

## Article

# Research of financial anxiety on the example of insurance behavior of Russian citizens in the context of the pandemic 2019-nCoV

Olga Medyanik<sup>1,\*</sup>

<sup>1</sup> Department of Political Psychology, St. Petersburg state University, 199034, Nab. Makarova, H. 6, Saint-Petersburg, Russia, medyanikov@list.ru, o.medyanik@spbu.ru

\* Correspondence: medyanikov@list.ru; Tel.: +007 (812) 324-25-74, +79052025211

**Abstract:** In the context of economic and political uncertainty associated with the 2019-nCoV pandemic, it is necessary to determine the socio-psychological factors in the transformation of the behavior of insurance consumers under the influence of the biogenic threat. This study is devoted to measuring financial anxiety and its impact on the insurance behavior of Russian citizens. Correlation, comparative and regression analyzes of financial anxiety of Russian citizens cover three stages of observation: before the start of the 2019 nCoV pandemic ("FA up to 19 nCoV; N = 766), during the period of quarantine measures announced in Russia in March 2020 ("FA 19- nCoV-1 "; N = 856) and after the relaxation of quarantine measures at the end of April 2020 ("FA 19-nCoV-2 "; N = 963). Psychological analysis data were obtained from the online survey "Financial anxiety (in the context of insurance)". The questionnaire is psychometrically reliable and easy to use, including 5 measurement scales: MR1. Physical manifestations of financial incentive anxiety, MR2. With money shortages and financial uncertainty, MR3. The value of insurance coverage, MP4. Financial Confidence, MR5. Perception of insurance and investment risks. Russian citizens considered it important to have insurance coverage on a "rainy day" and showed confidence in the insurance market during the biogenic crisis. But, unfortunately, Russian citizens during the 19-nCoV-1 and 19-nCoV-2 periods did not feel financially secure in the future, unlike the period before 19-nCoV. "Women showed high scores for physical manifestations of financial anxiety and low financial confidence in the future, in contrast to men, regardless of the observation period.

**Keywords:** *financial anxiety, insurance behavior, economic security of the person, financial confidence after COVID-19.*

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## 1. Introduction

Research on financial anxiety about financial and insurance decisions is not a new area of research. But in the context of the economic and political uncertainty associated with the nCoV 2019 pandemic, it is necessary to monitor the dynamics of the main indicators of the Russian insurance market, its product and demographic structure during the period preceding the onset of the pandemic, and determine the factors transforming the behavior of insurance consumers under the influence of the biogenic threat.

Recently, more and more researchers and practitioners at the Russian and international levels are paying attention to the need to actively develop issues of personal economic security in the field of insurance policy. The urgency of the problem of preventing threats to the economic security of

the individual, causing economic and psychological damage to the individual in the period of political, economic and new threat - biogenic crisis, is obvious.

We will highlight the main external threats that can accompany consumers in economic activity: increased social and economic stratification, distrust of financial institutions and lack of confidence in the future, preservation of solvency, planning future investments, employment and the risk of property loss. Most of these threats can be covered by an insurance institute.

Preparation for this study focused on a theoretical understanding of economic security issues, as exemplified by the insurance industry. The literature review of our study was based on important determinants that influence consumer attitudes towards insurance during a crisis. It includes: physical manifestations of concern about financial incentives, the value of insurance coverage, perceptions of insurance risks, experiences of lack of money and financial uncertainty, financial confidence (optimism).

## 2. Literary review

### *Financial anxiety*

In this study, we will not dwell on the different definitions of anxiety associated with different types of stressful situations. Let's pay attention only to those states of anxiety that are associated with financial incentives, such as caring for the financial future, maintaining financial stability, etc. Financial stress is a subjective response to economic difficulties. Among the alarming levels of stress experienced by citizens, the most frequently cited financial stressors are fears of having enough money and job security, preserving personal investments and assets.

This study took into account the scientific contributions of many researchers who are studying financial anxiety in different ways. K. Gill and JB Brendan [3] have shown that financial anxiety is a separate construct from depression and general anxiety. In their study of financial anxiety [3], respondents who reported having financial anxiety showed a latent response when processing financial information. The results of a clinical trial conducted by J. Grable, J., W. Heo and A. Rabbani [4] showed that financial anxiety is a painful attitude towards a person's financial situation, in which psychophysiological arousal or a physical precursor of behavior plays an important role in shaping the consumer's intention to participate in future financial planning. The results of their research show that those who used the most frequent financial advisor services showed low levels of financial anxiety and moderate to high levels of physiological arousal. Consumers who were reluctant to seek help from a financial advisor showed high financial anxiety and low psychophysiological arousal. To encourage those with financial anxiety to make decisions, financial advisors must take specific steps to both reduce financial stressors and stimulate the initiation of financial incentives, thereby influencing consumer decisions.

