

Neuroticization State of Long-Living Persons Before and During the COVID-19 Pandemic in Ivano-Frankivsk Region (Ukraine)

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Abstract

Background: The phenomenon of longevity has been studied over recent decades by many scientists representing a range of scientific disciplines, applying different research strategies and methodologies.

Objective: Our team of scholars sought to study the phenomenon of longevity in Prykarpattia (Ukraine) by applying an interdisciplinary methodology, drawing on the experience of gerontology, genetics, psychiatry and psycholinguistics, and studying the effects that influence the state of long-living persons neuroticization during the COVID-19 outbreak.

Methods: The study employed Ludwig Wasserman's pen-and-paper method of determining the level of neuroticism, which allows for both group and individual use in the form of a questionnaire survey. The questionnaire consists of 40 questions, which must be answered by agreeing or disagreeing with a 'yes' or 'no'. When processing the data, the number of positive responses was counted.

Results: Using Wasserman's neuroticization methodology, the number of long-living persons with high and mean levels of neuroticization was determined to be 5.13 in 2021 compared to 2018 and 1.18 in 2018, according to the pre-pandemic questionnaire results.

In the course of the psycho-emotional state of the Prykarpattia long-livers study we have established that in addition to genetic determinants and external factors an essential part in shaping longevity is played by the mental state of a person, a wholesome coherence of emotionality and speech, harmonious balancing of non-verbal psycho-emotional resonances and logical iconic-conventional consistency in the speech practice of a person.

Conclusion: An important demonstration of active and long-term physical existence is the formation of a special type of world-perception and world-experience, which arranges the inner emotional-neurotic space of a person through a system of coherent, logically and pragmatically aligned internal visual-verbal macro- and microcosms.

Keywords: Long-Living Person; COVID-19; Neuroticization State; Ukraine

Introduction

For many years, scientists have been studying the phenomenon of longevity (people who survive past the age of 90) and the factors that influence the lifespan. There are many theories justifying the phenomenon of longevity [1,2]. However, none of the studies can confirm the advantage of any one contributing factor alone. Studies by American psychiatrist Julia Samton, who has looked at the findings of a

variety of scientists on the subject of green old age and life extension, summarize that the most severe effect on longevity lies in a healthy diet [3], regular exercise and an optimistic approach to life. The scholar argues that the longevity secret resides not only in good nutrition, but also in other factors that affect how the human body ages [4].

Our team of scholars set the task of studying the longevity phenomenon in the Ciscarpathian location (Ukraine) by applying an interdisciplinary methodology, relying on the experience of gerontology, genetics, psychiatry and psycholinguistics, and studying the effects that affect the state of neuroticization of longevity during the COVID-19 epidemic. In the process of research Prykarpattia long-livers [5] we have found that aside from genetic determinants and external factors a major role in the formation of longevity plays mental status of a person, a sound congruence of emotional disposition and speech, correspondence of non-verbal psycho-emotional resonances and logical iconic-conventional consistency in human speech practice. An important feature of active and long-term physical existence is the formation of a special kind of world-perception and world-experience, which organizes the inner emotional and neurotic space of a person through a system of coherent, logically and pragmatically balanced inner visual-verbal macro- and microcosms [6,7]. They reflect the most sensitive themes of 'self-conception,' and in a broader sense they reflect a system of views on the world, social life, its past and future, on morality, science, art, healthy lifestyle, human beings, life meanings [8,9].

Of particular relevance is the study of neuroticization in long-living persons before and during the COVID-19 pandemic.

Materials and Methods

Respondents from 197 long-livers who live in Ivano-Frankivsk region and who were part of the study group in previous trials were analyzed [5]. Inclusion criteria were long-living persons residing in Ivano-Frankivsk region and relapsed in COVID-19. Exclusion criteria were long-livers suffering from mental illness and malignant tumours. The survey was conducted twice: first in March-April 2018 and in January-March 2021 for a second time. Persons who underwent an examination in 2018 and did not live to see the 2021 study were eliminated from the statistical analysis.

The study used Wasserman's method of determining the level of neuroticism, which is of the 'pencil-and-paper' type and assumes both group and individual use in the form of a questionnaire survey [10]. The questions to determine the level of neuroticization are indicative only. The questionnaire consists of 40 questions, which must be answered by agreeing or disagreeing with a 'yes' or 'no'. Positive responses were counted during data processing. When the score is higher, the higher the level of neuroticization is. The levels were interpreted as follows: a high level of neuroticization was considered to be present if the surveyed person provided an affirmative reply to 20 or more of the suggested questions. A mean level of neuroticization was detected when the respondent provides an affirmative answer to 10 to 19 questions in the test. A low level of neuroticization was recorded when there were 9 or fewer positive responses to the questionnaire.

