# COVID-19 RELATED FEAR DURING THE ECONOMIC FREEZE IN POLAND\*

## Sebastian Skalski<sup>1</sup>

Summary. This study aims to identify COVID-19-related fears in the final phase of the economic freeze in Poland. The survey contained a demographic component and 21 questions, including 8 questions related to experienced fears. A *chi*-square independence test identified variables associated with fear. The results indicate that most respondents feared the impact of the pandemic on the Polish economy and feared the infection of their relatives. Women were more likely to be afraid of the consequences of the pandemic than men. Respondents with higher education levels and older than 30 years more frequently reported a fear of coronavirus infection. Working people were more likely to express a fear of job loss or salary reductions than other respondents. This research indicates that sustained pandemic can negatively impact many spheres of human life, including mental health. The data presented herein can be applied in actions aimed at mitigating the negative effects of the pandemic in specific risk groups.

Key words: fear, mental health, pandemic, survey, COVID-19

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**Ethical standards**. The author asserts that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. The author also asserts that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional guides on the care and use of laboratory animals.

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#### Introduction

In March 2020, the World Health Organisation (WHO) declared an international pandemic due to the high incidence of SARS-CoV-2 (Ghebreyesus, 2020). In addition to a widespread threat to life and health, the pandemic has caused significant socioeconomic changes and has affected the lives of millions of people around the world.

Fear is one of the most common psychological reactions during a pandemic (Angus Reid Institute, 2020; Wang et al., 2020). Fear is a basic emotion that is activated in response to a perceived threat. This response can arise from real threats, but can also result from perceived dangers. Fear can also be a symptom of some mental health disorders.

Health and life threatening situations such as disease outbreaks and epidemics can induce fear among many people (Hall, Chapman, 2008; Van Bortel et al., 2016). The pandemic has affected virtually every person, regardless of their age, gender, place of residence or socioeconomic status. Variable predictions about the development of the pandemic may have caused feelings of helplessness and exacerbated fear. The spread of coronavirus has also contributed to a loss of hope for rapid stabilisation (Hacimusalar et al., 2020).

Increasing numbers of illnesses and deaths necessitated the introduction of a sanitary regime and restrictions in interpersonal contacts. Calls were made to practice social distancing and to minimise meetings with others. Public gatherings were forbidden. The introduction of safety rules has forced many people to change their habits. Recommendations for hand washing, disinfection and other safety behaviours may have exacerbated experienced fear (Deacon, Maack, 2008; Engelhard et al., 2015). There has been a tendency to overly focus on the symptoms of one's own and others' illnesses, such as the appearance of cough, shortness of breath or increased body temperature, which have been identified as symptoms of COVID-19.

The situation of working people changed in Poland. Many people began to worry about their jobs. Some service establishments suspended their activities, while other enterprises operated only to a limited extent. Commercial and service facilities (excluding grocery stores and pharmacies), schools and kindergartens were closed. Small businesses with low financial reserves were particularly at risk. Many employers reduced wages to maintain liquidity without resorting to redundancies. Regardless, many people lost their jobs. Research shows that a loss of salary continuity or unemployment due to the economy freeze was associated with a greater severity of symptoms in mental disorders. In contrast, there was no deterioration of mental health in people who had a fixed remuneration, worked remotely or had no changes in their professional situation (Gambin et al., 2020; Ueda et al., 2020).

Research conducted during the global economic freeze has confirmed the negative consequences of the COVID-19 pandemic on mental health (Bao et al., 2020; Xiang et al., 2020). An unstable personal, professional and economic situation can

cause fear and frustration. Moreover, prolonged psychological distress increases the risk for symptoms of anxiety and depression (Lee, Jobe, Mathis, 2020; Petzold et al., 2020; Solomou, Constantinidou, 2020). Consequently, mental disorders have arisen in healthy people and have increased in psychiatrically treated individuals (Asmundson et al., 2020).

The pandemic has caused individuals to be more anxious about people in the immediate vicinity than about their own health (Maaravi, Heller, 2020). Many people have lost their loved ones to the COVID-19 pandemic. The elderly and chronically ill are particularly at risk (Chen et al., 2020). Among people aged over 55 years, an intensification of anxiety and depression symptoms is associated with a sense of loneliness, fatigue with the situation and a need for lifestyle changes (Gambin et al., 2020).

Quarantined persons are in a particularly difficult situation. They may experience feelings of loss, lack of support and loneliness. Limiting contact with loved ones may cause strong longing and fear about their health. Moreover, quarantine has been shown to adversely affect sleep quality, anxiety and psychological distress (Casagrande et al., 2020).

The pandemic has negatively affected those who have been diagnosed with COVID-19. For a substantial duration, these individuals experience an increased risk to health and life, which may negatively affect their mental health. Studies in this group have revealed a relationship among fear of COVID-19 effects and depression, feelings of lack of social support and suicidal tendencies (Lee et al., 2020).

Healthcare workers, particularly those exposed to coronavirus infection, have risked their health and life by treating COVID-19 patients. The conditions in which healthcare professionals must work have caused symptoms of anxiety and depression (Xiao et al., 2020).

