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The role of psychosocial factors in the increase of health behaviors facing SARS-CoV-2 pandemic

Abstract: Introduction - The SARS-CoV-2 pandemic is a major health crisis modern world has to counter. Due to the highly contagious nature of this virus and the rapid growth of infections in many countries specific medical recommendations have been formed to reduce spread of the virus. Aim of the study is determine the psychosocial factors related to obeying medical recommendations against SARS-CoV-2 pandemic during the stage of increasing government's restrictions and limitations.

Method – The study included 319 participants (261 women and 58 men) aged 18-66 yrs (M=25). The study was carried out via the Internet from 21st March, 2020 to 27th March, 2020. The sample group included participants chosen using "snowball" effect.

Results - It has been shown that the higher anxiety of falling ill, the higher tendency to obey health behaviors towards SARS-CoV-2 ($r = .13$, $p < .001$). In order to explain what factors undertaking health behaviors towards SARS-CoV-2 depends on, structural equation modeling was applied including HMB model variables. It has been shown that the benefits and barriers have a significant impact on compliance with health behavior towards SARS-CoV-2 ($ß = 0.45$, $p < 0.001$).

Conclusions – At the beginning of a pandemic, while increasing restrictions perceived barriers and perceived benefits of obeying health recommendations are significant for explaining health behaviors towards SARS-CoV-2 pandemic. Perceived risk is less important. Higher intensity of health anxiety, understood as a fear of infection (likelihood of illness) is related to obeying the health behaviors towards SARS-Cov-2.

Keywords: *health behaviors, psychosocial factors, pandemic, SARS-CoV-2*

INTRODUCTION

The SARS-CoV-2 pandemic is a major health crisis modern world has to counter. Due to the highly contagious nature of this virus and the rapid growth of infections in many countries specific medical recommendations have been formed to reduce spread of the virus (Plohl & Musil, 2020). Scientists worldwide undertake intense attempts to produce an effective vaccine against SARS-CoV-2. Nevertheless, by now the reduce of COVID-19 spread only depends on non-pharmaceutical measures such as: lockdowns of schools, restaurants and shopping centers, ban on free movement or the obligation to wear face masks in public areas (Ferguson et al., 2020). Recommendations for individuals are given: frequent hand-washing, applying disinfection liquid and avoiding social contacts (Díaz & Cova, 2020).

A significant variable related to undertaking health behaviors is health anxiety – defined as extensive care of own health having no signs of a disease or experiencing extensive anxiety in case of minor symptoms (Lucock & Morley, 1996). Such fear appears when an individual is convinced that their bodily sensations or changes in their bodies indicate a serious disease. A moderate health

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anxiety may serve adaptive functions as it motivates to seek medical health when it is justified (Marcus, Gurley, Marchi, & Bauer, 2007; Salkovskis, Rimes, Warwick, & Clark, 2002). The anxiety may increase when an individual experiences acute stress, is ill or experienced a close relative loss. Additionally information spread over media may increase health anxiety. Attention is drawn to patients with comorbidities as they are at risk of a more severe course of the illness and worse prognosis if being infected by SARS-CoV-2 (Xie et al., 2020).

Research showed that a chronic disease is also associated with the prevention of health behaviors against SARS-CoV-2. In 2021 it was found that compared with adults without chronic diseases, adults with chronic diseases were more likely to adhere to recommended preventive behaviors to reduce the spread of COVID-19 in the USA (Islam, Vidot, Camacho-Rivera, 2021). Although no research has yet been conducted regarding the effect of the COVID-19 crisis on health behaviors in people with chronic illnesses, it may be presumed that the disruption in usual activity would be even more harmful in this population (Elran-Barak, Mozeikov, 2020).

Keeping to the recommendations depends on many factors which are included in the socio-psychological model of health beliefs (*Health Belief Model, HBM*). This model was created to explain and forecast health behaviors with special regards to health services (Janz & Becker, 1984). Despite being created in 1950's, it still remains one of the most well-known and most frequently applied theories in health behavior studies (Aalto & Uutela, 1997; Spikmans et al., 2003; Carpenter, 2010; Szczerbińska et al., 2014; Mokhtari Lakeh et al., 2019; Mascioli & Davis, 2019; von Wagner et al., 2019).

