

PNP 2021  
Personality in Norm and in Pathology**THE LINK BETWEEN THE ATTITUDE TO THE COVID-19  
PANDEMIC AND TIME**Olga Deyneka (a), Ekaterina Zabelina (b)\*  
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**Abstract**

Recently, scientists and publicists have called our life time extraordinary, they are writing and talking about the consequences in our life caused by COVID-19 pandemic. In the undertaken empirical study, the relationship between a person's attitude to time ("Time Attitude Scale") and the manifestation of fear and anxiety during the second wave of the pandemic (author's survey) was studied in Russia. The online study involved 827 people. (46.1% female, 53.9% male; 17-75 years old, average age 37.3). The obtained data indicates a psychological break in the time continuum "past - present - future" during the pandemic. In contrast to the past and future, the present turned out to be an emotionally intense part of the crisis consciousness, being separated from the past and the future. The pandemic subjectively destroyed the linearity of the personality's time. The results of regression and discriminant analysis have showed that the attitude to time is a stronger predictor of the attitudes to the pandemic than gender, age and income level.

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*Keywords:* Attitude toward past, attitude toward present, attitude toward future, COVID-19

## 1. Introduction

The situation caused by the COVID-19 pandemic is unprecedented in many ways. In addition to the psychological and social stress associated with the prohibitive measures and the fear of illness, this situation has seriously affected the economic situation in the world (Ahmed et al., 2020; Alaimo et al., 2020; Anastasiadou et al., 2020; Donthu & Gustafsson, 2020), and can be described as an economic crisis. In the psychology of time, there are works indicating a change in the subjective experience and attitude to time during the periods of crisis. However, the studies of the attitude to time during the COVID-19 pandemic have not been found. Nevertheless, these facts enrich science with the empirical data on this issue and allow us to talk about effective approaches to the correction of the negative psychological conditions during such situations. Besides, the results of empirical data on the link between a person's experience of the pandemic situation and its attitude to time can be useful in researching and correcting the negative psychological conditions that people have because of epidemics and economic crises (Jian et al., 2020).

## 2. Problem Statement

Earlier it has been mentioned that the passage of time (speed, integrity, duration, modality of events) may subjectively differ from the chronological one, depending on the characteristics of the experienced situation, the psycho-emotional condition of a person, his/her typological characteristics and other factors.

A situation that is subjectively experienced as difficult is characterised by novelty, unexpectedness, and lack of connection with the system of values and the worldview of the individual (Nurkova & Vasilevskaya, 2003). These unexpected changes are presented as a threat to the personal identity in the perspective of the expected future, that is, they lead to a deformation of the time perspective of the individual. "The future loses its positive valence, the present is chaotic, and the access to the past which could have been a resource stops" (p. 96). The loss of certainty leads to the disorientation of goals and anxiety appears (Salecl, 2004). Emotions accompanying a difficult situation can also affect the characteristics of a person's psychological time. The modern research shows that perceiving events as scary increases the level of concern, which in turn speeds up the internal clock system that is the principle of the time idea (Zhou et al, 2016).

In psychological science, data on the transformation of psychological time in difficult life situations are presented. In particular, the features of psychological time in situations of economic crises are studied (Levada, 2006; Muzdybaev, 2000, etc). A study by Muzdybaev (2000), conducted in the late 90s in Russia, showed that during the period after the collapse of the USSR and after the default of 1998, the time horizon for most of the respondents was greatly reduced or not defined. A significant number of respondents experienced a temporary disorientation (the orientation to the past and the uncertainty of time orientation prevailed); the present was assessed as an extremely negative process while the past was considered as positive.

The situation caused by the COVID-19 pandemic can be viewed as a crisis and can cause a change in certain components of psychological time, including the attitude to time. On the other hand, the attitude

to time itself can be a resource that helps to cope with a crisis situation. Since this issue has been little researched in science, this study aims to partially fill this gap in.

### **3. Research Questions**

The study asked the following questions:

1. How is the situation of the “second wave of the pandemic” reflected emotionally in the respondents’ perception in comparison with the events of the past and the future?
2. Does the attitude to the past, present and future differ among people who assess the danger of the COVID-19 pandemic to a different degree? What are the reasons for these differences?
3. What is the relationship between the attitude to time and the COVID-19 pandemic (a concern about the spread of the virus, the assessment of the danger of the virus, the impact on life experiencing)? Is the attitude to the past, the present and the future predictive to the attitude to the COVID-19 pandemic?

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

The purpose of this study is to identify the link between the attitudes to the COVID-19 pandemic and time (the past, the present, the future) based on the Russian sample.

