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HEALTH-RELATED BEHAVIOURS DURING COVID-19 PANDEMIC

Zachowania zdrowotne podczas pandemii COVID-19


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Abstract

During the COVID-19 pandemic, taking care of one's health may pose certain challenges. The aim of this paper was to present the emotional aspects of changing health-related lifestyle during COVID-19 pandemic also taking into account previous experiences. The study focuses on introduction of health-promoting behaviours and elimination of detrimental to health behaviours.

107 people participated in the study. It was based on an original questionnaire created by the author and questionnaire tools: the Polish adaptation of the *Chalder Fatigue Questionnaire* and the Polish adaptation of the *Depression, Anxiety, and Stress Scale DASS-21*. Data was collected over a period of one month.

Many of the respondents believe that a healthy lifestyle should be taken seriously, in particular during the pandemic. The majority of the respondents consider it difficult to follow a healthy lifestyle due

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to the COVID-19. The respondents were less likely to abandon behaviours detrimental to health practised so far. Those who had been trying to introduce health-promoting behaviours were diagnosed with a higher intensity of anxiety. Respondents who had been trying to eliminate behaviours detrimental to health experienced a higher intensity of anxiety, higher level of stress and fatigue.

During the pandemic habitual coping strategies tend to be used more often. When modifying one's health-related behaviours, it is worth taking into account that the previous health-related actions have an impact on the type of effort currently undertaken. Successful coping with a crisis depends on the effectiveness of the self-regulatory process.

Keywords: health-promoting behaviours, behaviours detrimental to health, health change, self-regulatory process, COVID-19 pandemic.

Streszczenie

W trakcie pandemii COVID-19 troska o własne zdrowie może stanowić ogromne wyzwanie. Celem badania było wskazanie emocjonalnych aspektów zmiany stylu życia związanego ze zdrowiem podczas pandemii COVID-19, również z uwzględnieniem wcześniejszych doświadczeń. Projekt koncentruje się na procesie wdrażania zachowań prozdrowotnych i eliminowania zachowań szkodliwych dla zdrowia.

W badaniu wzięło udział 107 osób. Projekt składał się z autorskiej ankiety oraz dwóch narzędzi kwestionariuszowych: polskiej adaptacji *Chalder Fatigue Questionnaire* – PL oraz polskiej adaptacji *Skali depresji, lęku, stresu DASS-21*. Dane były zbierane przez okres miesiąca.

Badani uważają, że zdrowy tryb życia jest ważny i należy o nim pamiętać również w trakcie pandemii, jednak zdecydowana większość respondentów twierdzi, że COVID-19 utrudnia prowadzenie zdrowego stylu życia. Ankietowani rzadziej zdecydowali się na rezygnację z dotychczas praktykowanych zachowań szkodzących zdrowiu. Osoby podejmujące próbę wprowadzenia zachowań prozdrowotnych charakteryzują się większym natężeniem lęku, w porównaniu do tych, którzy takich prób nie podejmują. Badani podejmujący próby usunięcia zachowań szkodzących zdrowiu odznaczają się nie tylko większym natężeniem lęku, ale także wyższym poziomem stresu i zmęczenia.

W trakcie pandemii nawykowe strategie radzenia sobie są częściej stosowane. W trakcie modyfikacji dotychczasowych zachowań prozdrowotnych warto wziąć pod uwagę doświadczenia w tym obszarze – wcześniejsze działania powiązane ze zdrowiem mają wpływ na rodzaj aktualnie podejmowanego wysiłku. Skuteczność radzenia sobie z kryzysem jest uwarunkowana efektywnością procesu samoregulacji.

Słowa kluczowe: zachowania prozdrowotne, zachowania szkodliwe dla zdrowia, zmiana stanu zdrowia, proces samoregulacji, pandemia COVID-19.