We claim that the HBM model accounts for a valuable explanatory source of the undertaken issue of health behaviors in the face of SARS-CoV-2 pandemic. In the HBM model, perceived susceptibility and severity, perceived benefits and perceived barriers explain the likelihood of health behavior. What is also significant for undertaking a particular behavior are the so called cues to action which include: information spread over media, personal experiences or a close persons illness. The model also regards self-efficacy (Rosenstock, 1974; Rosenstock, Strecher, & Becker, 1988). Demographic (e.g. gender, age) and psychological (e.g. personality, values) factors are also important for undertaking health behaviors.

According to the law for prevention and combating infections and infectious diseases among humans (Dz. U. [Journal of Laws] from 2020, item 433), Poland's Health Ministry issued an ordinance of the state of epidemic threat in Poland since 12th March, 2020. On the 23rd March, 2020 Polish authorities announced a state of epidemic and new restrictions were introduced on 25th March, 2020. Free moving was banned except for commuting to work and settling issues necessary for everyday life. Moving was allowed only in a group of maximum two people (excluding families). Assemblies were totally prohibited. Schools, kindergartens and day care centers were locked down and the functioning of restaurants, shopping centers

and galleries was limited. Citizens were instructed to wash hands frequently, avoid touching eyes, nose and mouth, maintain at least one-meter distance from people who cough, sneeze or have fever and to disinfect surfaces (https://www.who.int/emergencies/diseases/novel-corona-virus-2019/advice-for-public, access 03.19.2020). At the beginning of the study the number of infected people in Poland was 439 and 5 fatalities. On the day the collection of data was finished the number of infected people in Poland reached 1389 and 16 fatalities.

AIM OF THE STUDY

This study was aimed to determine the psychosocial factors related to obeying medical recommendations against SARS-CoV-2 pandemic during the stage of increasing government's restrictions and limitations. The following research hypotheses were formulated:
1. Increased health anxiety is related to obeying health behaviors towards SARS-CoV-2.
2. Chronic disease is related to obeying health behaviors towards SARS-CoV-2.
3. Factors included in HBM: perceived severity, perceived susceptibility, perceived barriers to obeying recommendations, perceived benefits of obeying recommendations, cues to action, self-efficacy explain health behaviors towards SARS-CoV-2.

METHOD

The study was carried out via the Internet from 21st March, 2020 to 27th March, 2020. The sample group included participants chosen using "snowball" effect. The link to the online questionnaire was published on social networking sites with a request to pass it on. 319 properly filled in questionnaires were returned.

The following research questionnaires were applied:

Demographics variables: gender, age, number of children, marital status, place of residence, job status. Moreover authors collected information about job character, history of chronic diseases, form of consultation with a doctor, infection by Covid-19, being put in quarantine.

Inventory of Health Behaviors towards Covid-19 (*IHBCovid-19*) – for measuring health behaviors during SARS-CoV-2 was used. The following questions were asked: washing hands with water and soap, using hand disinfection liquid, maintaining at least 1-meter distance from other people, avoiding contact with people who are coughing, sneezing or having fever, avoiding touching eyes, nose and mouth, avoiding touching surface often touched by other people (handles, knobs, banisters, counters, switches etc.), covering mouth and nose with a tissue or elbow pit while sneezing, avoiding human assemblies, limiting leaving house to the minimum, using public transport, cleaning or disinfecting mobile phone or other personal objects, cleaning surfaces at home, maintaining healthy nutrition and proper body hydration. Likert scale ranging from 1 (I have never done it) to 5 (I have

done it very often) was used as response cafeteria. Item 10 has reverse scoring. The sum of points obtained from the assessment of these behaviors account for information about the intensity of health behaviors towards SARS-CoV-2 (Cronbach alpha = .78).