During the temporary economic freeze, the situation of working people changed. Remote work was introduced in many countries. The need to conduct existing professional activities in a new form may have caused stress and exposure to additional difficulties. Many people were forced to buy computer equipment necessary for remote work, study or education of children, presenting a financial burden and the need to learn new computer programs. Moreover, limited contact with colleagues may have exacerbated people's fears, as team members are often an important source of support during shared tasks. All of these factors may have caused difficulty in adapting to the new situation.

The gradual de-freezing of the economy and the easing of restrictions introduced on 20 April 2020 have positively influenced the situation in Poland. Enterprises started operating in a manner similar to that of the pre-pandemic period. However, the risk of SARS-CoV-2 infection remained, posing a threat to the life and health of many people. A protracted pandemic can adversely affect mental health in a society, fostering a deepening sense of helplessness and an increased severity of fear.

This study aimed to understand the nature of COVID-19-related fears in the Polish population 1.5 months after the WHO declared a SARS-CoV-2 pandemic. Poland was in a difficult situation, due to the economic freeze and the introduction of many restrictions. It is fundamental to the research undertaken here to establish a relationship between various fears and the following variables: gender, age, education, employment situation and place of residence.

Most studies on fear caused by an increase in SARS-CoV-2 infections were conducted early in the pandemic. Previous reports provide a preliminary overview of the causes and conditions of concerns about the coronavirus pandemic. However, the majority of these studies do not indicate the prevalence of fear. Furthermore, fear is subjective, and the concerns of surveyed individuals or groups may extend beyond those identified in previous research.

The resulting data can help to clarify the nature of COVID-19-related fears in Polish society. These results will enable adequate action to be taken in the event of worrying symptoms of emotional disorders or adaptive problems in specific risk groups. Information on the fear experienced for each demographic variable is needed to identify target groups in preparing educational and preventive programmes (Pakpour, Griffiths, 2020).

The research results presented herein relate to the selected area of the research project. Analyses of the remaining areas, i.e. mental health and interpersonal relationships, will be presented in subsequent reports.

## **Methods**

An author's survey was conducted in a nationwide sample of 442 people. The survey participants included 332 women (75.1%) and 110 men (24.9%). There were 231 people under 30 years (52.3%), 128 people (29%) in the 31–45 age group, 76 people (17.2%) were in the 46–65 age group, and 7 people (1.6%) were aged over 65 years. Among the respondents, 48.9% had at most a secondary education, with higher education reported for 51.1%. Most people with secondary education were in the age group under 30 (32.6%), while the majority of respondents with higher education were in the age group 31–45 (33%). The proportion of participants residing in a village was 54.5%, while 45.5% resided in a town. Among the respondents, 46.2% were working individuals, 45.5% were students, and 8.4% were not workers or students.

The study was conducted between April 14 and 28, 2020. Most people (92%) were examined a week before the introduction of the first stage of de-freezing the Polish economy. The remaining 8% were examined up to a week after the lifting of restrictions related to the COVID-19 pandemic in Poland.

Due to the restrictions on social contact introduced in March 2020, it was not possible to randomly select a sample. The survey was conducted, among others, via social media, specifically Facebook. Instructions with a link to the survey were sent to all respondents, asking them to send an invitation to people who wished to

participate in an anonymous survey. Participants were provided with information about the objectives and procedure of the study.

The survey used in this study was constructed in Google Forms® and consisted of five demographic questions related to gender, age, education, employment situation and place of residence. The survey also contained 21 closed questions covering three key areas: 8 questions related to **different** experienced **fears**, 10 related to mental health, 3 related to interpersonal relationships. The last two areas will be analysed in a separate report.

The survey questions related to experienced fears were selected considering the major threats resulting from the first wave of the pandemic. They addressed concerns about the health, economic and professional consequences of COVID-19. In addition, the questions concerned fears raised in the media about the limited access to health care and the lack of food or medicines. The individual survey questions are presented in Tables 1–3.

#### Results

## Percentage distribution of the results

To determine COVID-19-related fears, I assessed the percentage of respondents that provided certain answers to individual questions. The data analysis presented in Table 1 shows that the respondents were primarily concerned about the negative long-term impact of the pandemic on the Polish economy (83.7%) and COVID-19 infection of family members or loved ones (82.1%). In addition, concerns were raised about the impact of the current epidemic situation in Poland on daily life (64.5%), restrictions to healthcare access (56.1%) and fear of coronavirus infection (50.0%). Less than half of those surveyed identified other fears associated with COVID-19.

Table 1. Experienced fear among respondents: results for individual items

Overetion		les	Hard to say		No	
Question	N	%	N	%	N	%
I am afraid of coronavirus infection.	221	50.0%	104	23.5%	117	26.5%
I am afraid of a family member or relative being infected with the coronavirus.	363	82.1%	38	8.6%	41	9.3%
The current epidemic situation in the country has a serious impact on my daily life.	285	64.5%	47	10.6%	110	24.9%

Overetion		es.	Hard	to say	No	
Question -	N	%	N	%	N	%
Due to the coronavirus pandemic, I am worried that there may be a shortage of food or medicine.	114	25.8%	54	12.2%	274	62.0%
I am concerned that the pandemic will have a serious impact on my financial situation.	217	49.1%	88	19.9%	137	31.0%
In the current situation, I am concerned about job loss or salary reductions.	159	36.0%	59	13.3%	224	50.7%
I am concerned that the pandemic will have a lasting impact on the Polish economy.	370	83.7%	53	12.0%	19	4.3%
I am afraid that I will not have access to healthcare if needed.	248	56.1%	55	12.4%	139	31.4%

*N*: number of people.

