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# Changes in the lifestyle of Polish students as a result of the COVID-19 pandemic in the light of direct research

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## Abstract

The COVID-19 pandemic has caused significant changes in the lifestyles of all social groups. As a result of the subsequent restrictions resulting from the epidemic threat, all areas of both professional and private life had to be modified. Students were a social group whose lifestyle changes were particularly visible. For most of this period, universities conducted classes remotely, using Internet platforms. Therefore, it was necessary to make changes in the current way of life, often associated with a change of place of residence, modification of the way of spending free time and current habits. A significant part of these changes may be permanent and remain after the end of the pandemic state or threat.

The aim of the paper is to analyze the changes in the lifestyle of Polish students in the light of our own surveys addressed to them. The students' opinions on the changes in the way of acquiring and testing knowledge, in relations with the university and peers, and in the process of communicating with them will be presented and critically assessed. Changes in the process of nutrition, healthcare, including the length of sleep and physical activity, and the pursuit of one's own interests will also be taken into account. The conclusions of the research will be confronted with the results of other studies and analyses devoted to various problems of lifestyle changes under the influence of COVID-19.

## 1. Introduction

The rapid spread of the COVID-19 pandemic, followed by attempts to minimize its effects, resulted in significant changes in people's behavior worldwide, includ-

ing their lifestyle. Restrictions on the possibility of movement and interpersonal contacts, the introduction of a sanitary regime in places of work and study, as well as in shops and service points, and the dissemination of remote forms of business and private contacts must have had a significant impact on our everyday behavior. This concerned all social and professional groups, but especially young people, including students. During the COVID-19 pandemic, universities conducted classes remotely using online platforms. Therefore, students had to make changes in their current lifestyle, often associated with a change of place of residence, modification of the way of spending leisure time and current habits. Looking from the current perspective, it can be seen that some of these changes are permanent and have remained until today, after the state of the pandemic or pandemic threat has been canceled.

The COVID-19 pandemic should be treated as a serious crisis situation that significantly affected almost all areas of socio-economic life. On the one hand, it increased the importance of regulations adopted centrally by state authorities, and on the other, the need to adapt to them and modify daily life in such a way that it was possible to achieve one's own life goals in significantly changed conditions. Decisions made by the state authorities were often criticized for inconsistency and, above all, unpredictability, which directly influenced the shaping of activities in the field of everyday behavior, activities, and habits.

The aim of the paper is to analyze changes in the lifestyle of Polish students in the light of our own survey research. The students' opinions on changes in the way of acquiring and testing knowledge, in relations with the university and peers and in the process of communicating with them will be presented and critically assessed. Changes in the process of nutrition, healthcare, including the length of sleep and physical activity, and the pursuit of one's own interests will also be taken into account. The conclusions of the research will be confronted with the results of other studies and analyses devoted to various problems of lifestyle changes under the influence of COVID-19.

## 2. Theoretical framework of the research

Lifestyle, a term used since the mid-eighteenth century, was initially associated with a manner of expression (Ansbacher, 1967). Nowadays, lifestyle is treated as a set of habits aimed at some desired goals (Jensen, 2009), as a set of daily behaviors specific to a given individual or community, i.e., a characteristic way of being that distinguishes a given community or individual from others (Siciński, 2002), or as a culturally conditioned way of meeting the needs, habits and norms that are regulated by the values adopted by individuals and social groups (Fatyga, 2012). The modern understanding of lifestyle comes from two types of sources: economic-sociological and psychological-medical. In the first approach, it is a specific fea-

ture of a given group and includes behaviors that distinguish it from other groups, primarily in the area of individual and social consumption. In the second approach, this concept is located in the psychological disciplines in the context of health and, in particular, patterns of behavior, activities, and habits related to maintaining, restoring, and improving health (Brivio et al., 2023). It can even be argued that lifestyle is the main factor determining the health of individuals and social groups.

Lifestyle, as a set of everyday behaviors, activities, and habits, is primarily concerned with:

- a way of nutrition,
- undertaken physical activity,
- shaping social relations,
- stress management skills,
- the use of stimulants,
- avoidance of risk factors.

Lifestyle, culturally conditioned, although changing over time, is a reflection of the quality of life and a reflection of patterns of behavior, hierarchy of needs, and motives for action. Therefore, it facilitates or hinders the creation of social bonds. It should also be emphasized that it is, on the one hand, the result of preferences and choices and, on the other, real opportunities for their implementation.

