

## Changes in attitudes of consumers of sports and recreational services in the context of Covid-19

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### Abstract:

The article concerns the issue of the coronavirus risk and the related restrictions in relation to human physical activity. The article concerns the behavior of consumers of sports and recreational services when there is a risk of contracting COVID-19. The COVID-19 situation disrupts the normal operation of sports and recreation centers. In many cases, the freezing of the economy resulted in a loss of financial liquidity in many enterprises, including sports and recreation centers. These companies had to look for solutions how they could stay in the market and continue functioning after the unfreezing economy. After the opening of sports and recreational facilities, epidemic-related guidelines and standards have been established and must be followed by these facilities. However, the participants of physical activity do not feel fully safe using these centers, and therefore many of them stop going to them or use them less frequently than before. The article shows the situation and how the situation has changed from the beginning of the pandemic to the present day. The respondents commented on whether they use the club card, whether they use or have used online classes conducted by coaches, and whether they returned to clubs immediately after lockdown. Moreover, the research shows how women and men perceive fitness classes conducted during a pandemic. It was surprising that men and women perceived and assessed the quality of activities conducted during the pandemic differently. This is probably due to the fact that we have different needs for sports and recreational services depending on gender.

**Key Words:** COVID-19, sport, recreation, behavior, consumers, market

### Introduction

As the COVID-19 pandemic continues to develop in almost all territories and regions in the world, various protective measures have been introduced by the authorities eg. the closing of schools and universities, bans on travel, cultural and sporting events or social gatherings (Parnell et al., 2020)

People were ordered or advised to stay home, and some countries recommended isolation for all travelers. All these activities are intended to be an effective strategy to prevent the spread of the virus. Many people follow official recommendations to isolate and stay at home, but these activities will have a negative impact on physical activity behavior, with more time spent inactive, which in turn will affect physical health and well-being. The beneficial effects of exercise on health are well known. (Pedersen & Saltin, 2015; Powell et al., 2011) For example the effect of physical activity upon insulin sensitivity, in relation to type 2 diabetes is known. (Routen, 2010) It is also well known that exercise increases energy levels and mood state what prevents depression. (Perrotta, 2010)

There are solutions to being active during a pandemic. These are home classes. Many countries have imposed blockades, forcing people to stay at home. These decisions affect people's psyche and physical health, especially of those who have been regularly outdoors. Staying at home can lead to a lot of stress, anxiety, and mental stress. The best way to solve these problems is to convert your outdoor activities into home activities. (Hammami et al., 2020)

During the COVID-19 pandemic, which began in Poland in March 2020, enterprises found themselves in a very difficult situation. There was a problem with maintaining financial liquidity, and thus with staying on the market. The crisis in their functioning was caused by the temporary closure of many enterprises, including enterprises from the sports and recreation industry. Companies were not prepared for such a situation. After the period of forced isolation, the economy gradually thawed and enterprises returned to functioning according to certain rules. Fitness clubs and gyms returned to operation on June 6, 2020. In accordance with the Regulation on the establishment of certain restrictions, orders and bans in connection with the occurrence of an epidemic, the condition for the re-provision of services was to meet the hygiene safety requirements. Managers of gyms, fitness clubs, or other sports and leisure facilities must ensure the safety of employees and customers. The Ministry of Development and the Chief Sanitary Inspector presented guidelines for the functioning of such centres during the SARS-CoV-2 epidemic in Poland. All procedures have been put in place to ensure the safety.

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The purpose of the implemented procedures is:

- increasing safety for employees and customers of the gym, fitness club etc.,
- minimizing the risk of infection of employees, customers and other people from outside,
- limiting the number of contacts in the gym, fitness club etc.,
- comprehensive action adapted to the stage of advancement of the epidemic.

The guidelines are divided into four parts:

- ensuring the safety of employees / trainers,
  - ensuring the safety of customers,
  - procedures to be followed in the event of suspected infection by an employee / trainer,
  - procedures to be followed in case of suspected infection at the client's premises.
- (www1)

In facilities providing sports and recreational services, classes must be held in accordance with the guidelines of the Chief Sanitary Inspector. Disinfectants for hands and sports equipment should be provided, sports devices and equipment should be disinfected after each use and for each group of users, a limit of customers using the services and 15 minutes intervals between entering and leaving participants of the classes should be provided, and participants of such activities are required to disinfect their hands when entering and leaving sports and recreational activities.

The aim of the article was to present the general situation and changes in the behaviour of buyers of sports and recreational services at the beginning of the pandemic, during the closure of facilities, and to compare these behaviours in the later phase of the epidemic, i.e. after the opening of centres operating in this industry. Moreover, the article shows how women and men perceive fitness classes conducted during the pandemic. The analysis was carried out in 2020, when social isolation occurred and in the period when it was possible to restart activities in sports and recreational enterprises.

