



# Applicability of the Theory of Unpleasant Symptoms to the population of older men with COVID-19 in Brazil

*Aplicabilidade da Teoria dos Sintomas Desagradáveis para a população de homens idosos com COVID-19 no Brasil*

*Aplicabilidad de la teoría de los síntomas desagradables a la población de hombres ancianos con COVID-19 en Brasil*

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## ABSTRACT

**Objective:** To analyze clusters of unpleasant symptoms in older men with the COVID-19 pandemic/syndemic. **Method:** A qualitative, multicenter study was carried out between March 2021 and April 2022, in which 94 older men who answered an online form participated. The data were processed and coded with the support of the NVIVO software, analyzed by the Collective Subject Discourse technique, and applied the Theory of Unpleasant Symptoms to interpret results. **Results:** Men between 60 and 88 participated; most self-declared heterosexual and white. The pandemic scenario and social isolation were considered situational influencing factors for different dimensions of symptoms and, as a performance for the experience of living the symptoms, remote medical consultations by Telemedicine, virtual affective interactions, and consumption of pornography on erotic websites. **Conclusions and implications for practice:** Syndemic exposure to COVID-19 triggered clusters of unpleasant symptoms, of a biopsychosocial nature, in the health of elderly Brazilian men, which requires management by Nursing.

**Keywords:** COVID-19; Nursing; Elderly; Men's Health; Signs and Symptoms.

## RESUMO

**Objetivo:** analisar os *clusters* de sintomas desagradáveis em homens idosos na pandemia/sindemia da COVID-19. **Método:** estudo qualitativo, multicêntrico, realizado entre março de 2021 e abril de 2022, no qual participaram 94 homens idosos, os quais responderam a um formulário *on-line*. Os dados foram processados e codificados com apoio do *software* NVIVO, analisados por meio da técnica de Discurso do Sujeito Coletivo, e interpretados com base na Teoria dos Sintomas Desagradáveis. **Resultados:** participaram homens entre 60 e 88 anos, de maioria autodeclarada heterossexuais e brancos. Durante os primeiros dois anos da pandemia da COVID-19, emergiram *clusters* de sintomas desagradáveis biopsicossociais na saúde de homens idosos como: picos de pressão alta, depressão, ansiedade e sedentarismo. O cenário pandêmico e o isolamento social foram considerados fatores influenciáveis situacionais para as diferentes dimensões dos sintomas. Como desempenho para a experiência de vivenciar os sintomas, foram considerados as consultas médicas remotas pela Telemedicina, interações afetivas virtuais e consumo de pornografia em *sites* eróticos. **Conclusões e implicações para a prática:** a exposição sindêmica à COVID-19 deflagrou *clusters* de sintomas desagradáveis, de caráter biopsicossocial, na saúde de homens idosos brasileiros, o que requer gerenciamento pela Enfermagem.

**Palavras-chave:** COVID-19; Enfermagem; Idosos; Saúde do Homem; Sinais e Sintomas.

## RESUMEN

**Objetivo:** analizar los *clusters* de síntomas desagradables en hombres ancianos en la pandemia/sindemia por COVID-19. **Método:** estudio cualitativo, multicéntrico, llevado a cabo entre marzo de 2021 y abril de 2022, han participado 94 hombres ancianos, que respondieron un formulario en línea. Los datos han sido procesados y codificados con el apoyo del *software* NVIVO, analizados por la técnica del Discurso del Sujeto Colectivo y la interpretación de los resultado embasada bajo la Teoría de los Síntomas Desagradables. **Resultados:** han participado hombres entre 60 y 88 años, en su mayoría autodeclarados heterossexuales y blancos. Durante los dos primeros años de la pandemia de COVID-19, surgieron *clusters* de síntomas biopsicossociales desagradables en la salud de los hombres mayores, a ejemplo de: picos en la presión arterial alta; depresión; ansiedad y sedentarismo. El escenario de la pandemia y el aislamiento social fueron considerados influenciadores situacionales para las diferentes dimensiones de los síntomas y, como performance para la experiencia de vivenciar los síntomas se consideraron las consultas médicas remotas por la Telemedicina, interacciones afectivas virtuales y consumo de pornografía en sitios web eróticos. **Conclusiones e implicaciones para la práctica:** la exposición sindémica a la COVID-19 desencadenó conglomerados de síntomas desagradables, de naturaleza biopsicossocial, en la salud de ancianos brasileños, que requieren manejo por parte de la Enfermería.

