

## Styles of coping with stress presented by female and male students of Physical Education during the pandemic

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**Abstract:** The aim of the study was to determine the intensity of coping strategies used by students of Physical Education during a pandemic. Women and men were compared in terms of strategies considered positive and negative. The study used the psychological tool: Inventory for the Measurement of Coping with Stress. The participants were students of Physical Education (aged  $25.69 \pm 5.908$ ); 26 women, 28 men. Results: the examined women show a higher intensity of both positive and negative coping strategies. The most common strategy among students is positive re-evaluation. Conclusions: The surveyed students experiencing difficult situations choose rather positive than negative strategies of coping with the problem. Women showing a higher level of coping strategies may be more aware of a difficult situation or experience a pandemic more intensely in relation to men.

**Keywords:** Cessation sport activity, Coronavirus, Men, Women



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### 1. Introduction

Coping mechanisms are some sort of "survival skills" which/whose people use to deal with the stress, pain, and natural changes which they experience in their lives. There are stands out are positive and negative coping mechanisms. Negative coping mechanisms may include denial, self-harm and addiction, while positive coping mechanisms entail? the individual's ability to maintain a positive disposition and healthy lifestyle, establishing structure support and creating effective and creative pathways [1].

In coping, requirements are perceived as difficult to meet or exceeding individual abilities. Coping in the literature is deliberate cognitive and behavioral activities aimed at meeting the expectations of the external and internal environment. Depending on the type of problem, coping is expressed in two main functions: dealing with the problem that causes suffering (problem-focused coping) and regulating emotions (emotion-oriented coping) [2, 3]. Mechanism

can be divided into more and less optimal. In order to successfully adapt to the requirements of the environment, various coping mechanisms have been developed. There are those that are beneficial, but also those that bring negative consequences in the long run. In terms of the impact on physical and mental health, coping styles are divided into positive and negative [4, 5].

Positive coping is associated with better mental health outcomes, while negative coping is associated with psychological problems [6, 7]. Positive coping styles, such as problem-solving attempts, information seeking, and social support, focus on actively trying to cope with stress and change the problematic situation. The hallmarks of negative coping styles are avoidance, wishful thinking, and substance use. Negative coping focuses on the emotions triggered by the stressor, not the stressor itself [8]. Participants' ways of problem solving and seeking help were shown to be important mediators of stress and subjective well-being, especially positive affect [9].

Recently, many articles have been written related to various psychological variables, their intensity and changes in relation to the current norms during pandemic the Covid-19 [10]. Some of them seem to be pragmatic, as scientific knowledge has been translated into psychoeducational materials and used in healthcare [11]. Based on the growing number of 2019 new coronavirus disease (COVID-19) cases, the World Health Organization's Extraordinary Committee announced a global health emergency on January 30 [12]. The COVID-19 outbreak poses a great threat to public health worldwide. This mental distress has been mainly described as sleep disturbance, symptoms of anxiety and depression, post-traumatic stress disorder, decision incapacity, and even somatic symptoms [13]. In last time an online study of mental health during the COVID-19 pandemic found that coping style was one of the factors influencing mental stress, i.e. Participants with negative coping styles had higher levels of mental distress such as nervousness, hopelessness and restlessness [14]. Therefore, coping style may weaken the link between perceived stress and emotional stress during the outbreak of the COVID-19 pandemic [12].

The last few decades have brought many studies suggesting that men and women show different trajectories of psychological symptoms [15]. For example, female crime scene officers tend to engage in more emotional support, instrumental

support, and positive reformulation than in the analysis of coping paths, a positive correlation was found between exposure to stress and coping with avoidance [16]. Moreover, coping avoidance has been shown to have an indirect effect on the relationship between stress and well-being. A systematic review in research found that coping avoidance strategies negatively affected psychological outcomes [17]. In the case of students, the statistical analysis of the Mini-COPE data showed significant differences between men and women in particular years of the study. In the first year, women more often chose strategies related to turning to religion, seeking emotional support, and seeking instrumental support than men. Moreover, women were characterized by a higher level of stress than men. Men are more likely to use psychoactive drugs and resort to a sense of humour to deal with stress [18]. Many factors influenced in analyzes focused on mental health [19-21]. In the analyzes below, positive strategies are considered to be those that involve coping actively with the problem, and negative strategies are associated with a style of avoidance [8]. The aim of the study was to show the differences in strategies used by women and men in a pandemic situation.