In the context of our research, it is important to note the work of D. Johnson and M. Peterson [5]. The aim of their study was to examine how small and medium-sized regional financial services firms responded to the 2008 financial crisis by helping their clients cope with increased financial anxiety in a crisis. The survey results highlighted the desire of many retail financial institutions to rethink their customer relationships in the aftermath of the financial crisis to help customers reduce consumer fears and financial anxiety, as the practical impact of the financial crisis in 2008 led to significant changes in consumer attitudes towards financial services - a decline financial institutions and growing concern about their financial risks.

### *Insurance relevance*

Overall, our review of previous research on insurance opportunities was based on an analysis of the vulnerability of consumers who fear for their personal property, finances, jobs, life and health in an uncertain future. Making a decision to buy an insurance policy is a process consisting of various stages of decision making, ranging from understanding the need to shift insurance risk onto agents of the insurance market, ending with the formation of insurance trust for the entire term of the insurance policy. Making an insurance decision is an intertemporal choice with an awareness of the consequences of financial uncertainty. Remuneration for the possession of a product (insurance policy) in the future at some point is exchanged for full or partial cash repayment of all insured events. Making the decision to buy an insurance policy changes the consumer's lifestyle and an insurance culture is acquired.

Financial, political and biogenic crises can affect consumer financial behavior in different ways, depending on gender, age and other characteristics. According to a study by T. Garling, E. Kirchler and A. Lewis [6] devoted to decision-making in the context of the 2008 financial crisis, young people are more flexible than older people. But older people who have experienced economic downturns in the past do better than younger people who lack such experiences. Pessimistic people and people from lower socioeconomic backgrounds adapt by buying less, while optimistic people and people from higher socioeconomic backgrounds continue their consumption and lifestyles by purchasing higher quality products with a longer shelf life.

In General, our review of previous research on the feasibility of insurance was based on an analysis of the vulnerability of consumers who are experiencing fear for their personal property, finances, work, life and health during an uncertain future. Making a decision to purchase an insurance policy is a process consisting of various stages of decision-making, starting from understanding the need to shift the insurance risk to the agents of the insurance market, ending with the formation of insurance confidence for the entire term of the insurance policy. Making an insurance decision is an intertemporal choice with an awareness of the consequences of financial uncertainty. Remuneration for the possession of the product (insurance policy) in the future at some point is exchanged for full or partial monetary repayment of all insurance claims. Making a decision to purchase an insurance policy changes the consumer's lifestyle, and the insurance culture is acquired.

### *Perception of insurance risk*

Business operators assess the future consequences of their financial risks. Long-term monitoring of policyholders (2008-2016) and an empirical study of the attitude of the population of Russia to insurance policies (2019) [7] showed that citizens are divided into three psychotypes: "marketers", "paternalists" and "not-morally". Paternalistic citizens, who often work in the public sector, feel less trust in insurance institutions, considering it inappropriate to transfer their property and non-property risks to the shoulders of enterprises, insurance companies and other agents of the insurance market. They believe that the state should be responsible for all insurance contingencies and prefer to limit consumption by buying only compulsory insurance programs such as MTPL. The next category of citizens, who work more in the commercial sector with an average income, approve the market policy of the state and participate in the consumption of insurance products, including voluntary types of insurance, approving the transfer of insurance risks to the Agents of the insurance market. "Neutrals" are those consumers who clearly do not trust market institutions, but also do not see the importance of the role of the state.

Consumer's attitude to risk is both an obstacle and an advantage in the decision-making process. Previous studies by Stroe Mihaela Andreea and Iliescu Mihaela [8] found that there are gender differences in risk perception in insurance decision making. Women are more likely to take risks than men and less likely to transfer risk to the insurance business. There are also differences in insurance risk taking, overconfidence, and information handling. It is possible that attitudes are shaped by positive or negative personal experiences and other psychological factors in addition to the impact of marketing on consumers.

*Lack of money and financial uncertainty*

The The problem of consumer experience of money deficit is most fully disclosed in the work of A. Gasiorowska [9] in 2014 on the relationship between objective and subjective perception of wealth, mediated by financial control and financial anxiety.