Introduction

Self-regulation and health habits

Self-regulation is the ability to change one's behaviour, which contributes to increasing the flexibility and adaptability of behaviour. Consequently, the individual is able to adapt to the requirements of the situation and also to act according to their personal standards. Self-regulatory abilities, in the form of forcing and/or refraining from certain behaviours, are the basis for the pursuit and achievement of goals and the display of socially desirable actions. The power of self-regulatory processes, as in willpower (action control) model (Sirois & Giguere, 2008) leads to many desired outcomes, including good job performance, success in school and work, popularity, mental health and adaptation, and good interpersonal relationships (Baumeister et al., 1994; Duckworth & Seligman, 2005; Baumeister et al., 2007). Self-regulation therefore refers to the ability

to change one's own behaviour, the source of which may be both the need resulting from the autonomous goals set by the individual themselves, and external circumstances influencing the formulation of tasks. Changing one's reactions/behaviour/habits requires the careful monitoring of one's own behaviour, correcting irregularities and dealing with negative emotions; the need to regulate these is one of the most serious problems in the self-regulation process (Baumeister & Vohs, 2007). Moreover, as Polivy (1998) points out, any change involving forcing (e.g. incorporating physical activity into everyday life) or holding back (e.g. stopping eating fast food) requires the use of more energy. Crisis situations put the individual in the face of new self-regulatory challenges, forcing them to develop new activities and modify those previously used. The situation of the coronavirus pandemic made people face the task of changing the organization of their lives resulting from numerous limitations, and thus also patterns of behaviour regulation. It increased the awareness of the need to take care of one's health, which is expressed in undertaking a number of pro-health behaviours and/or eliminating behaviours that negatively affect health. Leading a healthy lifestyle "declaratively" is important for people. In studies measuring the attitude to pro-health behaviours, the vast majority of respondents emphasize its significant, positive importance (95%: I believe that a healthy lifestyle is important and should be maintained also during the COVID-19 pandemic). However, the implementation of these declarations is definitely more difficult. As demonstrated in many studies, self-regulatory abilities are influenced by a number of factors, and their efficient operation is not only the result of strong motivation and willingness to achieve the goal, but also the experienced emotions, the situation in which the individual is, or energy resources influencing the effectiveness of the actions. Acts of self-regulation appear to deplete psychological resources, which in turn leads to poorer self-regulation. These acts lead to the depletion of ego resources (Baumeister & Vohs, 2007), and this state is defined as a situation in which the individual does not temporarily have the resources to regulate themselves effectively. Looking from this perspective, it can be concluded that the task of changing health habits, both introducing new, pro-health behaviours and getting rid of unfavourable ones, constitute a self-regulatory challenge. If such action is taken in a generally difficult, crisis situation (coronavirus pandemic), it may be particularly difficult to implement.

Factors influencing health-related habits

The role of health-related habits in the face of the current pandemic justifies an in-depth analysis of the topic. Health-related behaviours can be mainly divided into: (1) positive, health-promoting ones, which are beneficial to health, and (2) negative, self-destructive ones, which have a detrimental impact on our health (Gruszczyńska et al., 2015). The former help to maintain good health, prevent disease, and – if a disease has already developed – support the recovery process. On the other hand, self-destructive health behaviours lead to impaired health and disturbed physical, emotional and psychosocial

well-being (Gruszczyńska et al., 2015). Researchers identify the following types of health-promoting behaviours: 1. avoidance of addictive substances, 2. traffic safety (responsible driving and following safety rules), 3. good eating habits (e.g. a well-balanced diet, reduction of cholesterol), 4. positive health practices (physical activity, good hygiene) and 5. preventive behaviours (medical supervision, self-monitoring of health) (Steptoe, Gardner, & Wardle, 2010). The development of health-promoting habits may be influenced by: (1) upbringing (learning appropriate behaviours as a child), (2) social and cultural context (perception of health and disease; how symptoms are perceived, knowledge, attitudes towards diseases and the treatment process), (3) media (information on health). Literature on the subject also identifies several socio-demographic determinants of health behaviours, including:

- age – awareness of and tendency towards health-promoting behaviours tends to increase with age,
 - gender – women tend to undergo preventive medical check-ups more often than men,
 - marital status and family situation – people with children are more likely to engage in health-promoting behaviours,
 - education – higher education positively correlates with health-promoting behaviours,
 - profession and financial situation – a higher social status tends to be associated with involvement in health-promoting activities,
- as well as:

- health locus of control – internal locus of control determines the feeling of greater responsibility for one's health and increased engagement in health-promoting behaviours (Gruszczyńska et al., 2015).