It was assumed that people who were active in the period preceding the outbreak of the pandemic found a way to continue this activity during social isolation. It was also assumed that most of the people who were active before the pandemic returned to their classes in fitness clubs when the fitness clubs have been reopened.

### **Material & methods**

When analyzing the physical activity of Poles in 2018, it can be concluded that six out of ten respondents (61%) declare that they practiced sports in the last year. Among the analyzed socio-demographic variables, undertaking physical activity most strongly depends on age - the vast majority of young people aged 18–34 and two thirds of respondents aged 35–54 have played sports in the last year. Among the older respondents (aged 55 and over), less than half decided to undertake physical activity (Physical activity of Poles, CBOS, research report 125/2018).

These data show that there has been considerable interest in physical activity in recent years and, consequently, the growing demand for sports and recreational services and various other forms of activity offered to Poles. Unfortunately, this trend was shaken by the Covid-19 pandemic.

Some authors of studies on physical activity during COVID-19 believe that the pandemic may cause inactivity, which will influence on heart disease and hypertension is one of the most common health disorders that is associated with an increased incidence of mortality. (Machado et al., 2020) Thus, appropriate exercise habits will better support the growth and development, prevent illness and injury, and ensure a healthy life in the future. (Syuro Ito et al., 2020).

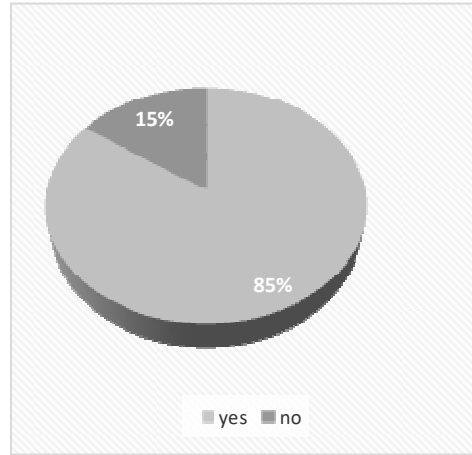
It has been suggested that quarantine can cause a significant decrease in levels of physical activity, similar to what is seen in conditions such as spaceflight and confinement. There is evidence that the potential increase in physical inactivity triggered by a pandemic could have serious consequences for cardiovascular health. (Peçanha et al., 2020)

Therefore, it is reasonable to conduct a study on the quarantine time and reveal the changing human behavior in terms of undertaking physical activity. Two studies were conducted among physically active people. One survey was conducted in the pre-pandemic period (from March to April 2020), and 297 people took part. The survey was published in social media, on groups of physically active people and on the profile of the Forma fitness club in Częstochowa. The second survey was conducted from August to September 2020. It was published mainly in social media and filled by the same respondents that the first research.

### **Results**

An important question seems to be about the continuation of physical activity during the pandemic. Initially, after the ban on participation in organized sports and recreation activities and the closure of outdoor playgrounds and gyms, and the ban on access to forests, many people treated this period as a short break from classes, assuming that it would be short. When this period was extended, alternative forms of physical activity began to be selected. Almost 85% of the respondents decided to continue the exercises.

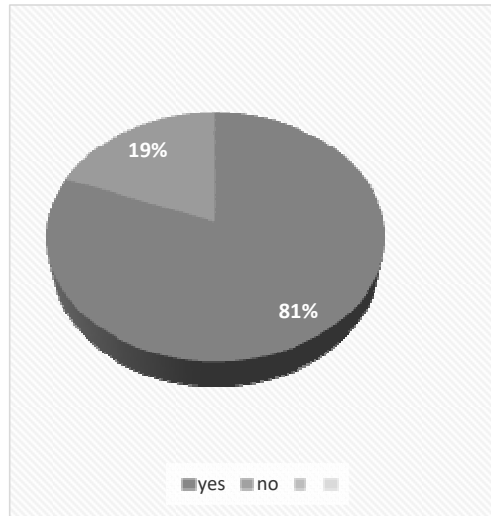
**Fig. 1 Continuation of physical activity during the coronavirus epidemic in March 2020**



Source: own research

As it is easy to see, in March 85% of the respondents decided to continue their classes. At the end of August, the situation changed slightly, as the percentage of people who were active was 80.8%. It is presented in the figure below.