Interesting from the point of view of an interdisciplinary approach are studies of the problem of financial uncertainty by American scientists E. Chow, B. Parmar and A. Galinsky [10]. A series of five measures of physical pain on financial incentives showed a link between economic instability due to personal unemployment and general unemployment in the respondents' area and physical pain. A meta-analysis including all studies testing the link between economic instability and physical pain has shown that the link is reliable. Researchers have defined economic instability as a state of uncertainty and inability to control one's financial well-being. Economic instability can manifest itself both concretely (for example, as unemployment) and abstractly (for example, as the possibility of future layoffs).

Studies by other American authors have shown that economic instability can cause disaster. For example, this can lead to impaired cognitive function [11], impaired self-esteem [12], as well as unproductive financial planning [12]. Thus, economic instability affects human behavior and psychological well-being. Financial control and financial stability are key factors in physical and mental well-being [13].

In developing our study, we relied, from our point of view, on very high quality empirical material from recent studies of financial anxiety conducted by B. Burchell, J. Shapiro (2012) [14], financial anxiety, physiological anxiety and financial planning. J. Grable (2014) [15] and studies of the relationship between financial anxiety and the use of credit cards by J. Barbosa, C. Smith and I. Boubacar (2016) [16], creditworthiness and financial well-being of C. K. Hughes and all (2019 ) [17].

*Financial confidence*

Research papers on financial confidence can be found in both Russian literature and Western sources. We were interested in researching financial confidence in the context of insurance protection. Here, the financial confidence of policyholders acts as an insurance trust in the system. Regression analysis of data from our previous surveys showed that respondents who are classified as "actual policyholders" and "marketers" are more likely to prefer voluntary insurance programs. Thus, the likelihood of a positive attitude of citizens to the insurance policy will be higher mainly for citizens who already have experience in the insurance sector and citizens who work in the commercial sector of the economy and use rational and market strategies in their economic behavior [7].

Financial and insurance literacy, economic education and experience in finance and insurance are critical in this case. Similar results were obtained by other authors in the study of financial literacy and financial behavior: assessment of knowledge and confidence by T.A. Collina [18], the spread of financial literacy to insurance literacy H. Lin A. Brune J. William [19].

**3. Materials and Methods**

The data of this study were obtained as a result of the online survey "Financial anxiety (in the context of insurance)" [20] - hereinafter referred to as the FA (insurance) questionnaire, conducted on three samples of Russian citizens.

The FA (insurance) questionnaire is a psychometrically reliable and easily implemented tool that has been used to assess the psychological state of citizens before and during the acute phase and the mitigation phase of isolation measures during the 2019-nCoV pandemic, including five measurement scales: MR1. financial incentives, MR2. With money shortages and financial uncertainty, MR3. The value of insurance coverage, MP4. Financial Confidence, MR5. Perception of insurance and investment risks. The ability to maintain positive emotions and the ability to recover from negative emotions (resilience) show the degree of variability in the emotional health and psychological state of citizens during a crisis. The questions were selected taking into account the accentuated mental behavior associated with problems that a person may face during a crisis in economic and economic life, including the perception of insurance and investment risks. The method was a large-scale multifactorial questionnaire containing statements that can be used to express the degree of agreement (disagreement) on a 7-point Likert scale: where "7" means "strongly agree", and "1" means "absolutely disagree." Many statements about the scale of physical manifestations of financial anxiety MR1 were built taking into account the classification of mental and behavioral disorders ICD-10 [21]. The introduction of the second scale MR3 into the questionnaire - the value of insurance coverage, is justified by the need to consider economic policy as the background of trust insurance policies in general. The MR4 scale - financial confidence, measures the expectations of citizens regarding financial prospects in the future for them and their families. The scale measures the cognitive assessment of the correspondence of life circumstances to the expectations of a person and reflects the general measure of inner harmony and psychological satisfaction. The MR2 scale, experiencing a shortage of money and financial uncertainty, assesses the current financial condition of a citizen, subjectively assesses the financial situation at the moment during the crisis. The fifth MR5 scale of experience of insurance and investment risks, assesses the subjective state of a citizen's personal safety in preventing risks and finding personal strategies for adapting to COVID19.

To prepare a research program to determine the socio-psychological factors in the transformation of consumer behavior of insurance products and services under the influence of the biogenic threat caused by the COVID-2019 pandemic, we used the results of a longitudinal study using the observation method and semi-structured interviews and empirical studies of the population's attitude to insurance during the period 2008-2019 in Russia [20].