### 3. Research methodology

In the direct research, the survey method was applied, and the research sample consisted of second-cycle students from Wrocław universities, one university from Legnica, and one from Zielona Góra. The study was conducted in the first quarter of 2023 and the sample consisted of 422 people. It was a homogeneous group in terms of demographics — the age of over 90% of the respondents was between 22 and 25 years, and the rest between 26 and 29 years. There were 226 women and 196 men among the respondents, but the analysis of the results did not show any significant differences depending on gender.

Students seem to be a social group that has suffered a lot from the need to change their lifestyle. Studies on the impact of previous pandemics (although not global, such as SARS in 2002–2003 and Ebola in 2014) showed that accepting restrictions did not only apply to the fear of contracting the virus, but also to many other areas of life (Barbisch, Koenig and Shih, 2015). Among these, young people were particularly affected by restrictions on freedom of movement, use of sports and recreational facilities, participation in gatherings, and uncertainty about the future.

Respondents were asked to express their attitudes towards changes in lifestyle, to determine the impact of the COVID-19 pandemic on changes in eating and substance-related habits, and finally to share their opinions on whether the pandemic had a significant impact on changes in their life values.

## 4. Results of the direct research

In the first part of the face-to-face survey, a 5-point Likert scale was used and respondents were asked to express their attitudes towards lifestyle changes that resulted from the COVID-19 pandemic (Table 1). First, they were asked to express their views on the attitudes towards lifestyle changes. Most respondents agreed with the general statement that the introduction of restrictions resulted in a significant change in behavior, although at the same time more than 1/3 had no definite opinion. The impact of the pandemic on lifestyle was particularly visible among young people, who often experienced emotional problems, mainly due to the need to isolate and limit contact with peers (Zemrani, Gehri, Masserey, Knob and Pelaton, 2021). In studies conducted among adults, 30% declared a change in their lifestyle to a healthier one or started to consider introducing such changes (Olearczyk and Walewska-Zielecka, 2021).

The pandemic affected behavior in different areas in various ways. While less than half of the respondents changed their diet and a significant proportion (38%) disagreed with the statement about changing their diet, only 20% did not change their attitude to physical activity and half of the respondents admitted that the pandemic positively influenced their activity. Previous studies showed that even when sports facilities were unavailable or the possibilities of using them were limited, almost 3/4 of the Poles did not give up their current physical activity and continued it if possible (Benefit Systems, 2020).

**Table 1.** Attitudes towards lifestyle changes

	1	2	3	4	5
The restrictions related to the pandemic caused a significant change in my behavior	1	11	35	38	15
I changed my way of eating because of the pandemic	9	29	19	28	15
The pandemic had a significant impact on my attitude towards physical activity	8	12	30	42	8
The management of the pandemic and the mistakes made increased my interest in socio-political issues	16	18	24	27	15
The pandemic had a positive impact on my environmental awareness	11	18	44	15	12
Negative events related to the pandemic made me think about my life in the long term, not just in the short term	4	32	15	39	10
Due to the pandemic, I had a desire to reduce excessive consumption	12	42	28	11	7
I shop more online these days	20	7	7	25	41
I prepare meals at home more often than before the pandemic	27	33	20	10	10
As a result of the uncertainty related to the development of the situation during the pandemic, the importance of a good education has increased in my hierarchy of values	22	33	26	16	3

Monitoring my health and preventive examinations are higher in the hierarchy of my needs than before	4	11	25	34	26
Since the pandemic, I rarely reach for stimulants	26	29	16	8	21
Problems related to communication and the development of remote forms caused a permanent change in the way I communicate with friends, acquaintances, and family	9	21	18	43	9
Remote work and/or learning implemented out of necessity during the pandemic should remain at least partly permanent	3	1	2	33	61
Since the end of the pandemic, I try to rest more	9	19	23	41	8
I care more about the length and quality of my sleep	13	20	27	31	9
The pandemic increased my resistance to stressful situations	30	34	9	18	9
So much time has passed since the end of the pandemic that my level of concern for health and physical activity has returned to the state before 2020	15	26	34	17	8

Note: 1 — strongly disagree; 2 — rather disagree; 3 — hard to say; 4 — rather agree; 5 — totally agree.

Source: own surveys.

The responses regarding the increased interest in socio-political problems and environmental awareness were also varied, which may mean that these spheres of life were perceived by the respondents in very different ways, probably depending on their previous interests.