The team of scholars conducted the study in compliance with the substantive provisions of the GCP (1996), the Council of Europe Convention on Human Rights and Biomedicine of 04.04.1997, the Helsinki Declaration, the orders of the Ministry of Health of Ukraine.

Results and Discussion

Ivano-Frankivsk region also referred to as Prykarpattia is located in western Ukraine. It is home to most of Ukraine's long-livers. The results of the responses of 197 long-livers who contracted COVID-19 have been analysed.

The survey of long-living persons was carried out twice: the first time in March-April 2018 and the second time in January-March 2021. Since the quarantine in Ukraine was first mandated in March 2020, those surveyed in 2018 and did not last through the 2021 survey were excluded from the sample in the statistical analysis. Table 1 provides the results of a study on the neuroticization level of Prykarpattia long-livers.

Research Period, Years	Neuroticization Level		
	High	Mean	Low
2018	15 (7,61%)	89 (45,18%)	93 (47,21%)
2021	77 (39,09%)	105 (53,30%)	15 (7,61%)

Table 1: Level of neuroticization of long-living persons in Ivano-Frankivsk region.

According to the data obtained, the level of individuals with a high level of neuroticism increased by 5.13 times over the period under study. At a high level of neuroticization, there is pronounced hyperemotivity, generating various negative experiences (anxiety, tension, worry, confusion, irritability, etc.) and manifesting in discordance of ‘visibility’ and ‘verbality’, displaying various forms of illogical alignment of visual and verbal semantics, which do not contribute to objective self-identification. We also observe an increase of 8.12% in the number of people with a mean level of neuroticism and a decrease in the number of long-living persons with a low level among those surveyed.

In terms of gender, the intriguing thing was that the number of women with high level of neuroticization increased by a factor of 5.6 (Figure 1).

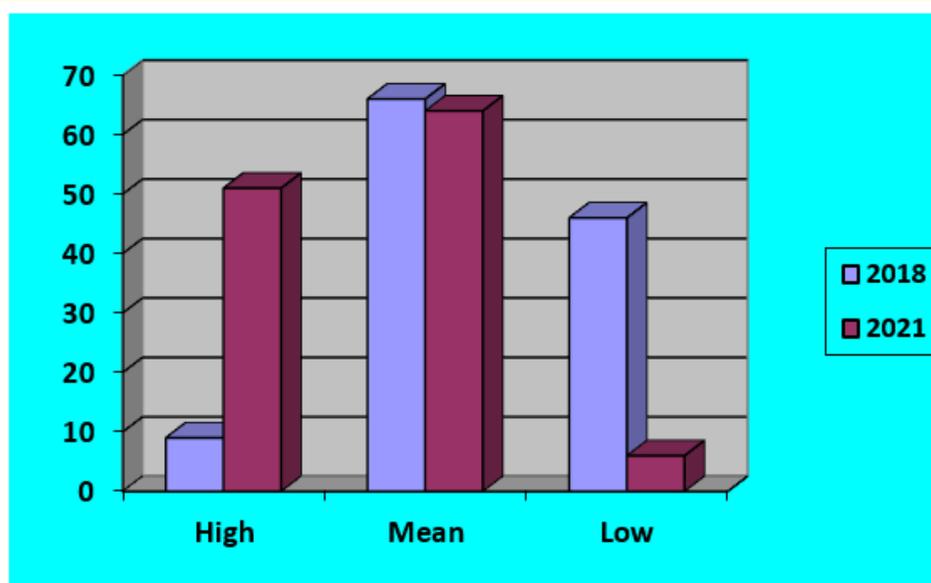


Figure 1: The neuroticization level of female long-living persons in Prykarpattia prior to the COVID-19 pandemic and as it proceeds.

The number of women surveyed with a mean level of neuroticization decreased slightly. However, there was a 7.6-fold decrease in the number with a low neuroticization level. That is, there is a tendency for women to progress from a low level to mean and high ones over the study period. Upon analysing the data, it became apparent that the oldest woman was 102 and the youngest was 90 years old.

A study of the neuroticization level among male long-livers in Ivano-Frankivsk region is presented in figure 2.