When interpreting statistical data on the dynamics of the insurance market, we took into account the previous psychological measurements of the population obtained in our study [20].

The aim of our study was to study the manifestations of financial anxiety and the characteristics of the insurance and financial behavior of Russian citizens in different periods: the previous COVID-2019 pandemic, the acute phase of the crisis and the end of quarantine measures. Our tasks included carrying out 3 waves of measurements of Russian citizens using the FA (insurance) questionnaire; correlation analysis of data from each survey and comparative analysis of survey data from different periods, as well as regression analysis of all observations.

The survey was published on the SurveyMonkey Internet platform [22]. The results were processed using the equipment of the resource center of the SPbSU Science Park "Sociological and Internet Research" [<https://researchpark.spbu.ru/rcsoc-rus>].

*Approximate characteristics of the first wave of measurements*



The first sample was surveyed on 03/09/2020 (before the start of the SARS-CoV-2 pandemic, then “FA up to 19-nCoV”) - 766 respondents (375 men, 391 women). Most of this sample - citizens aged 26-45 - 65%, who define their subjective income as average - 57.31%; 42.69% - work in the commercial sector, 14.36% - in the public sector, the rest - students, students (11.3%), pensioners (5.05%) and temporarily unemployed (26.78%). Also, the majority of 67.78% do not have an economic education (college, UNIVERSITY, courses). It is possible to characterize the date of the survey on 03/09/2020 (up to 19-nCoV) in Russia before the announcement of the pandemic as a period of relative economic stability before the onset of the biogenic crisis of 19-nCoV..

#### *Approximate characteristics of the second wave of measurements*

The second survey was conducted on 03/30/2020 during the active phase of the SARS-CoV-2 pandemic, after which the “1-FA19-nCoV” survey was conducted. The date of the survey on March 30, 2020 coincided with the Decree of the Chief State Sanitary Doctor of the Russian Federation of March 30, 2020 N 9 “On additional measures to prevent the spread of COVID-2019” (as amended) [23], This meant that the citizens of Russia could not continue to work and had to isolate themselves. The second group consisted of Russian citizens (856 respondents) - 400 men and 456 women. Most of this sample were also citizens of 26-45 years old - 62.70%, defining their subjective income as the average - 54.38%; 38.42% - work in the commercial sector, 12.46% - in the public sector, the rest - students, students (11.3%), pensioners (4.19%) and temporarily unemployed (32.01%). Also, most of 65.12% have no economic education (college, UNIVERSITY, courses). The main interest of this study, which was conducted on March 30, 2019, was aimed at studying the dynamics of financial anxiety during the period of acute experience of quarantine measures and self-isolation in Russian society (2019-nCoV). A new variable was included in the survey - whether the respondents have courses in economic education and financial literacy. Those with higher financial literacy and a keener sense of anxiety about their financial future were expected.

#### *Characteristics of the third wave sample*

The third group, which reached the level of financial anxiety on May 17, 2020 during the end of the acute phase of the SARS-CoV-2 pandemic (hereinafter referred to as the “2-FA19-nCoV” survey), consisted of 963 Russian citizens. The poll date 05/17/2020 was not chosen by chance. Information about a decrease in the incidence of 2019-nCoV in Russia and preliminary data on the lifting of quarantine measures in different regions of Russia began to appear in the media. Thus, financial anxiety was measured during the period of easing quarantine measures in Russia. The sample was heterogeneous - 422 men and 538 women. Most of this sample were also citizens of 26-45 years old - 58%, mostly citizens working in the commercial sector 32%. We introduced a new variable that determines the employment of respondents, namely the loss of jobs during the period of self-destruction measures announced by the Russian leadership during the SARS-CoV-2 pandemic. Such citizens accounted for 19% of the total number of respondents. Another new variable was also introduced - preferences in the consumption of insurance products. Most of the respondents identified the priority insurance purchases under compulsory programs - 47% of OSAGO, 29% of travel insurance, 11% of mortgage insurance. 25% of respondents had no experience in insurance of consumption and about 15-20% of citizens acquire voluntary types of insurance VMI, CASCO, real estate insurance (apartments, houses).