## Chi-square test of independence

A *chi*-square independence test was applied to assess the relationship between fear and various variables such as gender, age, education, place of residence and employment situation. The findings indicate a relationship between fear and gender. Women were more likely to be afraid of coronavirus infection [ $\chi^2$  (2, N = 442) = 22.272; p < .0001], infection among family members or relatives [ $\chi^2$  (2, N = 442) = 16.793; p = .0002], a potential lack of food or medicine [ $\chi^2$  (2, N = 442) = 7.183; p = .0276], deterioration of their financial situation [ $\chi^2$  (2, N = 442) = 16.171; p = .0003] and the possibility of limited healthcare access [ $\chi^2$  (2, N = 442) = 10.152; p = .0062] (see Table 2).

The *chi*-square test of independence showed only one relationship between experienced fear and age. People over 30 years of age were more likely to experience fear of coronavirus infection than people under 30 [ $\chi^2$  (2, N = 442) = 10.202; p = .0061] (see Table 2).

The education level of the respondents partially differentiated the causes of fear regarding coronavirus infection. People with higher education were more likely to be afraid of infection [ $\chi^2$  (2, N = 442) = 6.668; p = .036]. Among people with a secondary education at most, a fear of infection in family members or relatives was less frequent [ $\chi^2$  (2, N = 442) = 8.022; p = .0181] as was the fear of job loss/salary reduction [ $\chi^2$  (2, N = 442) = 9.384; p = .092] (see Table 3).

The *chi*-square test of independence did not show any relationships between experienced fear and one's place of residence.

Only one relationship was found between fear and employment situation. Employed persons were more likely to be afraid of job loss or salary reductions than the other respondents [ $\chi^2$  (4, N = 442) = 12.642; p = .013] (see Table 3).

### Discussion

This report aimed to identify COVID-19-related fear in the final phase of the economic freeze in Poland. The results indicate the most common fears in the studied population and the existence of a relationship between these experienced fears and the studied variables. The incidence of mental health problems was found to correlate with gender, education, age and employment situation. There was no relationship between the place of residence of the respondents and their mental health.

## Type of experienced fear

Analysis of the obtained data shows that the concerns of the respondents most often related to the negative consequences of COVID-19 for the Polish economy (83.7%). By comparing these findings with national polls (Angus Reid Institute, 2020; BIG InfoMonitor, 2020), it can be seen that the coronavirus pandemic has caused significant fear regarding economic consequences. In Poland, almost half of the respondents were afraid of problems with their household finances. These fears were justified by the deteriorating employment situation. Among the respondents, 25% stated that they had experienced a job loss or salary reduction. Persons employed in specific-task or mandate contracts, those running a business and those without savings found themselves in a particularly difficult situation. Concerns about the state of the domestic economy were justified. Economic forecasts were predicting reduced economic growth (OECD, 2020). There was a risk of a prolonged recession. A significant reduction in tax revenues could have impacted the national budget. Enterprises faced the threat of bankruptcy or job cuts. In addition, the social impact was significant. Many Poles lost their jobs and thus often their only source of income. These individuals found themselves in a completely new situation due to the deteriorating economic situation.

The survey results showed that respondents' concerns also related to the risk of coronavirus infection in a family member or loved one (82.1%). Analysis of this problem indicates that COVID-19 may have caused fear not only about one's own health, but even more often about the health of people in the immediate vicinity. These findings are in line with previous research reports (Maaravi, Heller, 2020; Wang et al., 2020) showing that, due to the coronavirus, people are more worried about others than themselves, with their fear for relatives being greater than that for strangers.

Table 2. Experienced fear among respondents based on gender and age

Question	Answer
	Yes
I am afraid of coronavirus infection.	Hard to say
	No
	Yes
I am afraid of a family member or relative being infected with the coronavirus.	Hard to say
Colonavirus	No
	Yes
The current epidemic situation in the country has a serious impact on my daily life.	Hard to say
my daily me.	No
	Yes
Due to the coronavirus pandemic, I am worried that there may be a shortage of food or medicine.	Hard to say
a shortage of root of medicine.	No
	Yes
I am concerned that the pandemic will have a serious impact on my financial situation.	Hard to say
Interior Structor.	No
	Yes
In the current situation, I am concerned about job loss or salary reductions.	Hard to say
sulary reductions.	No
	Yes
I am concerned that the pandemic will have a lasting impact on the Polish economy.	Hard to say
Tollott economy.	No
	Yes
I am afraid that I will not have access to healthcare if needed.	Hard to say
	No

 $<sup>\</sup>chi^2$ : value of the Pearson independence test, p: level of statistical significance, N: number of people.