In the period of the pandemic restrictions and reports of a severe course of the disease, often resulting in death, it seems reasonable to ask about the tendency to think about life in the long term. In this case, almost 50% of the respondents agreed with the statement that this was how they started to think about their lives. However, a definite minority declared their willingness to reduce excessive consumption. For more than half of the respondents, the pandemic and the related negative impact it had on their everyday lives did not constitute an impulse to rationalize this sphere of life, which was encouraged at that time by numerous initiatives undertaken by various environments.

Due to the restrictions on trade and services, which remained in force for a long time, with varying degrees of intensity, it is not surprising that as many as  $\frac{2}{3}$  of respondents agreed that they now shop more online than before. This is a steady trend, albeit quite slow. However, it is pointed out that some of the habits from the period of the pandemic bans will remain permanent (Tyagi and Pabalkar, 2021, 570), not because of the need to comply with safety rules, but because of the habit and convenience of shoppers. In line with current market trends, the majority of respondents did not agree with the statement that meals are now more often prepared at home than before.

It is also interesting to note that only less than 20% of the respondents indicated that the importance of good education increased. In conditions of uncertainty,

this usually constitutes an important value in the hierarchy of needs, especially that in 2020–2021, during the greatest intensification of restrictions, it was emphasized that this might not be the last pandemic that could be eradicated only by significantly limiting direct interpersonal contacts, and having a good education was more likely to allow one to perform one's professional duties remotely or with limited face-to-face contact. In this context, it should be emphasized that the absolute majority of Polish students want remote work and/or learning, implemented out of necessity in 2020, to remain, at least partially, permanent. To this day, in many universities, some classes are still conducted online, and various types of office work are also carried out remotely.

The next issue is also related to the way of shaping interpersonal relations. Half of the respondents (although only 9% definitely) agreed with the opinion that the pandemic had changed the way they communicate with family, friends, and acquaintances.

A positive change in lifestyle is the increased importance of the need to monitor one's health and undergo preventive examinations, indicated as significant by 60% of respondents. On the other hand, a similar majority of respondents (57%) disagreed with the statement that they had been using drugs less frequently since the pandemic.

Opinions of the respondents regarding the length and quality of sleep were mixed, and more unambiguous regarding the need for longer rest. In this case, almost half of the students agreed with the opinion that they had been trying to rest more since the pandemic. However, the vast majority, almost  $\frac{2}{3}$ , did not notice that the pandemic increased their resistance to stressful situations.

At the end of this part of the research, attention was drawn to the importance of the impact of the time that has passed since the end of the pandemic, or at least since its worst period. Therefore, the respondents were to express their attitude to the statement that the level of concern for health and physical activity returned to the state before 2020 and only  $\frac{1}{4}$  of the respondents agreed with it. Many more respondents disagreed or were unable to express an unambiguous opinion. This may mean that in this case these changes will be permanent, so that the behaviors shaped during the relatively short period of the pandemic restrictions will become a permanent habit.

Due to the fact that lifestyle-related behaviors are expressed primarily in eating habits, the respondents were asked about the change in the amount of food consumed. Five basic categories were distinguished: fruit, vegetables, fish and seafood, meat and sausages, and dairy products (Table 2). In each of these groups, the majority of respondents assessed that the pandemic had no impact on the amount of products consumed. This is probably due to the fact that for many years we have been dealing with various campaigns promoting healthy eating in Poland and some habits have already been developed, and during the pandemic this was not the most important problem. Among the remaining people, however, efforts to rationalize

their consumption can be noticed, as the answers about the current higher level of consumption of vegetables and fruit, and lower consumption of meat and sausages, were much more frequent.

**Table 2.** Changes in dietary habits as a result of the pandemic

Food category	Change compared to the pre-pandemic period		
	I eat more now	I eat less now	No change
Fruit	32	9	59
Vegetables	34	8	58
Fish and seafood	19	14	67
Meat and sausages	8	27	65
Dairy products	17	11	72

Source: own surveys.