Operationalization of the HBM model to measure beliefs about SARS-CoV-2 infection (own elaboration) The authors applied five-point Likert scale ranging form 1 (I don't agree) to 5 (I agree). Six factors which increase the likelihood of obeying medical recommendations were operationalized:

1) Perceived susceptibility (*My health condition makes me highly susceptible to coronavirus infection.*),
2) Perceived severity (*Infection by coronavirus would cause severe, negative consequences to my health.*),
3) Perceived benefits (*Obeying medical recommendations (resulting from current government ordinance) will help me prevent coronavirus infection.*),
4) Perceived barriers (*I see numerous barriers which prevent me from obeying all medical recommendations protecting me from coronavirus infection (due to e.g. going out to work, taking care of other people, taking care of animals, shopping.*),
5) Cues to action (*I constantly follow the news about coronavirus in media, press and the Internet.*),
6) Self-efficacy (*I claim that I am able to persist in recommendations which are aimed to stop the spread of coronavirus pandemic.*).

Short Health Anxiety Inventory (SHAI) (Salkovskis et al., 2002). Polish adaptation by: Kocjan (2016). The tool measures the level of health anxiety. It consists of 18 items which allow to assess two factors related to fear: illness likelihood, IL – Cronbach α .91 and negative consequences of an illness, NC - Cronbach α .92 as well as the general result which is the sum of points for both factors (Kocjan, 2016). The answers are assessed on 4-step Likert scale where: 0 – lack of symptoms, 1 – mild symptoms, 2 – severe symptoms and 3 – heavily severe symptoms, clinical form of hypochondriasis.

Sample group

The study included 319 participants (261 women and 58 men) aged 18-66 yrs (*M*=25). In quarantine were 4% respondents, 10% declared that a person from their closest surrounding was in quarantine and only around 1% declared that they know a person infected by coronavirus. For details see table 1.

RESULTS

The level of health behaviors is shown in table 2.

A detailed analysis showed that despite the fact that 80% of the respondents declare that they wash their hands very often using water and soap, almost 50% of the respondents use hand sanitizer very rarely or occasionally. Frequent or very frequent disinfection of mobile phones or other personal things occurs in only 40% of people. The frequent or very frequent avoidance of touching, eyes, nose and mouth concerns 65% of respondents. Over 90%

Table 1. Descriptive statistics of the examined sociodemographic variables (N=319)

Sociodemographic variables	*N*	*%*
Gender		
Women	261	82
Men	58	18
Place of residence		
City	240	75
Country	79	25
Martial status		
Single	186	58
Married	64	20
Divorced	2	.70
Widowed	1	.30
Free partnership	66	21
Job status		
Student	204	64
Employee	95	30
Person running own business	11	3.2
Unemployed	8	2.5
Pensioner	1	.30
Chronic disease		
Yes	58	18
No	261	82
Ability to work off-site		
Yes	207	65
No	112	35

of the respondents avoid crowds of people and limit home-leaving to the necessary minimum. On the other hand, frequent or very frequent use of public transport concerns over 90% of respondents.

The results of *r*-Pearson correlation analyses are presented in table 3. The correlations are as follows:

The first hypothesis regarding the relationship between health anxiety and health behaviors towards SARS-CoV-2, a significant statistical connection was revealed regarding only the probability of illness. The higher anxiety of falling ill, the higher tendency to obey health behaviors towards SARS-CoV-2 (*r*=.13, *p*<.001).

We compared health behaviors against Covid-19 and health anxiety. We noticed a trend after March 25, 2020 (government restrictions in place) in increased health behaviors against COVID-19, but it was not statistically significant (IHBCovid-19 group 1: *M*=54.63 and IHB-Covid-19 group 2: *M*=55.78) (*U*=9652.00; *p*=.078). Health anxiety also increased (SHAI), but this was not a statistically significant change (SHAI group 1: *M*=15.84 and SHAI group 2: *M*=17.07) (*U*=9605.50; *p*=.193). As for the factors in the HBM model, the perceived severity increased after March 25, 2020 (perceived severity group 1: *M*=2.88 and perceived severity group 2: *M*=3.25) (*U*=8880.50; *p*=.005).