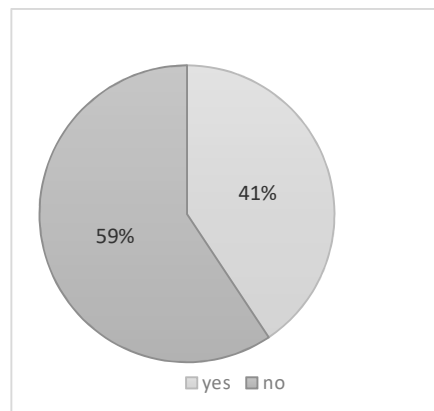
**Fig. 2 Current physical activity**



.Source: own research

Physically active people not only practiced their own activities, but also benefited from online classes conducted by trainers what is shown in the figure below. More than half of the respondents used on-line classes.

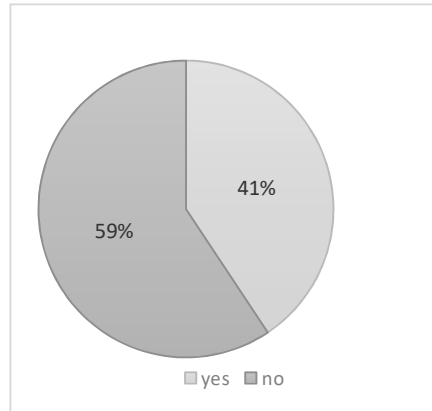
**Fig. 3 Using sports and recreational activities conducted on-line by coaches during quarantine**



Source: own research

The following is the situation that took place after the opening of clubs providing sports and recreational services, i.e. in June 2020. It turns out that about 40% of people returned to the classes conducted by these clubs. However, more than half of the respondents did not return to live club activities.

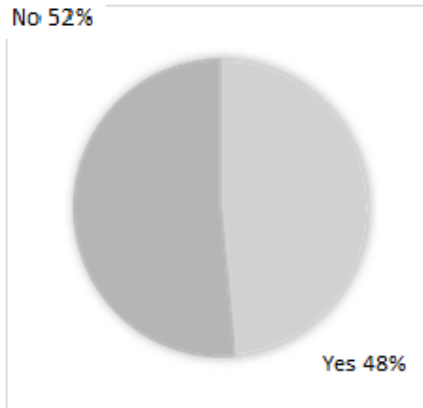
**Fig. 4 Attending classes in sports and leisure clubs after they open**



Source: own research

Another question concerned using pass or card for attending classes. It is noteworthy that about half of the respondents use the card and the other half do not.

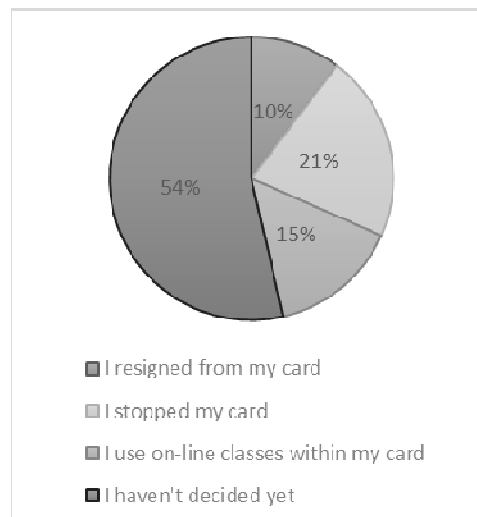
**Fig. 5 Use of a pass or card now**



Source: own research

It is interesting to show how the situation developed in the initial period of the coronavirus pandemic. Almost 15% of the subscription uses on-line classes in their club, 21% suspended and 10% resigned from the subscription. Over 53% did not make any decisions.

**Fig. 6 Decision to attend structured classes in the wake of the coronavirus epidemic during the lockdown**



Source: own research

Another interesting issue seems to be the assessment of activities provided by fitness clubs during a pandemic, broken down by women and men. The study conducted looked at the use and ratings associated with fitness clubs during the coronavirus pandemic. In order to verify the hypothesis that the assessment of the functioning of fitness clubs during a pandemic is independent of gender, over 160 people were examined. The chi-square test of independence was used for verification. It was supposed to determine whether the difference between women and men in terms of the assessment of activities conducted during a pandemic is statistically significant.

Table 1 is the starting table and shows the assessment of the activities by women and men on a scale from bad to very good.