An important determinant of lifestyle is the use of stimulants. The survey asked the respondents about changes in alcohol and cigarette consumption compared with the period before the pandemic. 13% increased their alcohol consumption during the pandemic and 9% decreased it. The rest declared that they did not drink at all (16%) or stated that the pandemic had not affected their consumption of alcoholic beverages at all (50%). An even smaller percentage of the respondents considered that the intensity of tobacco use changed during the pandemic (6% took up and 4% gave up smoking during the pandemic). Considering that the study involved young people, characterized by high variability over time in the use of stimulants, it can be concluded that the problems related to the pandemic were not a significant impulse for changing habits in this area. In the studies conducted in the Netherlands after the first wave of the pandemic, attention was also drawn to a large diversity of attitudes, from people who under the influence of the pandemic made positive changes in their lifestyle to a smaller group whose pro-health behavior deteriorated (van der Werf, Busch, Jong and Hoenders, 2021). Therefore, it can be concluded that crisis situations, such as a pandemic, may be an impulse for some to change their lifestyle in a health-promoting direction, while for others, e.g., the additional stress, may increase the consumption of goods and stimulants that have a negative impact on health. It is also noted that health problems may worsen in the long term and, in general, the pandemic has made it difficult for many people to strive to improve their health and general well-being (Hansel, Saltzman, Melton, Clark, and Bordnick, 2022).

Lifestyle, as mentioned, is a collection of different behaviors, activities, and habits. For many people, crisis situations lead to changes in the perception of various values that are taken for granted in everyday life. Table 3 presents changes in the perception of various life values as a result of the pandemic. For more than half of the respondents, the role of health and physical activity increased the

most. These values were appreciated, especially when the media reported on the severe course of the disease and the high risk of death, and when sports facilities were closed and the possibility of exercising was limited to prevent the spread of the virus. For almost half of the respondents, the importance of family ties has increased, which is usually the case in serious crisis situations. Over  $\frac{1}{3}$  of the respondents pointed to the increased importance of money, and over  $\frac{1}{4}$  indicated work, probably due to uncertainty about the future. Changes regarding the importance of friends, the role of one's own interests or travel were more diverse. In addition to the increase in the importance of these values, there were also opinions about a decrease in their role due to the pandemic.

In the case of faith and recognition in the eyes of others, apart from the majority for whom the importance of these values had not changed, there were a lot of opinions about a decrease in their importance due to the pandemic.

**Table 3.** Change in life values due to the pandemic

As a result of the pandemic, the role of:	increased	decreased	didn't change
Work	27	1	72
Money	35	0	65
Family	49	0	51
Friends	31	11	58
Own interests	28	12	60
Travels	26	23	51
Faith	4	24	72
Recognition in the eyes of others	5	21	74
Taking care of health	62	4	34
Physical activity	55	1	44

Source: own surveys.

However, it should be emphasized that apart from concern for health and physical activity, the majority of responses stated that their attitude to life values had not changed. This may mean that for many young people the pandemic was not a permanent threat which could significantly affect their life values in the long term.

## 5. Conclusions

Lifestyle is an interdisciplinary category. Therefore, it can be understood in different ways and manifested in various behaviors. On the basis of the presented research, it is not always possible to clearly identify the factors that had the greatest impact on changes compared to the pre-pandemic period. One can only indicate the areas related to students' lifestyles on which the COVID-19 pandemic had



a positive, negative or neutral impact. However, the fact is that many students are trying to make changes in their lives, especially in terms of healthcare, better nutrition, physical activity or free time. Similar results were obtained in studies conducted among students of medical universities, which additionally stated that a better financial situation, more physical activity, and better reported health were the key factors improving the students' quality of life (Szemik, Gajda, Gładyś and Kowalska, 2022). One can also notice some attitudes going in the opposite direction, e.g., an increase in the consumption of stimulants due to the intensification of stressful situations.

However, the biggest changes occurred in the perception of online contacts. The vast majority of students would like remote learning and working to remain permanently, and a significant proportion of them declared an increase in the frequency of online shopping. The pandemic also initiated changes in the ways of communicating with family, friends, and acquaintances, as the role of instant messaging increased significantly.

The pandemic was a surprise for the whole world since never before had such extensive actions been undertaken on a global scale, requiring the cooperation of so many countries. Decisions were made in haste, often without prior preparation. It seems that people's actions may also have been spontaneous, and from the current perspective, it is difficult to assess the durability of lifestyle changes. Therefore, the results of subsequent, more in-depth studies will be able to determine whether the changes in behavior will persist in the long term, or whether they return to the original state after some time. The results of these studies should also become an impulse to think about the use of various potential epidemic threats, but also those related to the natural environment, to encourage action in the field of improving healthy behavior.

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