Considering the second hypothesis, the authors carried out *t-Student* statistical significance analysis.

Table 2. Descriptive statistics of individual behaviors towards Sars-CoV-2

Inventory of Health Behaviors towards Covid-19	Descriptive statistics (*N=319*)			
	M	*Min*	*Max*	*SD*
1. I wash my hands using soap and water.	4.79	3.00	5.00	.43
2. I use a hand sanitizer.	3.49	1.00	5.00	1.19
3. I am at least 1.5 meters away from other people.	4.52	2.00	5.00	.66
4. I avoid contact with people who are coughing, sneezing or having a fever.	4.67	1.00	5.00	.63
5. I avoid touching my eyes, nose and mouth with my hands.	3.89	1.00	5.00	.97
6. I avoid touching surfaces frequently touched by other people with my hands (handles, handrails, table tops, switches, etc.).	4.21	1.00	5.00	.89
7. When sneezing or coughing, I cover my mouth and nose with a tissue or elbow bend.	4.58	1.00	5.00	.77
8. I avoid crowds of people, eg playgrounds, supermarkets, shopping malls, public transport.	4.70	1.00	5.00	.64
9. I limit the exit from the house to the necessary minimum (purchase of basic things, taking out the rubbish, going to work).	4.64	1.00	5.00	.69
10. I travel in the country by public transport (buses, trams, trains, planes).	4.63	1.00	5.00	.89
11. I clean or disinfect my mobile phone or other personal things (pen, apartment keys, payment card, tablet, laptop).	3.09	1.00	5.00	1.24
12. I clean surfaces in my house / flat (kitchen countertops, door handles, tables, light switches, handrails, etc.).	4.01	1.00	5.00	1.01
13. I take care of a healthy diet and stay hydrated (I eat easily digestible meals, avoid processed foods, eat fruits and vegetables, and drink 2 liters of fluids).	3.77	1.00	5.00	.99

Table 3. Correlation r-Pearson coefficient of the examined variables (N=319)

Variables	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1. IHBCovid-19	-									
2. Health anxiety – probability of illness	.13**	-								
3. Health anxiety – Negative consequences of an illness	-.05	.34***	-							
4. Sum – health anxiety	.09	.95***	.61***	-						
5. Perceived susceptibility	.05	.35***	.08	.32***	-					
6. Perceived severity	.07	.26***	.08	.25***	.42***	-				
7. Perceived benefits	.20***	-.07	-.14**	-.11	-.02	.01	-			
8. Perceived barriers	-.16**	-.01	.07	.01	.07	.11*	-.16**	-		
9. Cues to action	.15**	.18***	.16**	.21***	.11*	.12*	-.01	-.03	-	
10. Self-efficacy	.38***	.09	-.05	.06	-.03	-.01	.29***	-.35	.12*	-
M	54.99	13.21	3.02	16.22	2.07	2.99	4.36	2.90	3.98	4.35
SD	5.83	5.81	2.28	6.92	1.05	1.09	0.73	1.42	1.13	0.83

*Key: N– the size of sample; M – mean value; SD – standard deviation value; *p<.05; **p<.01; ***p<.001.*

People with a chronic disease (respiratory diseases were only 3%) also more frequently obey health behaviors towards SARS-CoV-2 (M=56.97, SD=4.86) than people without a chronic disease (M=54.55; SD=5.95) [t(317) =-2.88; p=.004]. The authors also observed that women obey health behaviors towards SARS-CoV-2 more frequently (M=55.78, SD=5.40) than men (M=51.47, SD=6.43) [t(317)=5.31; p<.001].

