

## PNP2021

## Personality in Norm and in Pathology

**INTERRELATIONSHIP BETWEEN SUPERSTITION, LOCUS OF CONTROL AND STRESS PERCEPTION AT COVID-19 PANDEMIC**

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**Abstract**

Some authors point out that the COVID-19 pandemic caused a conspicuous prolonged stress and psychological traumatization. This study aims at revealing correlations between superstitiousness, locus of control and concern about various factors related to the coronavirus pandemic crisis. 303 respondents took part in the empiric study, 254 female and 49 male, aged 18-66. The following survey tools were used: The Paranormal Belief Scale (PBS) by J. Tobacyk (adapted D.S.Grigoirev), "Superstitiousness Inventory" by I.R.Abitov, "Overall Subjective Control Survey" (E.F.Bajin, E.A.Golynkina, A.M.Ethkind, based on the Locus of Control Scale developed by J.B.Rotter). The respondents were also given a list of factors that may cause stress and were asked to evaluate their psychological discomfort about each factor using a 10-point scale. Concern about increasing digitalization has the largest number of relationships with internality and superstitiousness: direct correlations with the Superstition PBS sub-scale ( $r=0,138$ ;  $p=0,018$ ) and the Abitov's Inventory Superstitiousness index ( $r=0,141$ ;  $p=0,015$ ), negative correlations with the General Internality Index ( $r= - 0,138$ ;  $p=0,018$ ), family relations internality ( $r= - 0,119$ ;  $p=0,041$ ) and working relations internality ( $r= - 0,140$ ;  $p=0,016$ ). It was generally found that concern about factors related to the COVID-19 pandemic, such as the risk of infection, crucial changes in life-style, increased digitalization and the threat of global economic crisis, has direct correlations with superstitions and paranormal beliefs and inverse correlations with internality (internal locus of control) in different spheres of life.

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*Keywords:* COVID-19 pandemic, locus of control, paranormal beliefs, stress, superstition

## 1. Introduction

COVID-19 pandemic provokes increase of anxiety, confusion, despair and uncertainty about the future. Social, economic and other effects of the pandemic all over the world are fraught with the “prolonged uncertainty” (Skotnikova et al., 2020). It is hard for people to adapt to the rapidly changing circumstances and to re-arrange their lives and performances. Lockdown and isolation caused general decline in activity and had negative effect on the physical and mental health. Coronavirus became also a “psychological infection” that lead to emotional discomfort, panic and stress. Chinese studies after the first wave of pandemic revealed PTSR symptoms (Wang et al., 2020). Stress considered as disharmony may cause physical and emotional disorders, impact depression progression, increase cardiological deceases, gastrointestinal function disorders, cerebral crises and hypertonic crises.

People react to the factors that cause anxiety differently. Maladaptive behavioral strategies may exacerbate risks of deceases. Concern about one’s own health and fear for the loved ones, exacerbation of chronic diseases, changes in sleeping and eating schedules, trouble sleeping and difficulties with concentration, increase in tobacco, alcohol and drugs use are among stress symptoms caused by the COVID-19 outbreak (Buheji et al., 2020). Such stress responds may lead to seeking for extra medical care and make the critical healthcare situation even worse. Stress and fatigue of the medical staff may result in their professional burnout and contribute to the spread of negative emotional states among the population (Yu et al., 2020). In Russia researches also show crucial need for the psychological aid during pandemic due to the high level of stress and inability to cope with it (Bojko et al., 2020)

The COVID-19 pandemic is considered as a new type of mass trauma that influences all the aspects of social life (Horesh & Brown, 2020). This is evidenced by the extreme prudence, negative mood, obsessive ideas about danger and death threats. Individual, interpersonal and group levels of pandemic and lockdown effects were distinguished (Nestik, 2020). Individual level shows stress disorders, anxiety, lack of personality recourses, destructive coping strategies, depression, suicidal ideations, that incite “catastrophizing the image of the collective future”. On the interpersonal level the family conflicts, increasing number of domestic violence cases, decline of loyalty and trust between people, decrease of contacts are observed. On the group level there are trends to extremely conservative or, vise-versa, too risky behavioral strategies, inter-group tension, xenophobia and conspiracy theories. Fatalism impedes collective hazard preventing activities, provokes the growth of apocalyptic mood, approval of violent and radical methods of dealing with crises (Nestik & Zhuravlev, 2018)

## 2. Problem Statement

Being uncertain and confused people tend to search for the ways to alleviate their anxiety and to become more confident. Some of them turn to magical practices and superstitions to achieve these goals. Involuntary self-isolation leads to the growth of black-and-white thinking and superstitiousness (Boiko et al., 2020). In the most generalized sense superstitions may be understood as false cognitive beliefs or making causalities between different events that cannot be proved (Lindeman, 2017).