Gender									
Wo	omen	N	Men	p	Under 30 years		Over 30 years		p
$\overline{N}$	%	N	%	-	N	%	N	%	•
180	54.20%	41	37.30%	$\chi^2 = 22.272;$ p < .001	99	42.90%	122	57.80%	$\chi^2 = 10.202;$ $p = .006$
83	25.00%	21	19.10%		60	26.00%	44	20.90%	
69	20.80%	48	43.60%		72	31.20%	45	21.30%	
282	84.90%	81	73.60%	$\chi^2 = 16.793;$ p = .002	188	81.40%	175	82.90%	$\chi^2 = .757;$ $p = .685$
30	9.00%	8	7.30%		19	8.20%	19	9.00%	
20	6.00%	21	19.10%		24	10.40%	17	8.10%	
216	65.10%	69	62.70%		151	65.40%	134	63.50%	
38	11.40%	9	8.20%	$\chi^2 = 1.938;$ $p = .379$	22	9.50%	25	11.80%	$\chi^2 = .629;$ $p = .730$
78	23.50%	32	29.10%	- p 1077 -	58	25.10%	52	24.60%	
94	28.30%	20	18.20%	$\chi^2 = 7.183;$ $p = .028$	50	21.60%	64	30.30%	$\chi^2 = 4.778;$ $p = .092$
44	13.30%	10	9.10%		32	13.90%	22	10.40%	
194	58.40%	80	72.70%		149	64.50%	125	59.20%	. p .0>=
175	52.70%	42	38.20%	_	115	49.80%	102	48.30%	
71	21.40%	17	15.50%	$\chi^2 = 16.171;$ $p < .001$	43	18.60%	45	21.30%	$\chi^2 = .512;$ $p = .774$
86	25.90%	51	46.40%	- 7	73	31.60%	64	30.30%	. ,
125	37.70%	34	30.90%		73	31.60%	86	40.80%	
47	14.20%	12	10.90%	$\chi^2 = 3.323;$ $p = .190$	33	14.30%	26	12.30%	$\chi^2 = 4.015;$ $p = .134$
160	48.20%	64	58.20%	- P .170 -	125	54.10%	99	46.90%	. р .101
279	84.00%	91	82.70%		190	82.30%	180	85.30%	
40	12.00%	13	11.80%	$\chi^2 = .476;$ $p = .788$	31	13.40%	22	10.40%	$\chi^2 = .948;$ $p = .623$
13	3.90%	6	5.50%		10	4.30%	9	4.30%	. 7 .023
200	60.20%	48	43.60%		125	54.10%	123	58.30%	
40	12.00%	15	13.60%	$\chi^2 = 10.152;$ $p = .006$	30	13.00%	25	11.80%	$\chi^2 = .783;$ $p = .676$
92	27.70%	47	42.70%	- ρ000 .	76	32.90%	63	29.90%	. ,

Table 3. Experienced fear among respondents based on education and employment situation

		Education		
Questions	Answers		ndary less	
		N	%	
	Yes	96	44.4%	
I am afraid of coronavirus infection.	Hard to say	52	24.1%	
	No	68	31.5%	
	Yes	178	82.4%	
I am afraid of a family member or relative being infected with the coronavirus.	Hard to say	12	5.6%	
being infected with the colonavirus.	No	26	12.0%	
	Yes	133	61.6%	
The current epidemic situation in the country has a serious impact on my daily life.	Hard to say	25	11.6%	
has a serious impact on my daily me.	No	58	26.9%	
	Yes	63	29.2%	
Due to the coronavirus pandemic, I am worried that there may be a shortage of food or medicine.	Hard to say	26	12.0%	
that there may be a shortage of food of medicine.	No	127	58.8%	
	Yes	105	48.6%	
I am concerned that the pandemic will have a serious impact on my financial situation.	Hard to say	41	19.0%	
a serious impact on my intanctar struction.	No	70	32.4%	
	Yes	69	31.9%	
In the current situation, I am concerned about job loss or salary reductions.	Hard to say	22	10.2%	
about job 1035 of Salary Tedactions.	No	125	57.9%	
	Yes	176	81.5%	
I am concerned that the pandemic will have a lasting impact on the Polish economy.	Hard to say	27	12.5%	
a moning impact on the Folion economy.	No	13	6.0%	
	Yes	123	56.9%	
I am afraid that I will not have access to healthcare if needed.	Hard to say	22	10.2%	
to neutricate it necucu.	No	71	32.9%	

 $<sup>\</sup>chi^2$ : value of the Pearson independence test, p: level of statistical significance, N: number of people.