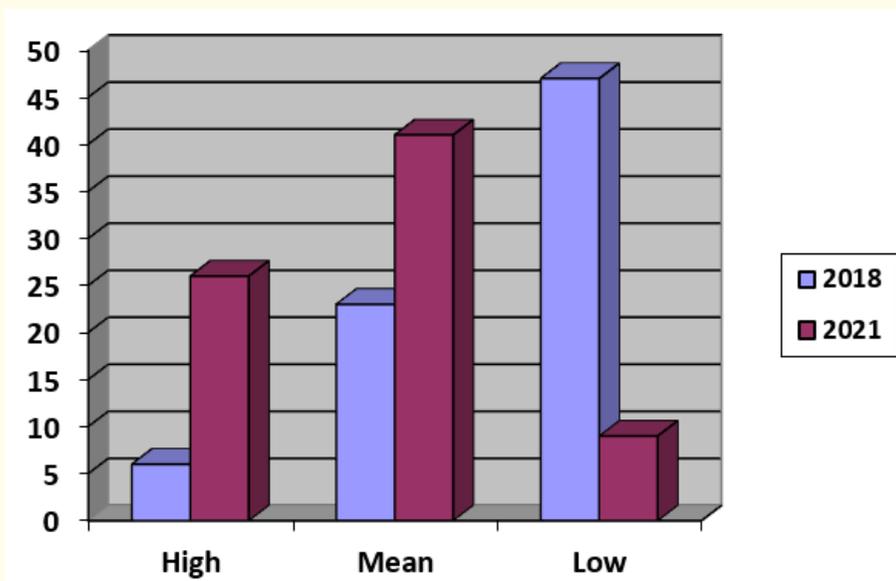


Figure 2: The neuroticization level of male long-living persons in Prykarpattia prior to the COVID-19 pandemic and as it proceeds.

The number of men with a high neuroticization level increased by a factor of 4.3, which is less than for women in the same category. Unlike female long-livers with a mean neuroticization level, the number of male long-livers with a mean neuroticization level studied increased by 1.8 times between 2018 and 2021. Similar to the women, the men studied had a 5.2-fold decrease in the number of persons with low neuroticization level. In other words, there is a tendency to proceed from a low neuroticization level to both mean and high over the period studied. The oldest adult subject was 101 years old and the youngest was 90 years old.

Inconsistent, but of interest, was the observation that individuals who lived alone were more likely to be encountered among those with high neuroticization level.

The processing of the questionnaire results revealed that the ‘panic virus’ and the psycho-emotional resonances formed under its influence generate more prerequisites for neuroticization than for overcoming the coronavirus infection. Being in a state of uncertainty, insecurity and ignorance, people experience fear and trepidation, which are the triggers for anxiety and panic. Under the circumstances of COVID-19, it is impossible to shield oneself completely from the threat, which is why people often experience panic symptoms such as palpitation, pulsus frequens, tightness of the chest and shortness of breath, choking sensation, chest pain, dizziness, general weakness and numbness in the limbs. What is behind the fear of illness is actually the fear of death. There is an essential function behind all these affective experiences – fear serves to protect. Fearing dying, a person does not do things that would threaten his or her health and life [11,12].

In the event that a person may have already fallen ill, these emotional expressions will exacerbate the physiological manifestations of the disease and its progression will be protracted and more severe. The patient’s body will channel its resources into overcoming panic, fear and bolstering psychological defence, while there will be less resistance to the disease. Such emotional states will also be debilitating for healthy persons, will affect their immune system and the risks of contracting the disease will still be much higher, notably with the elderly [13].

Therefore, in addition to maintaining physical health, it is essential to take care of your mental status, its iconic-conventional ordering, a wholesome coherence of visual and verbal self-interpretation of the problem. Those who have fallen under the influence of 'infodemia' and constantly scan the media outlets for different visual and verbal indications of COVID-19 symptoms, 'apply them to themselves,' need to closely adhere to the rules of personal 'emotional-verbal' hygiene and of course physical distancing, assess the real risks and case scenario [14-16].

Given today's pandemic situation, one must embrace it, but also learn to live in this reality. By devising a framework of action and behaviour, people are largely able to take care of themselves and protect themselves. It makes them feel confident. This is when anxiety levels decrease and one becomes more resilient, able to cope and maintain oneself. Keeping a clear agenda for action in one's head settles the mind and releases the tension [17,18].

Conclusion

Using Ludwig Wasserman's neuroticization methodology, the number of long-living persons with high and intermediate levels of neuroticization was found to increase by 5.13 times in 2021 compared to 2018 and 1.18 times in 2018, according to a pre-pandemic questionnaire.

The prospect for further research is to examine the neuroticization level in the study subjects following vaccination.

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