Many scholars consider superstitious person as having external locus of control, prone to see the causes of life events in invisible, mysterious and uncontrollable forces (Vyse, 2020). Locus of control

indicates how much people feel they can control their everyday lives. There are two kinds of it: internal and external. People with the internal locus of control think that they can control their life events and their own behavior lead to these or those effects, while persons with the external locus of control believe that their lives are determined by randomness, chances, luck or peoples' influence (Shrivastav, 2018). There is also research evidence that superstitions are linked with self-confidence. Low self-esteem correlates with highly manifested superstitiousness (Shrivastav, 2017).

Superstitious behavior arises as a response to the situation of uncertainty or suffering when a person faces uncontrolled or unpleasant circumstances. People rely on superstitions as an insecurity and stress coping mechanism to create the illusion of control over the uncertain situation (Taher et al., 2020). Superstitious beliefs are often harmless, but they may lead to irrational decisions followed by ineffective or erroneous actions. In the pandemic context rituals may become such erroneous actions if they are performed instead of asking for medical assistance if necessary or instead of abiding by the sanitary and epidemiological safety regulations.

### **3. Research Questions**

Although there are many studies that address the link between superstitious behavior, on the one hand and stress and anxiety experiences on the other hand, as well as relationship between superstitiousness and locus of control, there observed a lack in researches of the intercorrelation between the level of concern about different stressors related to the spread of the COVID-19 and internality in various spheres of life and different superstitions. Therefore, the following questions are to be answered in the study:

3.1. What factors related to the spread of the COVID-19 cause the most psychological discomfort?

3.2. What are the correlations between the locus of control in the different spheres of life and manifested concerns about various COVID-19 related factors?

3.3. What correlations can be found between superstitiousness and various paranormal beliefs and manifested concerns about various COVID-19 related factors?

### **4. Purpose of the Study**

The purpose of the study is to reveal correlations between the following psychological phenomena: superstitiousness, locus of control and the level of concern about various stressors related to the coronavirus pandemic.

### **5. Research Methods**

The following research tools were used in the empiric study:

5.1. The Paranormal Belief Scale (PBS)

5.2. The Superstitiousness Inventory

5.3. The Overall Subjective Control Survey, based on the Locus of Control Scale

5.4. The respondents were also given a questionnaire about the pandemic situation and its consequences.

▪ In particular there was a question: “If you worry about this abnormal situation, what exactly is your concern? Choose statements from the suggested list and evaluate the level of your discomfort from 0 to 10”.

▪ The following factors formed the list: “risk that I catch the infection”, “risk that the family members and loved ones catch the infection”, “decline in my income”, “risk to lose the job”, “probable global economic crisis and inflationary pressures”, “necessity to change plans”, “impossibility to meet relatives and friends in person”, “restriction of individual freedoms”, “increased digitalization”, “closed state borders” and “changes in the habitual continuity and life schedule”.

▪ There was also an option to give one’s own variant and to scale it of one to ten

The study was carried out using Internet. All the surveys were presented in the Google-form. The link with the google form was published in the social networks VKontakte and Facebook.

The data collection took place in Russian Federation during the period of lockdown and restrictive measures due to the coronavirus pandemic (March 30 – May 18 2020). 303 respondents participated in research, 254 female and 49 male, aged 18-66.

Spearman-Brown correlation coefficient was used to find the relations between various parameters.

## 6. Findings

The study showed that respondents think the probable global economic crisis and inflationary pressures to be the most disconcerting. This fact may indicate that the interviewees were more concerned about the probable financial difficulties in the future than about the present situation (growing number of coronavirus cases; restrictions; impossibility to contact with the family members who live separately). Maybe this is because the major part of the sample group experienced financial crises in the past (1998, 2008) and foresee the probable effects. Besides, epidemiological factors may be evaluated as temporal, while financial problems are more permanent and uncontrolled by the individual himself.

Direct correlation was found between the concern about the risk to catch the infection and the superstitiousness index ( $r=0,117$ ;  $p\leq 0,045$ ) and inverse correlation with internality in the field of health ( $r= - 0,117$ ;  $p\leq 0,044$ ). Thus, the more concerned the person is about the possible COVID-19 contamination, the more prone he/she is to follow various superstitions and the less responsible he/she is for his health. Anxiety may be the intervening variable that links superstitiousness and concern about the possibility to catch the infection. Some authors consider superstitions as a coping mechanism against insecurity and stress in the situations of low control and high uncertainty; and point out that superstitiousness is related to anxiety (Fite et al., 2020) and the problem of control (Whitson et al., 2018). Negative correlation with the health internality may mean that people who take more responsibility over their health conditions are surer that they may control the situation with the coronavirus risks. They are more responsible about their health, follow recommendations (sanitizing hands, face masks, supporting their immune system, etc.) and, in general, believe that they are able to control their physical state and well-being and, therefore, trouble about the risk to catch the COVID-19 less.