Edu	cation	-	Employment situation							
Hi	gher	p	Stu	Student Working		Not working/other				p
N	%	-	N	%	N	%			•	
125	55.3%		89	44.3%	115	56.4%	17	45.9%		
52	23.0%	$\chi^2 = 6.668;$ $p = .036$	52	25.9%	44	21.6%	8	21.6%	$\chi^2 = 6.818;$ $p = .146$	
49	21.7%	- p 1000 -	60	29.9%	45	22.1%	12	32.4%	. p 1210	
185	81.9%		160	79.6%	171	83.8%	32	86.5%		
26	11.5%	$\chi^2 = 8.022;$ $p = .018$	17	8.5%	20	9.8%	1	2.7%	$\chi^2 = 5.645;$ $p = .227$	
15	6.6%	. p 1020 -	24	11.9%	13	6.4%	4	10.8%	·	
152	67.3%		133	66.2%	131	64.2%	21	56.8%		
22	9.7%	$\chi^2 = 1.560;$ $p = .458$	21	10.4%	22	10.8%	4	10.8%	$\chi^2 = 1.476;$ $p = .831$	
52	23.0%	. р .100 -	47	23.4%	51	25.0%	12	32.4%	. р .001	
51	22.6%	$\chi^2 = 2.572;$ $p = .276$	53	26.4%	50	24.5%	11	29.7%		
28	12.4%		33	16.4%	18	8.8%	3	8.1%	$\chi^2 = 7.175;$ $p = .127$	
147	65.0%		115	57.2%	136	66.7%	23	62.2%	, p (12)	
112	49.6%		99	49.3%	98	48.0%	20	54.1%		
47	20.8%	$\chi^2 = .475;$ $p = .789$	42	20.9%	40	19.6%	6	16.2%	$\chi^2 = .819;$ $p = .936$	
67	29.6%	- 7	60	29.9%	66	32.4%	11	29.7%	. ,	
90	39.8%		58	28.9%	90	44.1%	11	29.7%		
37	16.4%	$\chi^2 = 9.384;$ $p = .009$	27	13.4%	28	13.7%	4	10.8%	$\chi^2 = 12.642;$ p = .013	
99	43.8%	- 7	116	57.7%	86	42.2%	22	59.5%	, , ,,,,,,	
194	85.8%		163	81.1%	180	88.2%	27	73.0%		
26	11.5%	$\chi^2 = 3.249;$ $p = .197$	29	14.4%	17	8.3%	7	18.9%	$\chi^2 = 7.546;$ $p = .110$	
6	2.7%	- r ·· -	9	4.5%	7	3.4%	3	8.1%	,	
125	55.3%		118	58.7%	109	53.4%	21	56.8%		
33	14.6%	$\chi^2 = 2.056;$ $p = .358$	20	10.0%	27	13.2%	8	21.6%	$\chi^2 = 5.484;$ $p = .241$	
68	30.1%		63	31.3%	68	33.3%	8	21.6%	, , <u>-</u> 11	

The most frequently reported problem and the best predictor of increased anxiety regarding COVID-19 were concerns about the health of loved ones (Mertens et al., 2020). Disturbing information provided by the media about the pandemic may have also caused fear (Gao et al., 2020; Garfin, Silver, Holman, 2020) especially regarding relatives that are elderly or chronically ill. These groups are at high risk for experiencing severe symptoms due to Sars-CoV-2 infection (Chen et al., 2020). The lack of effective treatments and the increasing number of deaths among the elderly may have caused feelings of helplessness and fear.

The research results presented herein show that more than half of the respondents (64.5%) were concerned about the influence of the epidemic situation in Poland on their everyday lives. The pandemic suddenly changed the lives of people all over the world, with uncertainty related to many aspects of everyday functioning. Among other things, the pandemic introduced the necessity to adopt restrictions on social contacts and access to various services, e.g. medical benefits, suspended the possibility of performing work and induced the necessity to switch to remote work.

The obtained data show that over half of the respondents (56.1%) were afraid of limited healthcare access. This fear may be due to the closure or limited operation of many healthcare facilities. Some hospitals in Poland have been transformed into so-called single-name hospitals, with the primary task of treating people infected with the coronavirus. Poles exhibited reduced access to necessary health services. Many planned visits and medical treatments were delayed or postponed indefinitely. Opinion polls showed that many people were not confident that the healthcare system in their community was prepared to handle a coronavirus outbreak if the problem does, indeed, worsen (Angus Reid Institute, 2020). The persistence of this situation could cause fear about the continuation of existing therapies or concerns about access to specialist doctors.

## Experienced fear and gender

Data analysis showed a relationship between experienced fear and gender. Compared with men, women were more likely to be afraid of coronavirus infection, infection of a family member or relative, the potential lack of food or medicine, deterioration of their financial situation and the possibility of limited healthcare access.

The obtained results are consistent with the findings of previous studies (Liu et al., 2020; Rossi et al., 2020). Women were more likely to fear COVID-19 than men; moreover, gender is a significant predictor of the level of fear of COVID-19. Being female was a predictor of medium or high levels of fear of COVID-19 (Broche-Pérez et al., 2020). In addition, women experienced more negative psychological consequences due to the risk of SARS-CoV-2 infection, in the form of higher levels of stress, anxiety and depression (Wang et al., 2020). Women more frequently showed

symptoms of adaptive disorders (Petzold et al., 2020; Rossi et al., 2020; Solomou et al., 2020). Research indicates that during the outbreak of the pandemic, women more frequently reported symptoms of post-traumatic stress than men (Liu et al., 2020). Women were reliving the trauma situation, experiencing excessive arousal, negative cognitive changes and mood changes.