In order to explain what factors undertaking health behaviors towards SARS-CoV-2 depends on, structural equation modeling was applied including HMB model variables (hypothesis 3). Dependent variable was undertaking health behaviors towards SARS-CoV-2. Independent variables were: perceived severity, perceived susceptibility, perceived barriers to obeying recommendations, perceived benefits from obeying recommendations,

cues to action, self-efficacy. Introducing variables into the model the authors applied maximum likelihood estimation (ML). Two models were created for so defined variables: model 1 – independent variables were only directly related to the dependent variable (multiple regression model). Only self-efficacy and perceived benefits were statistically significant predictors of health behaviors towards SARS-CoV-2. Model 1 did not obtain proper matching parameters χ^2 (*CMIN*=149.03, *p*<.001) (Gerbing & Andreson, 1993), and the variables explained only 13% of the variance of health behaviors towards SARS-CoV-2.

Model 2 – structural equation modeling which additionally included relationships between dependent variables (Fig. 1). On the other hand, model 2, based on the theoretical assumptions of HBM, included the relationship between latent variables (benefits and barriers and perception of illness). Model 2 is well-adjusted to the data what is indicated by an insignificant value of χ^2 (*CMIN*=8.82, *p*<.05) (Gerbing & Andreson, 1993). The value of the CMIN/df=.74 also allows to accept the model (the relationship of CMIN>2.00 indicates maladjustment (Byrne, 1989). The NFI, CFI, GFI and AGFI

indices are close or equal to 1 and the value of RMSA=.00 which indicates a very good adjustment (Browne & Cudeck, 1993).

HBM MODEL

SEM analysis (standardized values) of data used in the model of variables explaining health behaviors towards SARS-CoV-2. Standardized coefficients are reported and the significance levels of paths and covariates presented here are for the standardized regression coefficients. The model shows various factors related to health behaviors towards SARS-CoV-2.

Model 2 contains latent variables: a) perception of illness which includes such variables as perceived susceptibility (*ß*=.62, *p*=.012) and perceived severity (*ß*=.68, *p*=.012) and b) perceived benefits and perceived barriers (perceived benefits (*ß*=.35, *p*<.001) and barriers (*ß*=-.40, *p*<.001)). Cues of action is related to both perceived benefits and perceived barriers (*ß*=.16, *p*=.017) and the perception of illness (*ß*=.20, *p*=.015). Self-efficacy is related to benefits and barriers (*ß*=.77, *p*<.001). It is interesting that despite having positive significant correla-

Table 4. Model 1 and 2 adjustment indices: CMIN, CMIN/df, HOLTER, NFI, CFI, GFI, AGFI and RMSEA

	CMIN; *p*	CMIN/DF	HOLTER; *p*	NFI	CFI	GFI	AGFI	RMSEA
Model 1	149.03; .001	9.93	66; .01	.25	.25	.88	.78	.17
Model 2	8.82; .718	.74	945; .01	.96	1.00	.99	.98	.00

Key: Model 1 – in which independent variables were directly related to the dependent variable; Model 2 – structural equation modeling which additionally included relationships between dependent variables; AGFI, χ^2Adjustment Goodness of Fit Index; CFI, Comparative Fit Index; CMIN/df, χ^2 statistic and df are the degrees of freedom GFI, χ^2Goodness of Fit Index; HOLTER, Hoelter's critical N; NFI, Normed Fit Index; p - statistical significance; RMSEA, Root Mean Square Error of Approximation; SEM, Structural Equation Modeling.
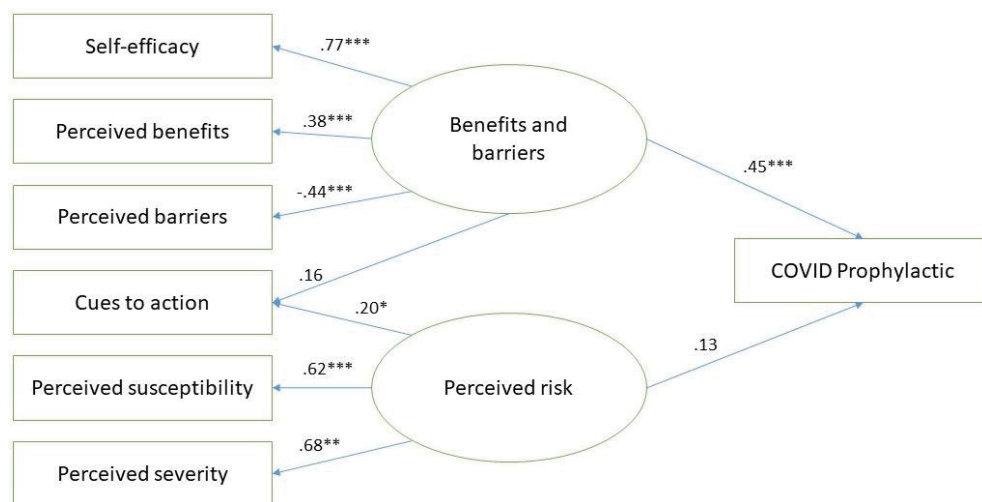