A direct link was found between the expressed discomfort about income decline and internality in the sphere of interpersonal relations ( $r=0,119$ ;  $p\leq 0,041$ ), while the fear to lose job shows an inverse

correlation with health internality ( $r=-0,167$ ;  $p\leq 0,004$ ). The more responsibility a person takes in the interpersonal relations the more he worries about his probable unemployment. This may be because people with high interpersonal internality are used to resolve conflicts and take responsible decisions themselves. In the situation with the coronavirus they do not really expect much support from senior managers or the state and therefore feel unhappy due to the income decline and the impossibility to influence their earnings directly. The negative relation between the health internality and troubles about the possible unemployment may be explained by the fact that people who are surer in their ability to take control over their health and to influence their own physical well-being are less concerned about the risk to lose job due to COVID-19 contamination, sickness and incapacitation.

Negative correlations are observed between the manifested concern about the development of global economic crisis and inflationary pressures, on the one hand, and the following scales, on the other hand: Traditional Religious Belief ( $r=-0,145$ ;  $p\leq 0,013$ ), Witchcraft ( $r=-0,18$ ;  $p\leq 0,002$ ) and Superstition ( $r=-0,204$ ;  $p\leq 0,001$ ), as well as Precognition ( $r=-0,139$ ;  $p\leq 0,017$ ). The more concerned the responders are about the possibility of the global financial collapse the less they believe in signs and necessity to follow rituals, traditional religious fundamentals, precognitions and magical impacts. Apparently, this is due to the development of rational thinking. Interviewees with high level of rationality feel considerable trouble about the possibility of financial crisis and at the same time they are less prone to believe in the above-mentioned supernatural phenomena.

The study also showed inverse correlations between the expressed discomfort related to the necessity to change plans, on the one hand, and Psi beliefs ( $r=-0,127$ ;  $p\leq 0,029$ ) and internality in the field of failure ( $r=-0,115$ ;  $p\leq 0,048$ ), on the other hand. The more the responders believe that some people have special supernatural capabilities (ability of self-levitation, telekinesis, mind-reading, etc.) and the more inclined they are to take responsibility over their own failures and mistakes, the less they worry about the necessity to change their plans. Psi beliefs may be conditioned by esoteric thinking and propensity for fantasizing that may compensate the discomfort related to the necessity to change plans. The negative link with the failure internality may demonstrate that respondents with high indexes of failure and mistakes internality feel responsible for the negative aspects and effects of their activity and behavior, including the bad decisions. Thus, they take responsibility for changing their plans and do not feel extra discomfort about it as they are ready to correct rearrange inactive schedules and plans if necessary.

Direct intercorrelations were observed between the troubles about the increasing digitalization and the Superstition index ( $r=0,138$ ;  $p\leq 0,018$ ) as well as Superstitiousness ( $r=0,141$ ;  $p\leq 0,015$ ). This stressor has also inverse correlations with the general internality index ( $r=-0,138$ ;  $p\leq 0,018$ ) and internalities in the field of family relations ( $r=-0,119$ ;  $p\leq 0,041$ ) and working relations ( $r=-0,14$ ;  $p\leq 0,016$ ). The mentioned correlation patterns may also be conditioned by rational thinking and readiness to take responsibility over family relations, or in the business or academic context (with colleagues, fellow students, senior managers or professors). Respondents with the higher level of rational thinking are more prone to take responsibility over the social situation at home or at work, and less concerned about the growth digital impact. The idea about the increasing digital control over citizens by the security and intelligence agencies, governing bodies and powerful corporations may be considered as one of the rapidly spreading contemporary superstitious beliefs, a variant of conspiracy theories.

A direct link was found between the stressor “changes in the habitual continuity and life schedule” and the Superstitiousness index ( $r=0,118$ ;  $p\leq 0,042$ ). People inclined to various rituals and superstitions have more difficulties adapting to the disrupted normal routine and daily life. Here again we can mention rational thinking and conspiracy beliefs. Interviewees who are deeply concerned about changes in their livelihoods are more rigid and less rational. They are more prone to trust the conspiracy theories about powerful external control. And on the contrary, if the respondents show rational and critical thinking, they are less superstitious, worry less about the involuntary changes in their daily environment and life-patterns due to the introduced restrictions.

## 7. Conclusion

The findings of the study made it possible to conclude the following:

7.1. The most highly evaluated stressor related to the COVID-19 pandemic is the risk of the global economic crisis and inflationary pressures. Respondents may put greater emphasis on this factor due to the previous hard experiences of economic crises in 1998 and 2008 and, therefore, foresee possible negative effects. Besides they may consider this factor the most permanent, long-lasting and the less controlled by the person

7.2. The concerns about the risk to catch the coronavirus infection, the increasing digitalization and changes in the habitual continuity and life schedule have direct correlations with superstitions and different paranormal beliefs and inverse correlations with internality in various life spheres. These findings may indicate that low level of rational thinking, high anxiety and an abdication of responsibility over events that occur in different aspects of life (including refusal to take responsibility over one’s health and to follow the medical recommendations) are intervening variables that have an impact on the manifestation of uneasiness about the mentioned stressors.

7.3. Expressed trouble about the possible of the global economic crisis and inflationary pressures has negative correlations with superstitiousness indexes and paranormal beliefs that may be due to high level of rational and constructive thinking among respondents who experience deeper concern about this factor.

## Acknowledgments

The reported study was funded by RFBR, project number 20-013-00644 A.

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