**Palabras clave:** COVID-19; Enfermería; Ancianos; Salud del Hombre; Signos y Síntomas.

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## INTRODUCTION

The pandemic of COVID-19 crossed all dimensions of life and, especially, vulnerable populations, triggered aggravations and anticipated significant losses in health. The significant repercussions for the life and health of the elderly population have been observed in the face of the deleterious effects caused by the pandemic, demarcating a new temporality called the “Post-COVID-19 era”, with the emergence of syndromes that were previously non-existent, and little known through the installation of a diversity of unpleasant symptoms.<sup>1,2</sup>

Unpleasant symptoms are defined as indicators and manifestations of multiple dimensions interconnected among themselves and possible to measure. They appear simultaneously or not, and have individuality in their performance results, considering the singularity of each individual's experience in experiencing the symptom, when presenting an alteration in their homeostasis.<sup>3</sup> On the other hand, the expression “symptom clusters” includes a compound of stable groups of two or more self-reported symptoms, added to the objective and subjective signs observed by non-verbal expressions of the experience in experiencing symptoms by human beings.<sup>4</sup>

The Unpleasant Symptoms Theory (UST) has conceptual elements that encompass the physiological, psychological, and situational influential factors of the symptom dimensions and their interactions, which may help in the evaluation of performance outcomes in experiencing them.<sup>5</sup> Performance, in turn, is a concept built by the results of the experience in experiencing certain symptoms, considered the main outcome of the theoretical model, because it is the performance of its consequences in its functional, cognitive and social aspects.<sup>4,5</sup>

Regarding the UST,<sup>5</sup> a scarcity was identified in the scientific literature regarding its applicability in the elderly male population affected by the pandemic, which explains a gap in scientific knowledge and justifies the usefulness of this study, its pertinence, and relevance to the scientific and professional community. In practical terms, the possibility of understanding and managing the clusters of unpleasant symptoms installed in elderly men who are directly and indirectly exposed to COVID-19 contributes to new forms of production in care in the field of gerontological nursing.<sup>3</sup>

Thus, this study aimed to clarify the research question: what were the clusters of unpleasant symptoms installed among elderly men exposed to the effects of the COVID-19 pandemic, taking into account the influential factors of the dimensions of such symptoms? Objective: to analyze the clusters of unpleasant symptoms in elderly men exposed to the effects of the COVID-19 pandemic.

## METHOD

Qualitative, multicenter, national scope study (Brazil) developed according to the guidelines of the Consolidated Criteria for Reporting Qualitative Research (COREQ), in order to ensure methodological rigor, as it is an investigation of human experience in a given phenomenon (the post-pandemic era).

Research conducted in a virtual environment, having as study scenarios the social networks Facebook and Instagram and the instant messaging application WhatsApp, which counted on the participation of elderly men with Internet access, in a non-sequential and consecutive way, all over the national territory.

We included men over sixty years of age, for being considered elderly in Brazil under an age/chronological perspective,<sup>6</sup> and residents in Brazil, regardless of nationality, regardless of serological status for COVID-19. And excluded, those who were in transit in the country, coming from international trips, and foreign tourists.

The approach and recruitment of participants took place in groups and specific pages of communities/groups of an elderly public on Facebook®, searches by hashtags #homensidosos, #saudedoidoso, and #idosos on Instagram® with subsequent contact by direct messages with the elderly who appeared in the search and text messages (SMS). The “snowball” technique was used,<sup>7</sup> sending the research link through the social network @cuidadoasaudedehomens, a profile created on Instagram with access to content on digital health and interaction between users and researchers. This capturing process involved five sample groups, with five people in each, one in each region of Brazil, called “seeds”.

Participants were 94 elderly men between 60 and 88 years old, who answered an electronic, self-applied and semi-structured form, hosted in the virtual platform Google Forms® - free version, chosen for having wide dissemination in Brazil, being of easy access and operationalization, and for incorporating encryption. The number of participants was determined based on the criteria of theoretical exhaustion,<sup>8</sup> defined as a form of data saturation, comprising all eligible subjects. The instrument was validated internally by the researchers, and externally by a pilot test carried out with twenty men who were not part of the final sample.