#### *Setting up hypotheses*

Demographic variables served as indicative elements as independent variables in our analysis. These predicates allowed us to take into account possible differences in the Russian sample in terms of age, sex, employment and accessibility of economic education and choice in the consumption of

insurance programs. Several of these variables were identified in the literature review as potentially important factors influencing levels and differences in financial literacy and financial behavior patterns. Our hypothetical expectation of the results was that empirical research data would demonstrate a positive relationship between respondents' financial anxiety and having an economic education (H1) and a positive effect of insurance consumption on reducing financial anxiety. (H2). With regard to gender differences, women are more likely to be physically anxious about material incentives and have a lower degree of financial confidence in the future (H3). For the employment variable, we expected a positive correlation, indicating that the level of financial confidence during a pandemic would be lower for unemployed citizens and citizens who lost their jobs due to quarantine measures, in contrast to other categories of citizens (H4). Active consumers of insurance services will feel confident in their financial future regardless of a period of stability or biogenic crisis (H5).

## 4. Results and Discussion

### 4.1. Correlation analysis

Correlation analysis of data from three waves of measurements of financial anxiety of Russian citizens showed the following results.

#### *Gender difference*

Significant gender differences were found in three factors at once: MR1, MR2, and MR3 (**Table 1**) partially confirmed hypothesis H3: women have higher physical manifestations of anxiety on material incentives.

Regardless of the period that the respondents lived, these differences were confirmed. But men are more sensitive than women to the problems of money shortage and financial uncertainty (MR2), and they trust MR2 insurance institutions more. This data is consistent with the work of Stroe Mihaela Andreea and Iliescu Mihaela[8], who determined that there are gender differences in risk perception attitudes in the insurance decision-making process. Women are more likely to take risks than men and are less likely to transfer risk to the insurance business. During the 1-19-nCoV and 2-19-nCoV periods, men showed greater confidence in the future than women (MR4). During the end of the acute phase of the SARS-CoV-2 pandemic, there were significant differences in the experience of insurance and investment risks of MR5. Men in the 2-19-nCoV period were more likely than women to agree that large purchases should be made on credit and were concerned that they might not be approved for a Bank loan.

#### *Age differences*

Significant age differences were obtained only for the MR5 factor (**Table 2**). the Experience of insurance risks and problems with lending was more often experienced by citizens 45-65 years old in the period prior to 19-nCoV and in 2-19-nCoV. Citizens aged 26-35 are less likely to make large purchases on credit, as opposed to those aged 36-45 (1-19-nCoV). In the period 2-19-nCoV, young citizens aged 18-25 were less concerned about Bank loan approval and insurance risks, in contrast to those aged 45-65.

#### *Subjective financial status (income)*

The following significant differences were obtained for the personal income variable (**Table 3**).

According to the MR1 factor: during the prior to 19-nCoV period, physical manifestations of anxiety were shown by low-income citizens as opposed to middle-income citizens. In the period 1-19-nCoV, financial anxiety has already become higher not only for low-income citizens, but also for very poor citizens.

Thus, the most financially unprotected group of the population with very low and low income demonstrated vivid characteristics of anxiety manifestations: "nausea and other discomfort in the stomach when I think about financial problems", "if I was cheated with money, my muscles contract and I can hardly breathe", "when I have problems with money, my heart stops", etc.

According to the invoice MR2: citizens who assess their financial situation as low and very low are more concerned about the problems of money deficit and debt relations in the periods prior to 19-nCoV and 1-19-nCoV.

For the MR3 factor: no significant differences were found. The level of consumer income did not affect the attitude to insurance for all 3 measures.

According to the MR4 factor: citizens with low and very low incomes are not sure about their financial future during the periods prior to 19-nCoV and 1-19-nCoV. In the post-crisis period 2-19-nCoV, the financial confidence factor did not show significant differences within the sample.

According to the MR5 factor: in the period 1-19-nCoV, citizens with very high incomes are ready to borrow from the Bank for large purchases. In the period 2-19-nCoV, low-and middle-income citizens are ready to take out loans from the Bank, and they are at risk of losing their property, unlike citizens with very low incomes.

### *Employment*

The analysis of data on the employment predictor gave the following results (**Table 4**).

For the factor of physical manifestations of financial anxiety (MR1), no significant differences were obtained depending on the type of employment of the Russian population.

The factor MR2 in the period "prior to 19-nCoV" the unemployed were concerned about was the lack of money in contrast to seniors; during the period of "19-nCoV-2" less than seniors showed concern over the shortage of money unlike the unemployed, retired, in consequence of the pandemic and on maternity leave.

According to the MR3 factor: during the acute phase of the pandemic, citizens working in the public sector increased the importance of insurance protection in contrast to the unemployed and merchants.