The more frequent fear observed among women may result from their family and professional roles. Women are more likely to bear the burden of caring for children and performing household chores. Research indicates that the closure of schools and nurseries in the initial period of the pandemic significantly increased the need for childcare, presenting a serious problem, especially for working mothers (Alon et al., 2020). Moreover, women had a greater risk of losing their jobs than men, particularly in the hotel and retail sectors, where primarily women are employed.

## Experienced fear and education level

Experienced fear among the respondents was analysed in relation to their education level, indicating that people with higher education levels were more likely to be afraid of coronavirus infection. Moreover, it was shown that people with primary, vocational or secondary education were less likely to exhibit fear of infecting a family member or relative or of job loss or salary reduction.

This tendency has been confirmed by an opinion poll (CBOS, 2020) showing that concerns about coronavirus infection were related to education levels. People with a secondary education at most were the least afraid of the virus, while those with higher education levels exhibited the greatest fear of infection. This trend is most likely due to the adoption of a more critical attitude in this group and a careful assessment of the risks associated with the pandemic. Research on this topic suggests that better educated people are more aware of their health, which is associated with increased psychological distress in the event of danger (Qiu et al., 2020). Furthermore, during the SARS pandemic, those with a higher education level and a moderate anxiety level were more likely to take precautionary measures to prevent infection (Leung et al., 2003).

## Experienced fear and age

The obtained data show that people aged over 30 years more frequently felt fear of coronavirus infection than people under 30 years of age. Most likely, this trend is associated with the negative health consequences of infection in the elderly, who are at risk of serious complications, especially in the presence of comorbidities that can lead to death.

Research performed in in the United States (Bialek et al., 2020) indicates that 31% of COVID-19 infections have occurred in people over the age of 65 years.

In addition, 45% of hospitalisations, 53% of admissions to intensive care units and 80% of deaths from coronavirus infection have occurred in this age group. The above data show that compared to the general population, seniors were more exposed to the negative effects of COVID-19. An additional problem for this group was the need to adapt to the introduced changes and limitations in performing daily activities. Older people were forced to spend more time at home and were also often deprived of contact with family members and friends. Due to the pandemic, the care and support of their relatives and social institutions became less frequent. Information in the media about the consequences of coronavirus infection in adults and the elderly may have significantly increased their fear levels.

## Experienced fear and employment situation

The research results show that workers were more likely to exhibit a fear of job loss or salary reduction than the unemployed and students. The outbreak of the pandemic caused sudden economic instability. Due to the constant increase in SARS-CoV-2 infections, operating restrictions or temporary closures of institutions and workplaces have been introduced. Among working people, this change may have induced a fear of job loss or salary reduction. Other research has demonstrated a higher level of concern about the consequences of the pandemic among low-income and part-time workers (Hamel et al., 2020).

Deterioration in financial situations leads to a reduction in everyday expenses or the inability to settle incurred financial liabilities. Lack of a steady income prevents individuals from planning and achieving long-term goals. It should be noted that work ensures a constant rhythm of the day and an appropriate use of available time. Loss of this structure can lead to a sense of destabilisation and increased fear.

## Limitations and implications

The study presented herein has some limitations. Due to the epidemic, the survey was conducted, among others, via social media. Notably, this kind of research does not cover all of society. Some people, especially the elderly, rarely use the internet or do not have social media accounts. It is unlikely that such individuals participated in this study. All of these factors limit the possibility of generalising these results to the entire population.

Subsequent studies should be performed using a larger, more representative sample, considering age, gender, education level, employment situation and place of residence.

This study did not collect information regarding whether participants or their family members were infected with the coronavirus, were in quarantine or were in isolation. The level of fear among these individuals may differ from that of the general population.

#### **Conclusions**

The material collected throughout this research and the subsequent analyses show that in the final phase of the economic freeze, the vast majority of respondents feared the consequences of SARS-CoV-2. The persistence of a pandemic over an extended period of time can have a negative impact on many spheres of human life, including mental health.

Due to the dynamic and unpredictable development of the epidemic situation, further studies are recommended. Such data may clarify the psychosocial effects of the COVID-19 pandemic. On this basis, it will be possible to take adequate measures to support specific risk groups, particularly women and the elderly. Action strategies should be tailored to their needs to mitigate the negative effects of the pandemic. Such strategies should focus on preventing mental health issues and minimising anxiety and depression symptoms. It is important to promote prohealth behaviours that enable adaptation to changes caused by the pandemic. It is also advisable to educate people on how to effectively cope with stress, to encourage physical activity (e.g. jogging, aerobics, stretching exercises) and to promote safe means of communication. Social media can be used to maintain contact with loved ones and to reduce loneliness and mental isolation, as these tools allow one to communicate with others via social networks, blogs and message boards. Additionally, in case of long-term symptoms of mental health disorders, psychological and psychiatric support should be encouraged.