### **5. Research Methods**

In order to identify the attitude to the future, the present, and the past "Time Attitude Scale" developed by Nuttin (2004) was used in the study. The technique is based on C. Osgood's method of semantic differential and represents bipolar pairs of adjectives, where one axis has a positive attitude, and the other axis is the opposite, negative attitude. Respondents are asked to define their attitude towards time (the past, the present, and the future) based on 15 parameters, which include emotional attitude, values-based attitude, and personality-based control of time: 1. Pleasant – Unpleasant; 2. Eventful – Eventless; 3. Safe – Scary; 4. Beautiful – Horrible; 5. Hopeful – Hopeless; 6. Fast-paced – Slow-paced; 7. Easy – Hard; 8. Successful – Unsuccessful; 9. Interesting – Boring; 10. Significant – Insignificant; 11. Bright – Dark; 12. Free – Captive; 13. Meaningful – Meaningless; 14. Active – Passive; 15. Familiar – Unfamiliar. A 7-point scale was chosen to assess attitudes to the past, the present, and the future, where the positive axis is indicated by 1 point and the negative axis by 7 points (a neutral position is indicated by 4 points).

To study attitudes to the pandemic, the following questions were used with a 5-point scale of answers:

To what extent is the current COVID-19 pandemic affecting your life?

1. The COVID-19 pandemic is affecting my life a lot;
2. The COVID-19 pandemic affects my life quite strongly;
3. The COVID-19 pandemic does not really affect my life;
4. The COVID-19 pandemic does not affect my life at all;
5. I find it difficult to answer.

To what extent are you concerned about the spread of COVID-19?

1. Very worried;
2. Quite worried;
3. Worried;
4. Not too worried;
5. Not at all worried.

How do you assess the danger of COVID-19?

1. The degree of danger of the coronavirus is exaggerated;
2. The coronavirus is very dangerous.

The study was conducted online on the Yandex.Toloka platform from December, 15 to December, 20, 2020. The study involved 827 respondents from different cities of Russia aged 17 to 75 years old (the average age 37.3), among whom 46.1 % were female, 53,9 % - male. The subjective income of the respondents was also measured.

## 6. Findings

To answer the first question of the research, the respondents' attitudes to the past (before the pandemic), to the present (during the pandemic) and to the future (after the pandemic) were compared. A significantly more negative attitude to the present (events during the pandemic) was found comparing to what happened before and after it ( $p=0.001$ ). This fact may indicate that the situation caused by the COVID-19 pandemic is experienced by the majority of respondents as a crisis, difficult, and is opposed in their minds to the previous period of life and what will follow. This fact correlates with the data on the “gap” of the time perspective during the crisis (e.g., Pakhno, 2004).

The construct of a person's psychological time during a pandemic has its own characteristics. Thus, the analysis of significant differences between the subjectively perceived past, present and future showed that statistically significant differences exist between the parameters of the past and the present, as well as between the present and the future (in all 15 bipolar descriptors). Whereas, no significant differences between the past and the future in most of the assessed descriptors have been found. This may indicate that the pandemic has destroyed the linearity of time. In the perception of a personality, there is a separate "past / future" and a separate "present", which has moved to the "time side" away from the time continuum. In this regard, a person is forced not to experience the present, but to worry (worry about himself, about his relatives and friends and about everyone who has been hit by the pandemic).

The personality turned out to be locked not only in some space (being locked by the government), but also locked in time (psychological experience of the present). The pandemic world with no time and no movement has turned into “photography” (Baudrillard, 1999). Figuratively speaking, people are unsuccessfully trying to recognize themselves and others in the photograph, so they try learning how to do it again, while they are forced to look for new ways to reconstruct everyday life.

To answer the second research question, we compared the attitudes to the past, the present and the future among people who have different assessment of the danger of COVID-19. To do it the entire sample was divided into two groups. The first group included the respondents who believe that the danger of coronavirus is exaggerated ( $N=347$ ). The second group consisted of the respondents who believe that the coronavirus is very dangerous ( $N=480$ ). Comparative analysis revealed the difference only in the

relation to the present ( $p=0.009$ ). The respondents who believe that coronavirus is very dangerous perceive the present ("the second wave of the pandemic") as less safe and more terrible ( $p=0.001$ ), more difficult ( $p=0.001$ ), less successful ( $p=0.001$ ), less eventful ( $p=0.003$ ), less beautiful ( $p=0.002$ ), long-lasting ( $p=0.013$ ) and less interesting – more boring ( $p=0.015$ ). Thus, it can be assumed that the assessment of the situation caused by the coronavirus, an increased anxiety about the pandemic is associated with a more negative perception of the current events in general. And the other way round, a more optimistic assessment of the present events is associated with a lower level of anxiety about the current situation.

Correlation analysis was used to answer the third research question (Table 1).