**Table 1. Assessment of activities by women and men**

		gender		sum
		women	men	
ment of the functioning of the classes	bad	5	7	12
	enough	12	9	21
	good	34	32	66
	very good	30	6	36
	sum	81	64	165

Source: own research

In this study, the chi-square test of independence was used, it is used to test the relationship between two nominal (categorical) variables. It is based on comparing the observed values (obtained in the study) with the expected values (i.e. those assumed by the test, if there was no relationship between the variables). If the difference between the observed and expected values is large (statistically significant), it can be said that there is a relationship between one variable and another. We use this test in this case because both gender and class rating are nominal variables. (www2)

**Fig. 7 Chi square test of independence**

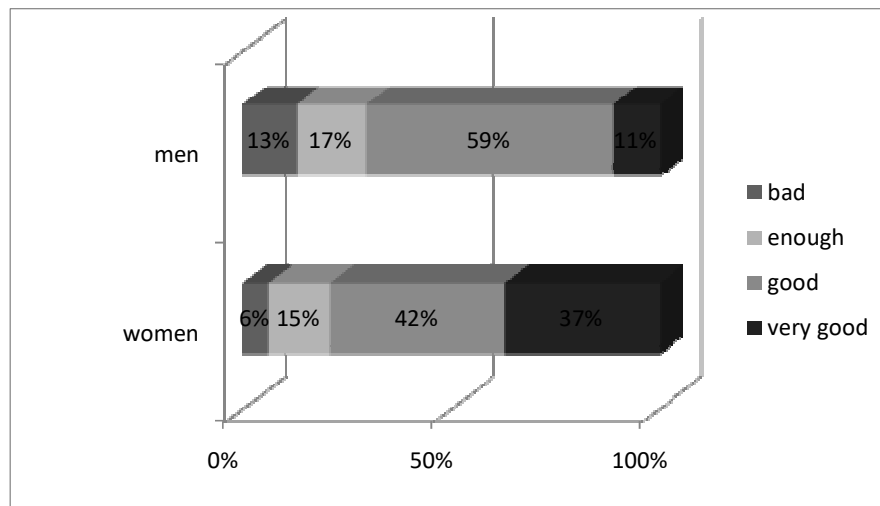
$$\chi^2 = \sum \frac{(n_o - n_e)^2}{n_e}$$

Source: <http://przepis-na-lo.pl/2013/12/jak-wykonac-test-chi-kwadrat-w-calcu/chi-kwadrat-wzor-chi-kwadrat/>

In the test procedure, theoretical values must first be calculated. Then, according to Formula 1, the empirical value of the chi-square coefficient should be determined. After that, it is compared with the theoretical value from the chi-square distribution tables with the appropriate assumed confidence coefficient. The 95% confidence level is most often assumed here, i.e. 5% is assumed as the probability of making a mistake. After the calculations, the empirical index in this case was 11.90. It is compared with the theoretical index included in the chi-square distribution table for a test accuracy of 5% and degrees of freedom. The degrees of freedom are calculated by multiplying the number of rows minus one by the number of columns minus one. In this case, it is (4-1) times (2-1) or 3. For 3 degrees of freedom, the theoretical value of the chi-squared coefficient at 95% confidence is 7.8147. This number is smaller than the number from the theoretical distribution, therefore the hypothesis that the features are independent should be rejected.

The exact distribution of the relationship between gender and ratings is presented in the figure below.

**Fig. 8. Distribution of class grades during a pandemic by gender**



Source: own research

It follows that gender significantly influenced the assessment of activities during Covid-19.

## Discussion

This study attempts to present whether the behaviour of buyers of sports and leisure services in the face of Covid-19 has changed and how the activities are perceived by women and men. Deeper analysis was not possible because the situation is dynamic and the operating conditions change. Before the pandemic, the part of the society that regularly participated in sporting activities try to continue physical activities. When it comes to the perception of classes depending on gender, it turns out that gender significantly influences the assessment of classes.

## Conclusions

The COVID-19 pandemic means many people have been locked in their homes due to the threat of contracting the coronavirus. This means that people started to be inactive and spent a lot of time sitting. This was difficult for those who attended fitness clubs regularly and even more difficult for those who did not exercise a lot. Literature and own research have shown the behavior of people during the pandemic and lockdown, and also showed the effects of being inactive. Regular physical activity benefits both our body and mind. Thanks to exercise, we are able, for example, to lower high blood pressure, and reduce the risk of heart disease, type 2 diabetes and many other diseases.

An interesting result of the research is that gender significantly influenced the assessment of activities during Covid-19. It was investigated that despite the lockdown, the respondents continued their sports and recreational activities, and after the clubs were opened, almost the same number of participants returned to the clubs for classes. This is positive information that as many as 85% of the respondents are physically active. During the lockdown, the respondents were also active in on-line classes.

Ultimately, it can be concluded that the situation regarding activity during the pandemic influenced physically active people, but these people are so determined in their activity that they do not abandon an active attitude.

**Conflicts of interest** - No conflicts of interest is declared.

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