Fig. 1 HBM Model benefits and barriers perceived risk COVID prophylactic.

Key: *** *p* < .001; ** *p* < .01, * *p* < .05
The values given are standardized results.

tion with health behaviors towards SARS-CoV-2 ($r=.34$, $p<.001$), self-efficacy returned a better adjustment without the path: self-efficacy – health behaviors towards SARS-CoV-2 in this model. Benefits and barriers have a significant influence on obeying health behaviors towards SARS-CoV-2 ($\beta=.45$, $p<.001$).

DISCUSSION

The presented study was conducted at the beginning of the pandemic when government introduced many restrictions. As it was showed in the study, the most important factor for undertaking health behaviors towards SARS-CoV-2 were perceived benefits and perceived barriers to fulfill the medical recommendations. The way an individual appraises potential gain and the height of estimated costs they have to bear with regards to engage in a particular behavior is related to their likelihood of obeying medical recommendations. Information about coronavirus spread over media played a significant role in this appraisal. People who show higher appraisal of benefits and lower appraisal of barriers will be more likely to obey medical recommendations under the influence of the information coming from media. On the other hand, people who claim that implementing restrictions will not make them avoid being infected and who appraise them as more bothersome and problematic to fulfill will be less likely to obey the health behaviors despite receiving unfavorable information about the epidemic from media (growing number of the infected people and fatalities). At the stage of introducing restrictions, the perception of the illness was insignificant for obeying medical recommendations towards SARS-CoV-2. It is probable that this factor will be significant in case of a growth in the number of infected people and fatalities in the population.

Self-efficacy is significant for perceived benefits and barriers in undertaking health behaviors towards coronavirus. Data presented in the literature indicate a positive relationship between self-efficacy and changing health behaviors to be more pro-health (Strecher, McEvoy DeVellis, Becker, & Rosenstock, 1986; Grembowski et al., 1993). The authors' own research suggested that self-efficacy influences the way an individual perceives potential benefits and barriers in undertaking health behaviors. People with higher self-efficacy appraise benefits of undertaking health behaviors higher than barriers which may hinder the realization of a particular behavior (Barchi, Winter, Ramaphane, & Dougherty, 2019). Therefore, they are more eager to undertake and maintain a given behavior.

Our research showed that health anxiety, defined as a fear of being infected (likelihood of infection) is a significant variable in obeying medical recommendations related to COVID-19 prophylactic. Own research results showed that people with a higher level of health anxiety are more likely to obey medical recommendations related to the coronavirus prophylactic. People with high level of anxiety are more susceptible to drawing selective attention to threats which may be significant for the notions discussed in this article (Williams, 2004). It is reported that people with high level of health anxiety always interpret the perceived symptoms (e.g. headache) as being a sign of a severe illness (Asmundson, Abramowitz, Richter, & Whedon, 2010). It seems probable that such people may have a tendency to overestimate their susceptibility to infection by this virus. They may also be influenced by the information spread over media about a constantly growing number of infected people and fatalities. Moreover, the ongoing atmosphere of constant threat may additionally motivate such people obey the recommendations. These factors may cause people with higher level of health anxiety present more desired behavior patterns.