The risk factors predisposing to self-destructive health behaviours include: low resistance to stress, a sense of isolation and a high level of anxiety – these factors are particularly important in the context of this research (Gruszczyńska et al., 2015).

Methods

Procedure

The project was designed as a pilot study. The data analysed in this article was collected over a period of one month, between January and February 2021, a snowball sampling (chain-referral sampling) technique. The study group consisted of users of social media (Facebook), instant messengers (Viber, Messenger, ZOOM), e-mail (Gmail) and website visitors (Trójmiasto.pl) who were provided with a link to the questionnaire. 107 people participated in the project. Only data obtained from adult participants was considered. Prior to taking the questionnaire, the respondents were asked to give their consent to participate in the study, and all complied. Participation in the project was voluntary and the respondents were informed that the obtained results would be used

for research purposes only. If required, the respondents could contact the researchers via the e-mail address provided in the research description.

Participants

Women accounted for 88% of the study group ($n = 94$), while 12% were men ($n = 13$). The vast majority of the respondents were aged 18–29 ($N = 56.52\%$). 19% of the study group was aged between 30 and 39 ($N = 20$). The rest of the group were aged 40–49 ($N = 10.9\%$), 50–59 ($N = 10.9\%$), 60–69 ($N = 8.7\%$) and over 70 ($N = 3.3\%$). The majority of the respondents lived in cities with over 500,000 ($N = 37.35\%$) or 200,000–500,000 residents ($N = 33.31\%$). 17 respondents lived in rural areas (16% of the group). The majority of the respondents had higher education ($N = 65.61\%$). A significant part of the study group finished high school ($N = 40$, 37%), while only 2 participants had vocational education. Half of the group were professionally active ($N = 54$, 50%). 33% ($N = 35$) were students. Seven participants (6.5%) were studying and working, while 10 participants (9.3%) were retired.

Measures

The project consisted of a self- designed questionnaire and two questionnaire tools: the Polish adaptation of the *Chalder Fatigue Questionnaire* and the Polish adaptation of the *Depression, Anxiety and Stress Scale DASS-21*.

The self-designed questionnaire was used to gather demographic data and analyse:

- support received in difficult life situations (question about the amount of support from family and friends in the difficult situation);
- health (subjective evaluation of health condition);
- health-promoting behaviours (set of questions: Have you ever tried to get rid of behaviours that are harmful to your health (e.g. smoking) in your life? Have you ever tried to implement behaviours in your life that were designed to benefit your health (e.g. regular exercise)? In the face of the COVID-19 pandemic, have you tried to get rid of behaviours that are harmful to your health (e.g. smoking)? In the face of the COVID-19 pandemic, have you tried to implement behaviours that were intended to benefit your health (e.g., regular exercise)? Each question was followed by another question connected with how successful the activities were;
 - optimism (looking to the future with optimism);
 - time (question about the amount of time that respondents can devote to themselves (doing what they want at the moment); and the time they can spend taking care of themselves and their health).

The Polish adaptation of *Chalder Fatigue Questionnaire* (by Agata Zdun-Ryżewska, Krzysztof Basiński, Anna Michalik) used in the study was used to measure the level of fatigue among the study group. The questionnaire consisted of 11 items and allows to

detect decreased mental and physical endurance, problems with thinking and memory combined with increased fatigability.

The Polish adaptation of the *DASS-21 Depression, Anxiety and Stress Scale* (by Marta Makara-Studzińska, Beata Petkiewicz, Anna Urbańska and Jacek Petkiewicz), in turn, was used to assess the intensity of depression (dysphoria, anhedonia, hopelessness, lack of involvement, devaluation of life, self-deprecation), anxiety (autonomic arousal, situational anxiety, subjective experience of anxious affect) and stress (chronic non-specific arousal, difficulty relaxing, being easily agitated, irritable, impatient) experienced by the participants. The scale consisted of 21 items.

In this study, the main research question is:

RQ: What are the most significant aspects of health-related lifestyle changes during the COVID-19 pandemic?

Moreover, we test the following hypotheses:

H1: The number of people trying to eliminate behaviours detrimental to health is smaller in comparison to those who are trying to implement health-promoting habits in the face of a stressful situation.