For the MR4 factor: significant differences were obtained in periods 1-19-nCoV and 2-19-nCoV. Public sector employees, students on maternity leave and merchants showed greater financial confidence in the phase of the acute crisis of the pandemic, in contrast to the unemployed. This fact can be explained by the specifics of the organization of state aid in Russia during the pandemic: citizens who work informally and are unemployed were not organized by the state in any form. In the period 2-19-nCoV, financial insecurity was demonstrated by the unemployed and those who lost their jobs as a result of the pandemic crisis. Thus, the H4 hypothesis was confirmed.

### *Education and financial literacy*

In measure 3, 1-FA19-nCoV, a new variable was introduced: availability of economic education or financial literacy courses (**Table 5**). At a time of political and financial uncertainty, we expected that citizens with additional financial knowledge would respond more to the emergence of a crisis caused by a biogenic threat. Hypothesis H1 was confirmed: citizens with an economic education were more likely to give positive ratings on the scale of physical manifestations of financial anxiety.

### *Consumption of insurance programs*

In the third measure, a new variable was introduced - preference in the consumption of insurance programs (**Table 6**). Two months have passed since the introduction of quarantine measures. For the first time in modern history, Russian citizens faced the practice of self-isolation and special quarantine measures. How did the socio-economic situation affect the consumption of insurance products? Analysis of data from 3 measurements showed that Russian consumers who experience more physical manifestations of financial anxiety do not buy CTP for their car, in contrast to those who buy this program on a regular basis. We didn't get any significant differences in the



factor of experiencing money shortage, which means that there is no connection between buying insurance and experiencing money shortage.

The relationship between the value of insurance protection and the consumption of insurance products is clearly demonstrated. Those consumers who have higher ratings for the MR3 factor are more likely to use all the insurance programs listed in the survey in their household: mortgage, CTP, CASCO, VMI, NS, life and health, etc. These citizens can be considered "owners" of the insurance culture. This type of consumer is just beginning to appear in Russian society.

According to the MR4 factor, consumers who are confident in their financial future are more likely to buy almost all the programs listed in the survey, except for travel insurance and apartment and home insurance. The latter type is poorly represented in Russian insurance practice.

According to the MR5 factor: Citizens who are experiencing insurance and investment risks are more likely to buy a hard hat for their car and accident insurance.

This confirmed the data from our previous studies [20]: active consumers of insurance services feel confident in their financial future, which confirmed the H5 hypothesis.

#### ***4.2. Comparative analysis of financial anxiety data of 3 waves of measurements (FA prior to 19-nCoV; 1-FA 19-nCoV; 2-FA 19-nCoV)***

A comparative analysis of data from three measures of financial anxiety was performed (Table 7). The Result was unexpected in assessing the significance of insurance protection. It was during the two-month economic and socio-psychological crisis that the demand for the value of insurance protection grew, as opposed to the period before the pandemic. Russian citizens considered it important to have insurance coverage for a "rainy day" and showed confidence in the insurance market. And as expected, significant differences were found in the factor of financial confidence in the future: Russian citizens before the crisis associated with the 19-nCoV pandemic felt financial confidence in the future, in contrast to the period of experiencing the pandemic measures and the period of mitigation measures. Unfortunately, Russian citizens did not show confidence in the future after passing the quarantine measures.

#### ***4.3. Regression analysis***

To search for the influence of independent variables (predictors): gender, age, financial status, and employment were analyzed for the "financial confidence factor" (Table 8). Significant indicators were obtained only for the financial confidence factor.

##### *Financial confidence factor*

Women showed low values of the financial confidence factor. Hypothesis H3 was completely confirmed: women, unlike men, are more susceptible not only to physical manifestations of financial anxiety, but also have low characteristics of financial confidence. Our research has shown the stability of this psychological characteristic in all 3 studies, regardless of the crisis periods faced by Russian women. In addition, low financial health was found to have an impact on financial confidence. This is an understandable fact, since citizens with medium and high financial status feel safe in their current situation and in the future. The pandemic crisis did not transform their sense of personal financial security. The regression analysis confirmed the partially correlated analysis of the employment predictor data: regardless of the pandemic crisis, citizens working in the public sector and pensioners were confident in their financial future. This is understandable, since these categories of citizens are guaranteed a minimum income from the state in the form of pensions or fixed wages. This is probably why Russian citizens often go to work in the public sector, even if the salary is rather low.