**Table 1.** The ratio between the attitude to the COVID-19 pandemic and the attitude to time

Attitude to pandemic	Attitude to the past	Attitude to the present	Attitude to the future
The pandemic impact on life	,086*	-,212**	-,120**
Concern over the spread of the COVID-19	,013	,000	,001
COVID-19 hazard assessment	,021	-,147**	-,011

As it can be seen from the table, the attitude to the pandemic in all measured parameters turned out to be significantly associated with the attitude to the present. The more respondents feel the impact of the pandemic on their lives and worry about the spread of the virus, the more negatively they perceive the events of the present. Vice versa, those respondents who are less worried about the current situation and do not consider it dangerous, emotionally perceive the events of the present more positively (brighter, more joyful, more interesting, easier, safer, etc).

Such a parameter as the strength of the impact of the COVID-19 pandemic on life turned out to be associated not only with the attitude to the present, but also the past and the future. Those respondents who believe that their lives have changed significantly with the beginning of the pandemic have a more negative attitude not only to the present, but also to the future. Probably, the current situation causes their negative emotions that extend to their future life. The fact that the presence of a negative image of the future in a difficult situation is also confirmed in other researches (Nurkova & Vasilevskaya, 2003; Pultz & Hviid, 2016; Potgieter et al., 2011). At the same time, the past (life before the pandemic), on the contrary, is perceived by these respondents as more positive. They are prone to nostalgia for the "past" life, perhaps they can "get stuck" with memories, emotionally not accepting the changes that are taking place (Muzdybaev, 2000). This phenomenon resonates with the understanding of an individual and collective nostalgia, as a means (mechanism) of maintaining identity in the face of instability (Juhl et al., 2010; Smeekes et al., 2018; Zhou et al., 2016), when the past gives the meaning to the present.

At the final stage of the research, we tested the hypothesis that emotional attitude to time can be a predictor of attitude to the pandemic, along with the demographic variables. The regression analysis results indicate that the attitude to the time is a stronger predictor of how the pandemic will affect life than gender, age (Nestik et al., 2020), and income. In particular, a negative attitude to the present ( $\beta=-0.317$ ), combined with a positive attitude to the past ( $\beta=0.231$ ), contribute the formation of the conviction

that life has changed greatly during the pandemic ( $R=0.295$ ,  $F=39.372$ ,  $p=0.001$ ). The results of the discriminant analysis also correspond to the obtained data. Belonging to a group according to the degree of the coronavirus hazard assessment is most likely determined by the respondents' attitude to the present and the future. Thus, a more negative attitude to the present (the pandemic period) and more positive expectations from the future (after the pandemic) characterize the group of respondents who assess the danger of the virus as high (Table 2).

**Table 2.** Results of the discriminant analysis

Step	Parameters	Wilkes's Lambda	F	p
1	Attitude to the present	,992	6,824	,009
2	Attitude to the future	,983	7,111	,001

This result may indicate that a highly negative attitude to the COVID-19 pandemic, combined with overestimated expectations for the future ("when all bad things end and everything will be as it used to be"), increases respondents' anxiety and fear in their perception of the virus.

## 7. Conclusion

The results of the research confirm the ratio between the attitude to the COVID-19 pandemic and the attitude to time. It has been found that the situation caused by the COVID-19 pandemic is experienced by the majority of respondents as a crisis, accompanied with an emotionally negative attitude to the present and opposed to the past and the future, which may indicate a gap in the time perspective during the pandemic.

The assessment of the situation caused by the coronavirus as dangerous, an increased anxiety about the pandemic are associated with a more negative perception of the events in general. On the opposite, a more optimistic assessment of the present events is associated with a lower level of anxiety about the current situation. Those respondents who are less worried about the current situation and do not consider it dangerous, emotionally perceive the events of the present more positively (as bright, joyful, interesting, easy, safe, etc).

Those respondents who believe that their lives have changed significantly with the outbreak of the pandemic have a more negative attitude not only to the present, but also to the future, which is also confirmed in other studies (Nurkova & Vasilevskaya, 2003; Pultz & Hviid, 2016; Potgieter et al., 2011). At the same time, there is nostalgia for the "past" life, "getting stuck" in the past, an emotional denial of the ongoing changes (Muzdybaev, 2000).

The regression and discriminant analysis indicate that the attitude to the time is a stronger predictor of the attitude to the pandemic than gender, age, and income.

Thus, the discovered facts of the transformation of the attitude to time during the COVID-19 pandemic are quite comparable with the changes accompanying a personal (Pultz & Hviid, 2016; Potgieter et al., 2011) or social and economic crisis (Muzdybaev, 2000). The obtained results of this empirical research can be taken into account in the counseling practice and the correction of negative psychological conditions during crisis situations in society.

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