H2: The subjects who eliminate habitual coping strategies in the face of a stressful situation differ from those who attempt to implement new health-promoting habits in terms of differentiating negative emotional states.

H3: Attempts to eliminate anti-health behaviours in the past are associated with current attempts to change anti-health behaviours, undertaken during a pandemic.

Data analysis

Statistical analysis of the obtained results was performed with the use of the Statistica software (version 13.3). Statistical parametric methods were used in the study. Pearson's χ^2 (the Chi Square) was used for testing relationships between categorical variables. To determine if the means of two groups are significantly different the t-test was performed. In all tests $p < 0.05$ was considered statistically significant.

Results

Among the respondents, as many as 95% ($N = 102$) believed that a healthy lifestyle is important and should be taken seriously during the pandemic. Only one person concluded that although a healthy lifestyle is important, during the COVID-19 pandemic this issue could be set aside for various reasons, while 4% ($N = 4$) believed that a healthy lifestyle did not matter much, regardless of the pandemic-related situation.

A slightly different issue was the perception of actual possibility to practise a healthy lifestyle currently. In this regard, the responses of the participants were more diversified. The majority of the respondents ($N = 60.56\%$) believed that the COVID-19

pandemic had made it difficult to follow a healthy lifestyle. Almost 30% of respondents ($N = 32$) believed that COVID-19 has no impact on being able to lead a healthy lifestyle, while 15 respondents (14%) were of the opinion that the pandemic had, in fact, made it easier for them to follow a healthy lifestyle.

In practice, activities aimed at protecting health can be divided into two types: eliminating behaviours detrimental to health and introducing behaviours aimed at improving health. In this research, the latter were much more common. 64% ($N = 69$) of respondents declared that they had been implementing health-promoting behaviours during the pandemic. In contrast, only 30% ($N = 32$) of the participants were trying to eliminate behaviours harmful to health.

Earlier health-related activities (eliminating harmful behaviours and introducing new health-promoting activities) also appear to be linked to current efforts in this regard during the pandemic. Past attempts to eliminate health-detrimental behaviours were significantly correlated with the current attempts to change unhealthy behaviours during the pandemic (Pearson's χ^2 : 7.88; $df = 1$; $p = 0.005$). The summary is presented in the first part of Table 1. Those respondents who declared to have tried to eliminate health-detrimental behaviours in the past and were no longer making such efforts during the current pandemic was almost 25% larger than the group that continued their efforts in this regard. This subgroup was the most numerous in the entire study group (accounting for almost 45% of the respondents), especially when compared to those who have never (neither in the past nor during the pandemic) made any attempt to eliminate behaviours detrimental to health (25%) or those who have tried before and continue their efforts (27%).

The second part of Table 1 presents a more detailed analysis of the issue of effectiveness in the context of the actions undertaken in the past (Pearson's χ^2 : 7.75751, $df = 3$, $p = .051298$). A large group of participants declared to have made an effective and permanent attempt to eliminate health-detrimental behaviours in the past, but were no longer undertaking such measures (21%). 24% of the respondents had not engaged in any such effort, either in the past or at present (24%). 19% of the respondents declared to have made such an attempt in the past with short-term effects, but do not intend to do so again. In addition, the respondents in the latter group (i.e. people who achieved only short-term effects in terms of eliminating health-detrimental behaviours), were more likely not to undertake such efforts again (59%) than to do so (41%).

Attempts at eliminating health-detrimental behaviours during the pandemic seem not to be correlated with the introduction of health-promoting behaviours in the past (Pearson's χ^2 : 0.25; $df = 1$; $p = 0.62$).

Similarly, attempts at introducing health-promoting behaviours during the pandemic were not correlated in a statistically significant way with attempts at eliminating health-detrimental behaviours in the past (Pearson's χ^2 : 1.11; $df = 1$; $p = 0.29$).