Data collection occurred between March 2021 and April 2022, through a Web Survey originating from a national multicenter study analyzing the health impacts of the COVID-19 pandemic on men residing in Brazil. Participants were provided with detailed information about the survey by means of the Free and Informed Consent Term, available in an imaged format before they agreed to participate in the survey. They then responded to a form on Google Forms.

The form contained closed questions about sociodemographic, occupational/work, and health characteristics; and open questions about unpleasant symptoms arising from the COVID-19 pandemic in the health of elderly men, with a response time of 20 to 30 minutes, as follows: 1) after one year of the pandemic in Brazil, did you experience anything important (that you want to highlight) regarding your health?; 2) did the COVID-19 pandemic impact your health? Describe what occurred and 3) how did the pandemic impact your health care? Describe what occurred. The individual response reports were exported from the drive to Excel spreadsheets, automatically, and transferred to their folders in a Word® file with the use of access codes and passwords that ensured security by avoiding misplacement and loss of information. This process was carried out by a research team

composed of specialists in Gerontology, masters, and doctors in Nursing and Health and Family Health, with experience in the area of investigation and performance in teaching/research.

The data were systematized and organized through coding and qualitative analysis with the support of the NVIVO 12 software. From the coding, the syntheses were built and the figures of the Discourse of the Collective Subject (DCS) were identified.<sup>9</sup> Its operationalization was done through the Key Expressions (KE); the Central Ideas (CIs) and their Anchorages (CAs)<sup>9,10</sup> which brought up the categories of the speeches that were organized into units and sub-units of meanings of the unpleasant symptoms, arising from the multisystemic aspects of the pandemic, as well as the contributions to Nursing in the health of the elderly man. In this sense, the discourse syntheses were interpreted under the theoretical constructs of the UST.<sup>5</sup> This theoretical-analytical framework assumes that there are common points among the different symptoms that make it possible to understand the experience in living them from one or more of a given disease.<sup>11</sup> As the participants reported more than one symptom related to the impacts of COVID-19 in their lives, the authors adopted the UST to interpret the findings.

The matrix project “Experiences of men in the context of the pandemic of the new coronavirus Sars-Cov-2 (COVID-19) in Brazil: a focus for health”, which gave rise to this research, was approved by the Research Ethics Committee, under protocol number: 4.087.611, and its data were protected from violation and other virtual crimes according to Resolution No. 466/2012 and Circular Letter No. 1/2021.

## RESULTS

Ninety-four elderly men between 60 and 88 years of age participated, with a mean age of 74 years, 70 (74.46%) declared themselves heterosexual, 16 (17.02%) homosexual, and five (5.31%) bisexual; 86 (91.48%) said they were Cisgender and one (1.06%) transgender; 66 (70,29%) said they were white, 20 (21.27%) brown, six (6.38%) black, one (1.06%) indigenous, and one (1.06%) yellow. They had comorbidities such as hypertension and diabetes mellitus, were public employees or workers with a signed contract, earning an income of up to five minimum wages, or were retired. Most had been infected with the virus, used the supplementary health network, and lived alone, but reported interacting with the social-affective network composed of family and friends.

The operationalization of the process obtained the following classification: 1) Key Expressions (KEs) of the short individual excerpts from the DCS that represented the dimensions of symptoms (intensity, time/duration, quality, and suffering); 2) Central Ideas (CIs) of the synthetic meanings of the DCS and similarities between the individual responses on the most reported symptoms; 3) Anchorages (ACs), which described the results and the functional, cognitive and social responses of the individual performance within the DCS and 4) Discourse of the Collective Subject (DCS) - corresponding to the junction of the E-HCs

codified in the CIs and/or in the CAs which brought meaning and distinct formats to the analyzed content.

Thus, four categories of discourse syntheses emerged that grouped the representation of data from a collectivity and were organized based on the physiological, psychological, and situational influencing categories of the symptom dimensions proposed by the UST. The first category involved the discourse synthesis related to the physiological influencing factors of the symptom dimensions which, in turn, encompass the symptoms that influence the identification of a particular diagnosis.

### Discourse-synthesis: expression of unpleasant symptoms of physiological factors

Chart 1 refers to the expression of unpleasant symptoms of physiological factors.

