondents was made according to the key characteristic - an indicator of the level of involvement in the Internet during various forms of the educational process.

Respondents were divided into 3 groups due to the level of involvement: I group - low involvement (2-3 hours per day), II group - medium involvement (4-6 hours) and group III – high involvement in the Internet (more than 7 hours per day). The main task of the first stage of the study was to identify the level of Internet involvement during face-to-face and distance learning of respondents. The results of the questionnaires distribution received by groups during face-to-face and distance learning and analysis of answers to defined questions of the questionnaire reflect the transition of respondents from the group of low involvement into groups of medium and high involvement during distance learning, as presented in Fig. 1.

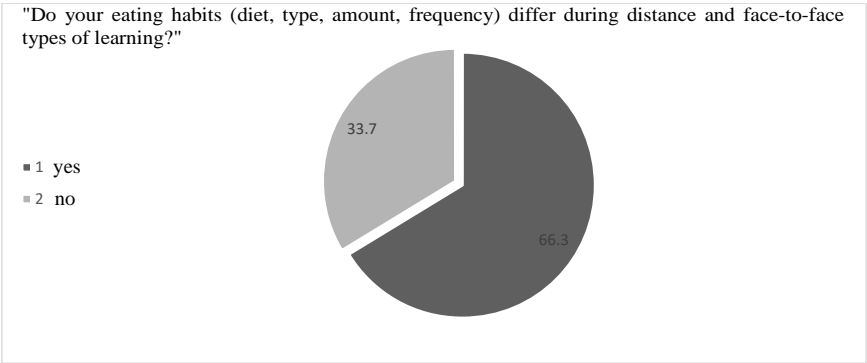
Figure 1 The distribution of respondents by the level of involvement in the Internet during face-to-face and distance learning (n=523) (A.O. Lepkanych, I.S. Myronyuk, 2022)



Analyzing the results of the second stage of the study regarding the nutritional characteristics of university students during different periods of quarantine restrictions, it was found that 66.3% of the respondents (124 people)

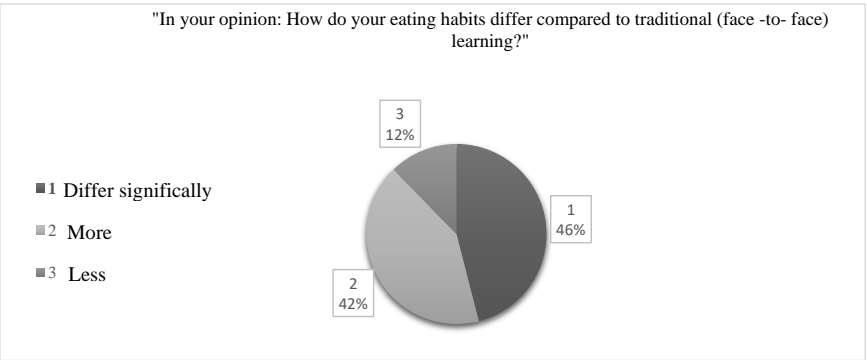
noted changes in their diet and types of food compared to face-to-face and distance learning, and 33.7% (63 people) did not indicate any changes in their diet with the transition to distance learning (Fig. 2).

Figure 2 Distribution of answers to the question "Do your eating habits (diet, type, amount, frequency) differ during distance and face-to-face types of learning?"



We were interested in the question: does the amount of food consumption differ depending on the type of educational organization. The following results were obtained: 41.7% (78 people) consumed more food during distance learning compared to traditional face-to-face learning, 46% (86 people) did not change their diet, and 12.3% (23 people) indicated that they were consuming less food during distance learning compared to face-to-face one (Fig. 3).

Figure 3 Distribution of answers to the question "In your opinion: How do your eating habits differ compared to traditional (face-to-face) learning?"



Since the strict quarantine restriction lasted for a considerable period of time, it was interesting to investigate whether university students had frequent snacks while learning, taking into consideration the fact that during distance learning they had constant access to a variety of foods at home. After analyzing the data of questionnaire No. 2, the following results were obtained: 35.3% (66 people) of the surveyed students pointed out having frequent snacks during distance learning, therefore the frequency of eating increased. However, only 10.7% (20 people) of the respondents noted that they were eating more fast food during distance learning, whereas 33.2% (62 people) noted that they were having fast food more during face-to-face learning. At the same time, this confirms that students of this category consumed less fast food during distance learning; 56.1% (105 people) did not feel any changes in their diet. Regarding the assessment of the impact of nutrition on health during distance learning, it was found that 16.6% (31 people) experienced a negative effect on their health, 23.5% (44 people) experienced some positive changes in their own health and 59.9 (112 people) did not mention any changes at all. Furthermore, analyzing the answers regarding the levels of physical and motor activity of student during the quarantine, it should be noted that 57.2% (107 people) noted that their physical and motor activity decreased. The question of the influence of distance learning on the health of students remains open, as additional research is needed here.

Conclusion. There are significant differences in the eating habits of university students during face-to-face and distance learning, which may be associated with an increase in the time spent on the Internet use. The vast majority of students pointed out differences in their diet during face-to-face and distance learning periods - 66.3% of respondents. A significant part indicated an increase in the amount of food consumed during distance learning - 41.7%, while the majority experienced a decrease in physical and motor activity - 57.2% of respondents. The level of consumption of fast food and fizzy drinks during distance learning was lower, which may be related to the fact of staying at home with parents during this period. Only 16.5% of respondents noted a negative impact of nutrition on health during distance learning, whereas 23.5% had a positive influence.

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