Table 1

Summary of participants who have made an attempt to eliminate health-detrimental behaviours (Pearson's χ^2 : 7.88; $df = 1$; $p = 0.005$) and the effectiveness of actions aimed at the elimination of such behaviours in the past and now, during the pandemic (Pearson's χ^2 : 7.76; $df = 3$, $p = 0.05$)

		Attempts to eliminate health-detrimental behaviours during the pandemic	
		Yes	No
Attempts to eliminate health-detrimental behaviours in the past	Yes	27%	45%
	No	3%	25%
Effectiveness in eliminating health-detrimental behaviours	Permanent elimination of health-detrimental behaviours	10% (in line: 33%)	21% (in line: 67%)
	Temporary elimination of health-detrimental behaviours	13% (in line: 41%)	19% (in line: 59%)
	Unsuccessful attempts	4% (in line: 36%)	7% (in line: 64%)
	No attempts	3% (in line: 10%)	24% (in line: 90%)

In turn, a correlation was found between the introduction of health-promoting behaviours in the past and currently, during the pandemic (Pearson's χ^2 : 9,52; $df = 1$; $p = 0.002$). Those respondents who declared to have attempted to introduce health-promoting habits in the past, seemed to be more likely to make such attempts during the pandemic (68%) rather than not (32%). The results are presented in Table 2.

It is also worth pointing out that the issue of the effectiveness of health-promoting behaviours introduced in the past seems in no way correlated with the current attempts to introduce such behaviours during the pandemic (Pearson's χ^2 : 6.93; $df = 3$; $p = 0.07$).

Table 2

A summary of the participants declaring to have attempted to introduce health-promoting behaviours in the past and are currently making such attempts (Pearson's χ^2 : 9.52; $df = 1$; $p = 0.002$).

Attempts to introduce health-promoting behaviours in the past	Attempts to introduce health-promoting behaviours during the pandemic	Attempts to introduce health-promoting behaviours during the pandemic
	Yes	No
Yes	64% (in line: 68%)	31% (in line: 32%)
No	0% (in line: 0%)	5% (in line: 100%)

The group who attempted to introduce health-promoting behaviours differs from the group who made no such attempts in their higher level of anxiety. In turn, the participants who attempted to eliminate health-detrimental behaviours differed from those who undertook no such actions not only in terms of greater anxiety, but also a higher level of stress and fatigue (Table 3). No other variable included in the study (depression, optimism, support, health condition, spare time) allowed for the differentiation between the groups undertaking and not undertaking actions to take care of one's health (both by eliminating harmful behaviours and introducing health-promoting habits).

Table 3

Comparison of groups that, in the face of the pandemic, make/do not make attempts to eliminate health-detrimental behaviours and introduce health-promoting habits (Student's *t*-test, bolded statistically significant results with $p < 0.05$)

Variable	Group that eliminates health-detrimental behaviours	Group that does not eliminate health-detrimental behaviours	<i>t</i>	<i>P</i>	Group that introduces health-promoting behaviours	Group that does not introduce health-promoting behaviours	<i>t</i>	<i>p</i>
	<i>N</i> = 32 <i>M</i> (<i>SD</i>)	<i>N</i> = 75 <i>M</i> (<i>SD</i>)			<i>N</i> = 69 <i>M</i> (<i>SD</i>)	<i>N</i> = 38 <i>M</i> (<i>SD</i>)		
Fatigue CHFQ-PL	17.47(7.04)	14.6(5.47)	2.27	0.02	16.23(6.34)	14.05(5.42)	1.79	0.08

Variable	Group that eliminates health-detrimental behaviours <i>N</i> = 32 <i>M</i> (<i>SD</i>)	Group that does not eliminate health-detrimental behaviours <i>N</i> = 75 <i>M</i> (<i>SD</i>)	<i>t</i>	<i>P</i>	Group that introduces health-promoting behaviours <i>N</i> = 69 <i>M</i> (<i>SD</i>)	Group that does not introduce health-promoting behaviours <i>N</i> = 38 <i>M</i> (<i>SD</i>)	<i>t</i>	<i>p</i>
Stress DASS-21	9.81(6.15)	6.41(4.96)	3.01	0.003	8.10(5.59)	6.21(5.3)	1.71	0.09
Anxiety DASS-21	6.9(5.4)	3.95(4.2)	3.05	0.003	5.54(5.11)	3.55(3.79)	2.09	0.04
Depression DASS-21	6.34(4.8)	5.6(4.8)	0.73	0.46	6.17(4.79)	5.18(4.84)	1.01	0.31
Optimism	3.72(1.17)	3.67(1.01)	0.23	0.82	3.74(1.02)	3.58(1.13)	0.74	0.45
Support	4.59(0.56)	4.6(0.68)	-0.04	0.96	4.59(0.69)	4.60(0.54)	-0.08	0.93
Health assessment	3.84(0.72)	3.93(0.66)	-0.62	0.53	3.86(0.76)	4.00(0.52)	-1.06	0.29
Time to oneself	5.08(17.68)	2.45(1.97)	1.27	0.20	3.50(12.1)	2.76(2.27)	0.37	0.71
Time to take care of one's health	1.36(0.59)	1.29(0.53)	0.57	0.57	1.36(0.58)	1.24(0.49)	1.07	0.29