## 2. Materials and Methods

### 2.1. Participants

The study group consisted of 54 extramural students of Physical Education, aged 19 to 40 ( $M=25.69$ ;  $SD=5.908$ ), including 26 women (48.1%) and 28 men (51.9%). They practiced recreational sports and took up paid work.

### 2.2. Measurement

Inventory for the Measurement of Coping with Stress (Mini COPE) [22] in the Polish adaptation of Juczyński and Ogińska-Bulik [23] consists of 14 coping strategies; active counseling, planning, positive re-evaluation, acceptance, sense of humor, turn to religion, seeking emotional support, seeking instrumental support, dealing with something else, denial, discharge, taking psychoactive substances, ceasing activities, self-blame. The Polish language version is characterized by a satisfactory split-half reliability of (0.86). The accuracy of the tool is confirmed by the results of the factor analysis.

### 2.3. Procedures

The research was conducted in the form of an on-line survey on the platform

<https://www.surveio.com/pl/> in April 2020. during the COVID-19 pandemic. In Poland, a ban on sports activities has been introduced. All subjects participated in the study during the period of the ban.

### 3. Results and Discussion

#### 3.1. Statistical analyzes

Since the variables did not meet the requirements of the normal distribution, the U Mann-Whitney test was used to determine differences between the groups. The limit of the confidence interval was set at the level of  $p < 0.1$  (which meant a tendency for the dependence of the variables).

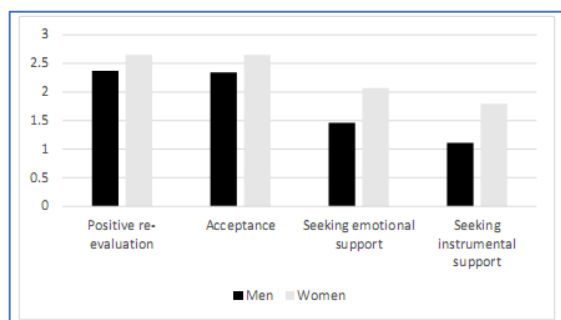
#### 3.2. Results of coping strategies with stress

**Table 1** Comparing the group of women and men in terms of significant coping strategies.

Coping style	
Acceptance	288.5**
Seeking emotional support	242.5***
Seeking instrumental support	224***
Dealing with something else	283.5**
Taking psychoactive substances	325*
Ceasing to act	325*
Positive re-evaluation	296.5*

$p < 0.1^*$ ,  $p < 0.05^{**}$ ,  $p < 0.01^{***}$

The above table 1 presents only those strategies that turned out to be statistically significant from the point of view of differences between the gender of the respondents. The students male and female showed the greatest differences in seeking emotional and instrumental support.

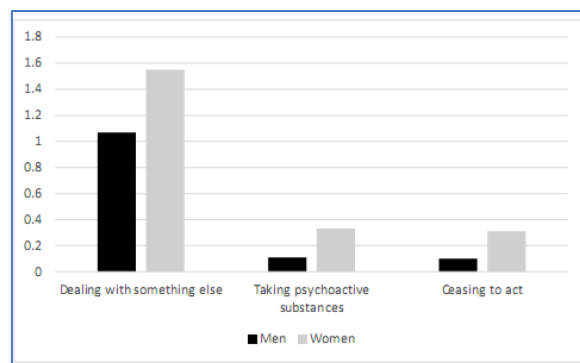


**Fig.1.** Positive coping of students male and students female

The figure shows the differences between female and male students. Women scored higher on

each of the selected aspects of the coping strategy (Figure 1 & 2).

In strategies for negative coping, women show higher scores on all variables. There are significant differences in each of the strategies.