## **5. Conclusions**

In general, the results of the study showed that all the hypotheses put forward were statistically confirmed and consistent with the conclusions of our other studies.

Improving the financial literacy of the population is key to making the right financial decisions while protecting consumers from financial anxiety. During difficult times, such as the COVID-19 pandemic crisis, the public began to look for ways to transfer financial risks to alternative instruments that could bring some financial independence and financial confidence in the future. As our research has shown, one of such institutions can be the insurance sector of the economy. A well-designed financial information policy program should contribute to the development of insurance literacy, personnel management from external and internal risks. The development of an insurance culture in Russia should help consumers understand the value of insurance.

It is expected that the results of this study may be useful both to the scientific community in the field of economic psychology and to industry practitioners.

While this study has its advantages in terms of exploring new links between financial anxiety, financial confidence, insurance preferences, and experiences with low-income demographics, there are some limitations to providing some useful insights on the subject. However, the limitations of our study may serve as directions for future research for other work in this area. First, you can test our questionnaire in different categories of insurance and financial services and explore the possible differences. Second, this study paves the way for future consumer insurance literacy researchers with regard to trust and favorable attitudes towards insurance.

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**Conflicts of Interest.** The authors declare no conflict of interest.

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## Tables

**Table 1. Cross-Group significant data on gender differences\***

Factors	FA prior to19-nCoV N=766		1-FA19-n CoV N=856		2-FA 19-nCoV N=963	
	gender					
	m	w	m	w	m	w
MR1. Physical manifestations of anxiety on financial incentives	-.16	.13	-.23	.1	-.2	.18
MR2. Experiencing money shortages and financial uncertainty	-.10	.08	-.15	.1	-.1	.14
MR3. Value of insurance coverage	-.12	.11	-.14	.0	-.1	.11
MR4. Financial confidence	.01	-.01	.08	-.0	.6	-.05
MR5. Perception of insurance and investment risks	.07	-.13	.03	-.0	.1	-0.0

\*Note: the table shows the average values of each category for each factor. We tested the differences between the categories of each variable within each factor. If there were only two categories, the Shapiro-Wilk test was used;

*if there were more categories, the Kruskal-Wallis pairwise test was used. The orange color indicates groups in which a statistically significant difference was found at  $p\text{-value}=0.05$ . For variables with categories greater than two, I explained which groups have a statistical difference.*

**Table 2 Inter-Group significant data on age differences\***

Factors	FA prior to 19-nCoV				1-FA19-nCoV				2-FA19-nCoV			
	N=766				N=856				N=963			
	age											
	18-25	26-35	36-45	46-65	18-25	26-35	36-45	46-65	18-25	26-35	36-45	46-65
MR1	.08	.05	-.05	-.20	.03	.003	-.07	-.21	.07	.02	-.11	-.04
MR2	-.09	.03	.08	-.10	-.04	.07	.01	-.03	-.09	.07	.03	-.05
MR3	-.01	-.004	-.08	.15	.03	-.01	-.12	.09	.01	.005	-.02	-.02
MR4	.03	-.09	.07	.001	.05	.01	-.05	-.10	.07	.02	-.07	-.06
MR5	-.11	-.11	.06	.22	-.08	-.08	.12	.07	-.08	-.02	.02	.12

\* see Note to Table 1

**Table 3. Significant inter-Group differences in subjective income data\***

Factor s	FA prior to 19-nCoV					1-FA 19-nCoV					2-FA 19-nCoV				
	N=766					N=856					N=963				
	very low	low	average	high	very high	very low	low	average	high	very high	very low	low	average	high	very high
MR1	.39	.13	-.13	-.11	.06	.33	.09	-.16	.02	1.0					
MR2	.53	.22	-.13	-.47	-.57	.32	.25	-.15	-.45	-.54	.17	.09	-.07	.02	.47
MR3	-.04	-.03	.03	.14	-.66	-.37	-.01	.04	-.38	-.19	-.06	-.02	.02	.17	-.87
MR4	-.65	-.33	.22	.29	.72	-.71	-.32	.23	.90	1.3					
MR5										3	-.73	-.41	.29	.94	.04
	-.02	-.02	-.02	-.22	.51	.00	.01	-.04	.04	2.0		.01			
						.7	.8			.5	-.22	.2	.01	.15	-.22