Discussion

From a psychological perspective, the tendency to implement health-promoting behaviours and eliminate behaviours which are detrimental to health, in the face of a pandemic, may be considered in connection with self-regulatory processes. As Baumeister pointed out, self-regulation makes it possible to adjust the actions of an individual to specific situational requirements in order to restore the disturbed balance (Baumeister & Vohs, 2007). In the presented material, we have compiled and analysed the results associated with the modification of health behaviours by subjects in the face of COVID-19 pandemic.

The majority of people ($N = 102$; 95%) declare that leading a healthy lifestyle is important and should also be kept in mind in the face of a pandemic. From the psychological perspective, the pandemic and its consequences that provoke shifts in current lifestyle (e.g. modification of health-related habits, social isolation, a sense of threat to health and/or life) can be regarded as a difficult life situation (Steptoe et al., 2010), which poses a regulatory challenge. This usually entails an imbalance in the performed tasks and activities, as well as a sense of deprivation, difficulty and threat, and the feeling of being overwhelmed (Jager, 2003). This can lead to the belief that the COVID-19 pandemic had made it difficult to follow a healthy lifestyle, which is confirmed by the results obtained in this study ($N = 60.56\%$).

An individual attempting to cope with the difficulties arising due to the pandemic may go through different phases of this process (Stueck, 2021). Initially, the nature of the situation and the related difficulties are interpreted and the available resources required to restore balance are assessed (through the sense of influence on one's own functioning, manifested, for example, by making an effort to change health habits). The assessment process of a given situation, determined by the type of physiological arousal, may be influenced by situational factors (in this case: the COVID-19 pandemic, the available resources and support) and existing habits (related to the level of anxiety, sense of control and experience) (Stueck, 2021).

In the subsequent phase, routine coping strategies are activated in response. In the cognitive sphere, actions aimed at explaining the phenomena taking place may be triggered, while on the emotional level, the observation and regulation of the experienced emotions is initiated. In the next phase of the Model, if previous efforts related to coping with a difficult situation have not yielded positive results, then serious and negative consequences (Stueck, 2021) may follow. Some of the respondents in this study declared an increased level of anxiety, stress and fatigue due to the over-activated psychophysiological system (Stueck, 2021).

The state of consumption of available resources may lead to the so-called “Ego depletion” – understood as a situation in which the self of an individual does not have the resources characteristic of a given person (Baumeister & Vohs, 2007) – which leads to a disturbance of optimal functioning and the ability for self-regulation (Tice et al.,

2007). In our research, the inability to mitigate the threatening factors led to the emergence of negative consequences as a result of such failed attempts, in the form of, for example, fatigue. In accordance with the theory, the existing situation is a symptom of the exhaustion of the adaptation resources (self-regulation) of the respondents as a response to their attempts to cope with the pandemic and its consequences, such as social isolation or changes in current lifestyle (Stueck, 2021).

Moreover, long-term overwhelm, combined with an inability to restore balance, can lead not only to fatigue, but also to chronic stress – symptoms which were observed in the study group, which corresponds to phase 4 of the Model based on *Pandemic Management Theory*. In addition, one's energy resources may be depleted, which may also be manifested by sleep disorders, psychosomatic disorders, depression and post-traumatic stress disorder (Stueck, 2021).