#### References

- Alon, T.M., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). The impact of COVID-19 on gender equality. *National Bureau of Economic Research*, doi: 10.3386/w26947
- Angus Reid Institute. (2020). *Half of Canadians taking extra precautions as coronavirus continues to spread around the globe*. Retrieved from http://angusreid.org/wp-content/uploads/2020/02/2020.02.04\_Coronavirus.pdf
- Asmundson, G.J.G., Paluszek, M.M., Landry, C.A., Rachor, G.S., McKay, D., & Taylor, S. (2020). Do pre-existing anxiety-related and mood disorders differentially impact COVID-19 stress responses and coping? *Journal of Anxiety Disorders*, 74, doi: 10.1016/j.janxdis.2020.102271
- Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: Address mental health care to empower society. *The Lancet*. Lancet Publishing Group, doi: 10.1016/S0140-6736(20)30309-3
- Bialek, S., Boundy, E., Bowen, V., Chow, N., Cohn, A., Dowling, N., ... Sauber-Schatz,
  E. (2020). Severe Outcomes Among Patients with Coronavirus Disease 2019
  (COVID-19) United States, February 12–March 16, 2020. MMWR. Morbidity
  and Mortality Weekly Report, 69(12), 343–346, doi: 10.15585/mmwr.mm6912e2

- BIG InfoMonitor. (2020). *Koronawirus odbiera pracę i pustoszy portfele Polaków* [The coronavirus takes away jobs and ravages Poles' wallets]. Retrieved from https://media.bik.pl/informacje-prasowe/498172/koronawirus-odbiera-prace-i-pusto-szy-portfele-polakow
- Broche-Pérez, Y., Fernández-Fleites, Z., Jiménez-Puig, E., Fernández-Castillo, E., & Rodríguez-Martin, B.C. (2020). Gender and Fear of COVID-19 in a Cuban Population Sample. *International Journal of Mental Health and Addiction*, doi: 10.1007/s11469-020-00343-8
- Casagrande, M., Favieri, F., Tambelli, R., & Forte, G. (2020). The enemy who sealed the world: Effects quarantine due to the COVID-19 on sleep quality, anxiety, and psychological distress in the Italian population. *Sleep Medicine*, *75*, 12–20, doi: 10.1016/j.sleep.2020.05.011
- CBOS. (2020). Życie codzienne w czasach zarazy. Komunikat z badań [Everyday life in times of plague. Research report]. Retrieved from https://www.cbos.pl/SPISKOM.POL/2020/K\_060\_20.PDF
- Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., ... Zhang, L. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. *The Lancet*, 395(10223), 507–513, doi: 10.1016/S0140-6736(20)30211-7
- Deacon, B., & Maack, D.J. (2008). The effects of safety behaviors on the fear of contamination: An experimental investigation. *Behaviour Research and Therapy*, 46(4), 537–547, doi: 10.1016/j.brat.2008.01.010
- Engelhard, I.M., van Uijen, S.L., van Seters, N., & Velu, N. (2015). The Effects of Safety Behavior Directed Towards a Safety Cue on Perceptions of Threat. *Behavior Therapy*, 46(5), 604–610, doi: 10.1016/j.beth.2014.12.006
- Gambin, M., Sękowski, M., Woźniak-Prus, M., Cudo, A., Hansen, K., Gorgol, J., ... Wnuk, A. (2020). *Uwarunkowania objawów depresji i lęku uogólnionego u dorosłych Polaków w trakcie epidemii Covid-19 raport z pierwszej fali badania podłużnego* [Determinants of depression and generalized anxiety symptoms in adult Poles during the Covid-19 epidemic report from the first wave of longitudinal study]. Retrieved from http://psych.uw.edu.pl/wp-content/uploads/sites/98/2020/05/Uwarunkowania\_objawow\_depresji\_leku\_w\_trakcie\_pandemii\_raport.pdf
- Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., ... Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PLoS ONE*, 15(4), doi: 10.1371/journal.pone.0231924
- Garfin, D.R., Silver, R.C., & Holman, E.A. (2020, May 1). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology*. American Psychological Association Inc., doi: 10.1037/hea0000875
- Ghebreyesus, T.D. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 11 March 2020. Retrieved from World Health Organization