\* see Note to Table 1

**Table 4. Significant inter-Group differences in employment data\***

	FA prior to 19-nCoV	1-FA 19-nCoV	2-FA 19-nCoV
Fact ors	N=766	N=856	N=963



	student	civil service	commerce	jobless	maternity leave	retire	student	civil service	commerce	jobless	maternity leave	retire	student	civil service	commerce	Jobless1	jobless 19-CoV	maternity leave	retire
MR 1	.06	.02	-.05	-.01	.10	-.03	.04	-.08	-.08	.04	.11	-.28	.06	.13	-.09	.03	.06	.03	-.04
MR 2	-.24	.02	-.05	.08	.17	-.23	-.14	-.01	.00	.14	.12	-.18	-.22	-.17	.00	.13	.14	.16	-.04
MR 3	.14	-.02	-.08	-.11	.14	.20	.03	.33	-.11	-.10	.11	-.15	-.03			-.10	-.03	.02	-.04
MR 4	.07	.05	-.03	-.01	-.01	.32	.15	.20	.00	-.11	.00	-.03	.12	.34	.11	.26	.32	.04	.01
MR 5	-.02	.07	-.01	-.01	-.11	.23	-.06	.17	-.08	.05	-.02	-.01	.11	.03	.03	.03	.03	.08	.02

\* see Note to Table 1

**Table 5. Cross-Group significant differences in data depending on economic education or financial literacy\***

	FA prior to 19-nCoV N=766		1 - FA 19-nCoV N=856		2 - FA 19-nCoV N=963	
Factors	economic education					
	+	-	+	-	+	-
MR1	.052	-.046	.054	-.074	-	-
MR2	.001	-.007	.10	-.026	-	-
MR3	0.008	-.015	-.06	.01	-	-
MR4	.027	-.03	-.02	.006	-	-
MR5	.05	-.06	-.02	-.01	-	-

\* see Note to Table 1

**Table 6. Significant differences in data in group 3 (2-FA 19-nCoV N=963) by preference for purchasing insurance programs\***

1.

Факторы	Mortgage		OSAGO		Tourism		Real estate		CASCO	
	-	+	-	+	-	+	-	+	-	+
MR1	-.007	.06	.08	-.09	-.01	.04	-.0003	.001	.01	-.04
MR2	-.01	.09	.01	-.01	-.01	.05	.02	-.10	.01	-.05
MR3	-.02	.22	-.10	.11	-.09	.25	-.06	.30	-.09	.41
MR4	-.027	.22	-.05	.06	-.01	.04	-.01	.07	-.02	.11
MR5	-.01	.11	-.03	.03	-.001	.002	-.008	.04	-.02	.11

2.

Factors	VHI		Private insurance		Life and health insurance		No experience	
	-	+	-	+	-	+	-	+
MR1	-.008	.04	-.001	.03	.003	-.02	.0003	-.001
MR2	.01	-.08	.002	-.03	.01	-.07	.01	-.05
MR3	-.07	.34	-.01	.27	-.05	.34	.12	-.37
MR4	-.0260	.126	-.02	.39	-.02	.147	.04	-.13
MR5	-.0168	.0817	-.01	.30	-.01	0.07	.01	-.05

\* see Note to Table 1

**Table 7. Comparative analysis of financial anxiety data from 3 waves of measurements (FA prior to 19-nCoV; 1-FA19-nCoV; 2-FA19-nCoV)\***

	FA prior to 19-nCoV N=766	1 - FA 19-nCoV N=856	2 - FA 19-nCoV N=963
MR1	-0.0656	-0.0129	0.0275
MR2	-0.0169	0.00780	0.0198
MR3	-0.0791	0.0195	0.0355
MR4	0.0762	-0.0530	-0.0242
MR5	-0.00230	-0.0151	-0.0140

\* see Note to Table 1

**Table 8. Regression model of the "financial confidence Factor" (all observations)**

Variables		Coefficient	STD. error	P-value
Constant		2,235	0,008	< 2e-16 **
gender	female	-0,010	0,003	0,001 **
financial situation	low	0,034	0,006	0,000 **
	average	0,095	0,006	< 2e-16 **
	high	0,141	0,012	< 2e-16 **
	very high	0,133	0,022	0,000 **
Employment	civil service	0,013	0,006	0,050 *
	commerce	0,000	0,005	0,935
	jobless	-0,014	0,006	0,014 *
	retire	0,017	0,008	0,043 *
	student	0,009	0,007	0,146

Note: significance: 0 '\*\*\*', 0.001 '\*\*', 0.01 '\*', 0.05 '.