Detailed analysis of the data showed that during the pandemic, habitual coping strategies tended to be used more often. The group of people trying to eliminate behaviours detrimental to health is smaller in comparison to those who are trying to implement health-promoting habits in the face of a stressful situation. Moreover, the group who attempted to introduce health-promoting behaviours differs from the group who made no such attempts in their higher level of anxiety. In turn, the participants who attempted to eliminate health-detrimental behaviours differed from those who undertook no such actions, not only in terms of greater anxiety, but also a higher level of stress and fatigue. In a crisis situation, an individual strives to restore the disturbed balance through a mechanism of self-regulation, which manifests itself in the form of correcting irregularities and emotional regulation (Baumeister & Vohs, 2007). The implementation of new habits or the resignation from existing ones requires significant energy expenditure.

In the context of the self-regulation process and the ability to implement changes, the role of motivation (understood as motivation to achieve a goal or meet a standard), which is currently considered one of its essential components, cannot be ignored (Baumeister & Vohs, 2007). According to the theory of self-determination by Deci and Ryan (2001), man is an individual predisposed to act, while the sources of his potential are located both internally (e.g. emotions) and externally (environment). Thanks to the ability to self-regulate, it is possible to develop and integrate functioning (Ryan & Deci, 2001; Deci & Vansteenkiste, 2004). The needs to be satisfied are related to autonomy (the sense of the individual that they are the cause of events, taking into account individual values), competences (sense of the meaning of actions taken) and relations with the environment (the possibility to interact with others). The inability to satisfy any of these areas can lead to negative emotional states. According to the theory described, a person strives to achieve what is conducive to satisfying his needs. In the face of the self-regulatory challenge posed by the COVID-19 pandemic for humans, it is easier to direct one's actions towards behaviours that favour the satisfaction of needs, even if these behaviours are detrimental to health and/or short-term (Deci & Vansteenkiste, 2004).

Another theory which may explain the functioning of the respondents refers to the neuroanatomical structures of emotion regulation and assumes that health-detrimental habits, such as, for example, the excessive consumption of alcohol and unhealthy food, affect the so-called brain's reward system (Kudła, 2014). Behaviours that result in gratification (e.g. perceived pleasure) encourage the continuation of such adaptive responses (i.e. those that improve mood), which explains the difficulties the respondents face in giving up health-detrimental habits, as well as the fact that those who decided to run such a risk experienced consequences related to mood disorders and fatigue more often.

Conclusions

A healthy lifestyle as a challenge

When modifying one's health-related behaviours, it is worth taking into account previous experience in this regard, as it may have an impact on the efforts currently undertaken. From the perspective of the presented theoretical models, people who try to introduce changes in their health-related behaviours often fail. Modifying one's lifestyle seems to be particularly difficult and – as it turned out – the participants in this study were reluctant to try. If modifications are introduced, they are usually short-term and ultimately lead to a return to familiar strategies with predictable effects (even if they are detrimental to health).

The importance of the self-regulation process

The need for gratification – understood as the need to regulate emotions – seems to be of particular relevance, especially now, during the pandemic – when opportunities for enjoyment became limited and may pose a considerable challenge. The ability to exercise control over oneself and the ability to make choices is one of the most important adaptive functions of a human being, as described in literature (Tice et al., 2007). Apart from the potential resulting from the described possibilities, the mentioned functions may also lead to the exhaustion of psychological resources (Tice et al., 2007). Practicing positive health behaviours (including introducing beneficial health changes and resigning from unfavourable health changes) in the described conditions may be particularly difficult due to the need to use more energy for this purpose, and thus the risk of a faster depletion of resources. The state of ego exhaustion can disturb the process of making the right adaptive behaviour, thus leading to the occurrence of many destructive behaviours (Muraven et al., 2002; Muraven et al., 2005; Stucke & Baumeister, 2006).

Positive emotions as a corrective factor

At the appropriate stage, ego depletion can be counteracted by positive emotions, which may foster the recovery of volitional opportunities (Tice et al., 2007). Positive affect

affects the replenishment of the exhausted resources and thus favours the repair processes of the self-regulation system (Fredrickson & Levenson, 1998; Fredrickson et al., 2000; Fredrickson, 2001), increasing the chances of a successful solution to the crisis. Perhaps it is worth discussing this topic of the relationship between positive emotions and health behaviours during a pandemic in further studies.

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