**Fig. 2.** Negative coping of students male and students female

#### 3.3. Discussion

Our research presents the results of coping with the example of students from the Faculty of Physical Education during a pandemic. Similar analyzes carried out on another group showed a relationship between maladaptive or negative coping and higher levels of depression and anxiety [24-26]. Adaptive emotional regulation, such as positive representation and evaluation, act as a buffer between subjective perception of a pandemic situation and possible fear of the virus [27]. Differences in how people deal with events make people more susceptible to the negative consequences of stress [28]. For example, the impact of negative life events on depression was greater among those who adopted more negative coping strategies, such as worrying about problems instead of solving them [29]. Likewise, among women who adopted more negative coping strategies, such as passive acceptance and wishful thinking, high scores on negative life events were associated with significant increases in depression and anxiety symptoms [30,31]. The outbreak of the coronavirus (COVID-19) pandemic posed a huge threat to the physical and mental health of the general population. The results showed that negative coping strategies increased emotional suffering [13]. Some studies have highlighted the positive effects of social and family support on mental health [32,33]. In our study, women showed a greater willingness to admit that they were using the coping process, and therefore experiencing stress, more than men.

On the basis of other reports, it is assumed that resources (generalized immune resources) make it possible to avoid stressors or (when it is impossible) to cope with the tension generated by them. Maybe this (in our research) is why men showed lower scores in all coping strategies that significantly differentiated them from women [34].

Other studies in the early months of the pandemic reported that young people were using coping strategies such as denial of the problem, emotional discharge, substance use, stopping action, and blaming themselves for the situation. It seems interesting that such coping strategies are used by women and men, for whom the current situation may pose a threat to health, job loss, or interrupting education [35].

If you take a closer look at the gender differences, you notice that men and women function differently in the face of everyday difficulties or crisis situations. There is evidence that men and women deal with stress in different ways. For example, a meta-analysis showed that women prefer to focus on emotions as a coping strategy. Moreover, men are less likely than women to seek help with psychological issues. Research shows that men and women show significant differences in some aspects of coping and seeking help [36].

The above research was carried out on extramural students who take up gainful employment and participate in weekend activities consistent with the study program. Students could experience additional stress related to job insecurity and, consequently, financial problems. The lack of a sense of stability equates to the failure to meet one of the basic human needs, namely the need for security. Research findings show that coping strategies play a moderating function in the relationship between job insecurity and mental health. It turns out that the burden of coping with disengagement strategies is more important than the buffering role of engagement strategies. On this basis, women implement more coping strategies, which have more positive mental health outcomes [37]. Likewise, more women than men in our study have implemented coping strategies.

In the relationship between job insecurity and mental health, the most important strategies are those related to social interaction inside and outside the organization, and these are the main strategies used by women. It follows that strengthening rich social

relations in the work environment and beyond is a guarantee of well-being [37].

## 4. Conclusion

The pandemic is an extremely difficult situation. It is associated with many difficulties that are not conducive to private and professional life, as well as meeting the need for exercise. It is worth remembering about constructive ways of coping with stress.

Regular physical exercise seems to be important, as it counteracts difficulties in regulating mood and increases the level of mental energy. Unfortunately, the quarantine, in which the respondents also participated, inhibited all manifestations of group activity, in the open air or in sports facilities, allowing only independent exercise at home. One can only guess that the effects of a pandemic may be felt for a long time and lead to health problems through reduced activity and deterioration of mental well-being.

People may react differently to the problem of a pandemic. It should be assumed that this is an objectively difficult situation. However, specific problems relate to individual needs and difficulties in the functioning of the individual. Some experience economic difficulties, others - uncertainty about the future and difficulties in social relations due to the lack of physical proximity of others. Despite the evident threat to each circumstance, a pandemic may be associated with different and thus incomparable experiences. Therefore, it is worth studying (measuring, controlling) psychological variables, such as the styles of coping with stress, but also mental health or affective states. Supervision over factors changing in time of danger should translate into social awareness and at a later stage ensure prevention aimed at the most vulnerable social groups. In our study, men are such a group, which may suggest that it is the male ones that are exposed to greater difficulties and that they would need to be provided with access to mental well-being factors, such as social support.

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### Authors Contribution

Individual contributions are as follows: A. Samełko - Study Design, Manuscript Preparation, Review & Editing. Study Design, Manuscript Preparation; M. Szczypińska & M. Guskowska. All authors have read and approved the manuscript.

### Conflict of interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

### Availability of data and material

No additional data are available

### Informed consent

Written consent were obtained from the participants.

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