- website: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020
- Hacimusalar, Y., Kahve, A.C., Yasar, A.B., & Aydin, M.S. (2020). Anxiety and hopelessness levels in COVID-19 pandemic: A comparative study of healthcare professionals and other community sample in Turkey. *Journal of Psychiatric Research*, 129, 181–188, doi: 10.1016/j.jpsychires.2020.07.024
- Hall, R.C.W., Hall, R.C.W., & Chapman, M.J. (2008). The 1995 Kikwit Ebola outbreak: Lessons hospitals and physicians can apply to future viral epidemics. *General Hospital Psychiatry*, 30(5), 446–452, doi: /10.1016/j.genhosppsych.2008.05.003
- Hamel, L., Lopes, L., Muñana, C., Kates, J., Michaud, J., & Brodie, M. (2020, March). KFF Coronavirus Poll: March 2020. The Henry J. Kaiser Family Foundation. Retrieved from https://www.kff.org/global-health-policy/poll-finding/kff-coronavirus-poll-march-2020/
- Lee, S.A., Jobe, M.C., & Mathis, A.A. (2020). Mental Health Characteristics associated with Dysfunctional Coronavirus Anxiety. *Psychological Medicine*. Cambridge University Press, doi: 10.1017/S003329172000121X
- Leung, G.M., Lam, T.H., Ho, L.M., Ho, S.Y., Chan, B.H.Y., Wong, I.O.L., & Hedley, A.J. (2003, November). The impact of community psychological responses on outbreak control for severe acute respiratory syndrome in Hong Kong. *Journal of Epidemiology and Community Health*, doi: 10.1136/jech.57.11.857
- Liu, N., Zhang, F., Wei, C., Jia, Y., Shang, Z., Sun, L., ... Liu, W. (2020). Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter. *Psychiatry Research*, 287, doi: 10.1016/j.psychres. 2020.112921
- Maaravi, Y., & Heller, B. (2020). Not all worries were created equal: the case of COVID-19 anxiety. *Public Health*, 185, 243–245, doi: 10.1016/j.puhe.2020.06.032
- Mertens, G., Gerritsen, L., Duijndam, S., Salemink, E., & Engelhard, I.M. (2020). Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. *Journal of Anxiety Disorders*, doi: 10.1016/j.janxdis.2020.102258
- OECD. (2020). OECD Economic Outlook, Interim Report March 2020. Www.Oecd-Ilibrary.Org (pp. 1–16). OECD. Retrieved from https://www.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2019/issue-2\_7969896b-en
- Pakpour, A.H., & Griffiths, M.D. (2020). The fear of COVID-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*, 2(1), 58–63. Retrieved from https://concurrentdisorders.ca/2020/04/03/the-fear-of-covid-19-and-its-role-in-preventive-behaviors/
- Petzold, M.B., Bendau, A., Plag, J., Pyrkosch, L., Mascarell Maricic, L., Betzler, F., ... Ströhle, A. (2020). Risk, resilience, psychological distress, and anxiety at the beginning of the COVID-19 pandemic in Germany. *Brain and Behavior*, 10(9), doi: 10.1002/brb3.1745
- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic:

- Implications and policy recommendations. *General Psychiatry*. BMJ Publishing Group, doi: 10.1136/gpsych-2020-100213
- Rossi, R., Socci, V., Talevi, D., Mensi, S., Niolu, C., Pacitti, F., ... Di Lorenzo, G. (2020). COVID-19 Pandemic and Lockdown Measures Impact on Mental Health Among the General Population in Italy. *Frontiers in Psychiatry, 11*, doi: 10.3389/fpsyt.2020.00790
- Solomou, I., & Constantinidou, F. (2020). Prevalence and predictors of anxiety and depression symptoms during the COVID-19 pandemic and compliance with precautionary measures: Age and sex matter. *International Journal of Environmental Research and Public Health*, 17(14), 1–19, doi: 10.3390/ijerph17144924
- Ueda, M., Stickley, A., Sueki, H., & Matsubayashi, T. (2020). Mental health status of the general population in Japan during the COVID-19 pandemic. *Psychiatry and Clinical Neurosciences*. Blackwell Publishing, doi: 10.1111/pcn.13105
- Van Bortel, T., Basnayake, A., Wurie, F., Jambai, M., Koroma, A.S., Muana, A.T., ... Nellums, L.B. (2016). Psychosocial effects of an Ebola outbreak at individual, community and international levels. *Bulletin of the World Health Organization*, 94(3), 210–214, doi: 10.2471/BLT.15.158543
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C.S., & Ho, R.C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), doi: 10.3390/ijerph17051729
- Xiang, Y.T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C.H. (2020, March 1). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry*. Elsevier Ltd., doi: 10.1016/S2215-0366(20)30046-8
- Xiao, X., Zhu, X., Fu, S., Hu, Y., Li, X., & Xiao, J. (2020). Psychological impact of healthcare workers in China during COVID-19 pneumonia epidemic: A multi-center cross-sectional survey investigation. *Journal of Affective Disorders*, 274, 405–410, doi: 10.1016/j.jad.2020.05.081

### OBAWY ZWIĄZANE Z COVID-19 W OKRESIE ZAMROŻENIA GOSPODARKI W POLSCE

**Streszczenie**. Celem badania było zidentyfikowanie obaw związanych z COVID-19 w końcowej fazie zamrożenia gospodarki w Polsce. Skonstruowana ankieta zawierała część demograficzną oraz 21 pytań, w tym 8 związanych z doświadczanymi obawami. Do oceny związku pomiędzy obawami badanych a poszczególnymi zmiennymi zastosowano test niezależności *chi*-kwadrat. Wyniki badań wskazują, że większość respondentów obawiała się wpływu pandemii na polską gospodarkę oraz zakażenia swoich bliskich. Kobiety częściej od mężczyzn obawiały się negatywnych konsekwencji pandemii. Respondenci z wyższym wykształceniem

i powyżej 30. roku życia częściej zgłaszali obawy przed zakażeniem koronawirusem. Osoby pracujące częściej wyrażały strach przed utratą pracy lub obniżeniem wynagrodzeń. Badania wskazują, że utrzymująca się pandemia może negatywnie wpłynąć na wiele sfer ludzkiego życia, w tym na zdrowie psychiczne. Uzyskane dane moźna wykorzystać w celu łagodzenia negatywnych skutków pandemii w określonych grupach ryzyka.

Słowa kluczowe: obawy, zdrowie psychiczne, pandemia, ankieta, COVID-19

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