The presented study revealed that the respondents differed in the degree of obeying health behaviors towards SARS-CoV-2 with regards to gender and the fact whether or not they suffered from a chronic disease. Women were more likely to obey the recommendations than men. Similar results were obtained in a study comparing the attitudes and behavior of men and women in eight countries around the world (including Germany, New Zealand, the United States, and Italy). Galasso et al. (2020) showed statistically significant gender differences in individual perceptions of the seriousness of COVID-19 as a health problem. During the first wave, 59% of women in the countries surveyed rated the pandemic as a serious health problem, compared to almost 49% of men. During the second wave of the pandemic, the gender gap continued to be significant. The authors of this study also showed that countries led by women, such as Germany and New Zealand, responded more effectively to the pandemic by introducing some preventive practices, such as wearing face masks. Similarly, in the face of the transmission of SARS-CoV-2 virus, research results indicate that men and young adults less frequently obeyed the recommendations aimed to limit the spread of COVID-19 (Raude et al., 2020). Considering the recommendations such a result may be relatively worrying as it is men (especially over 60 yrs old) who are regarded as high-risk patients (Xie et al., 2020). In the fight against the pandemic, behavioral changes that take into account mobility restrictions and the requirement to wear masks appear necessary. Taking into account the data obtained in this study and other reports, it seems reasonable to introduce different messages, taking into account the gender of the recipient. Perhaps a different form of communication will contribute to their greater effectiveness in the group of men (Wenham, Smith, & Morgan, 2020).

Our study showed that people suffering from chronic diseases are more likely to obey medical recommendations towards coronavirus. Moreover, people suffering from chronic diseases showed to experience higher health anxiety. It would be necessary to obtain information on the importance of particular groups of diseases for health behavior, because our sample group was too varied (asthma – 3%, hypothyroidism – 5,6% , hypertension – >1%, diabetes - >1%, psoriasis - >1%, heart defect - >1%). Results of other studies show that health anxiety is present

in patients with various diagnoses (e.g. diabetes, circulatory system illnesses, endocrinological illnesses) (Janzen Claude, Hadjistavropoulos, & Friesen, 2014; Tyrer et al., 2011). In the presented study, this anxiety had a positive aspect as it conditioned a higher engagement of an individual in obeying medical recommendations related to coronavirus prophylactic. In case of people suffering from chronic disease, health anxiety may be higher because they more frequently experience physical sensations which they regard as dangerous (LeBouthillier, Thibodeau, Alberts, Hadjistavropoulos, & Asmundson, 2015). Therefore, these people are more motivated to undertake every possible activities to protect themselves from an infection that may be a threat to their health or life.

CONCLUSIONS

1. The most commonly followed health behaviors towards SARS-CoV-2 are washing hands with soap and water, avoiding contact with sneezing or coughing people, having fever and avoiding crowds of people.
2. At the beginning of a pandemic, while increasing restrictions perceived barriers and perceived benefits of obeying health recommendations are significant for explaining health behaviors towards SARS-CoV-2 pandemic. Perceived risk is less important.
3. Higher intensity of health anxiety, understood as a fear of infection (likelihood of illness) is related to obeying the health behaviors towards SARS-Cov-2.
4. Female and people suffering from chronic diseases display a higher intensity of health behaviors towards SARS-CoV-2.

LIMITATIONS AND IMPLICATIONS

The study was carried out via the Internet, therefore the representativeness of the sample group may not be confirmed. What is significant for the interpretation of the results is the fact of applying self-descriptive questionnaires. It regarded measuring both psychological variables and health behaviors. Using psychological tests may generate numerous errors resulting from i. a. deliberate provision of improper data or distortions caused by the memory of the respondents. It is also noteworthy that the study was conducted at the beginning of the pandemic and introducing government restrictions. Therefore, the presented results ought not to be generalized to subsequent periods of the epidemic. A repeat study and analyses seem worthwhile in order to determine the relationship between the intensity of health behaviors and the time of the pandemic.

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