The four dimensions of symptoms (intensity, time/duration, quality, and distress) were present in the process of organizing and interpreting the DCS as a whole. Intensity is related to the strength and severity of one or more symptoms, which are relatively measurable. Time/duration analyzes whether the symptom is installed, combined with another, and its relationship between frequency and duration. Quality represents the variation in its mode of manifestation, makes it possible to distinguish between pathologies, and indicates the severity of the problem. The last dimension, suffering, relates to the degree of discomfort, its intensity, and the focus of attention given to it. Chart 2, psychological influential factors exemplify the dimension of symptom quality in each individual.

The data brought the information about the performance results of the collective subject as the search for medical help and the follow-up with specialists such as cardiologist, gastroenterologist, and endocrinologist; the practices of proactive actions to combat fake news; cultural activities in the virtual modality; distancing from neuroticized and scared people; virtual interaction through social networks with family and friends and the attempts to perform exercises at home. The data on the absence of physical and sexual contact was reflected in the reports of performing masturbation and consuming pornography in erotic sites, as can be seen in Chart 3.

The restrictions imposed that resulted in an absence of freedom brought out the need for readjustment of the coexistence of elderly men in their social, family, and political contexts. Given the data exposed in the tables above, we observe the formation of a wide variety of symptom clusters, or groups of two or more symptoms experienced by the same individual, structured in the logic that the same participant, within the discourse context, reported feeling different symptoms simultaneously or intermittently and composed of symptoms related to the three influential factors (physiological, psychological, and situational) of symptoms, proposed by the UST, thus characterizing the biopsychosocial symptom clusters.

The data found were adapted to the methodological model of the UST according to the elements that compose it. It is observed that the components of the UST interact with each other and

## Unpleasant symptoms of COVID-19 to elderly men

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**Chart 1.** Unpleasant symptoms of physiological factors experienced by elderly men in the pandemic of COVID-19. Salvador (Bahia), Brazil, 2021.

Unpleasant symptoms of physiological factors	
<p>[...]I had to reduce mobility. I became more sedentary, and a sedentary lifestyle became a problem. My blood pressure became high, I had peaks of high blood pressure, I gained weight, I lost my sense of taste for 60 days. I am having strong gastrointestinal disturbances from the use of chloroquine, I started to have vitamin deficiencies, anemia, and changes in diet, metabolism, hepatic, hormonal, circulatory, cardiac, and gastric [...] my lung capacity decreased. I noticed that I have inflammatory processes. I had weight gain because of the inactivity, prostration and I got into a condition of obesity, my immunity fell, I feel very tired, with muscle weakening and many rheumatic pains in the legs, spine, and knees, I had anemia, visual fatigue, my lung capacity decreased, I have shortness of breath and my blood sugar was altered. The physical after-effects of the post-COVID-19 infection lasted for more than 14 months. (DCS of elderly men during the pandemic)</p>	<p><b>Intensity:</b> [...] high blood pressure; weight gain (Obesity); slight weight gain; increased anxiety and stress; more sedentary; decreased lung capacity and increased insulin.</p>
	<p><b>Time/Duration:</b> [...] increased tiredness; a little stressed.</p>
	<p><b>Quality:</b> [...] very serious prostate problem; high/peak high blood pressure; less exercise and anemia.</p>
	<p><b>Suffering:</b> [...] shortness of breath; increased rheumatic pain; inability to ejaculate and loss of taste.</p>

Source: Research data.

**Chart 2.** Psychological unpleasant symptoms experienced by elderly men in the pandemic of COVID-19. Salvador (BA), Brazil, 2021.

Psychological unpleasant symptoms	
<p>[...] The pandemic altered my mood and generated a lack of concentration, and a worsening in mental health, because I started to be apprehensive, and tense, with negative feelings of helplessness, sadness, fear, grief, and anger over the death of close ones, lack of control and emotional declines such as panic, discouragement, impatience, irritability, generalized anxiety attacks, stress, and depression, for not being able to do some things I like, in addition to changes in sleep such as insomnia and sleepiness. [...] worsening in mental health [...] losses [...] fear of COVID-19 [...] stress. (DCS of elderly men during the pandemic)</p>	<p><b>Intensity:</b> [...] anxiety; [...] stress and depression.</p>
	<p><b>Time/duration:</b> [...] increased worry [...] more anger.</p>
	<p><b>Quality:</b> [...] a little anxiety [...] anxiety crisis [...] generalized anxiety and altered mood.</p>
	<p><b>Suffering:</b> [...] insomnia; [...] sleepiness; [...] irritability and extremely apprehensive.</p>

Source: Research data.

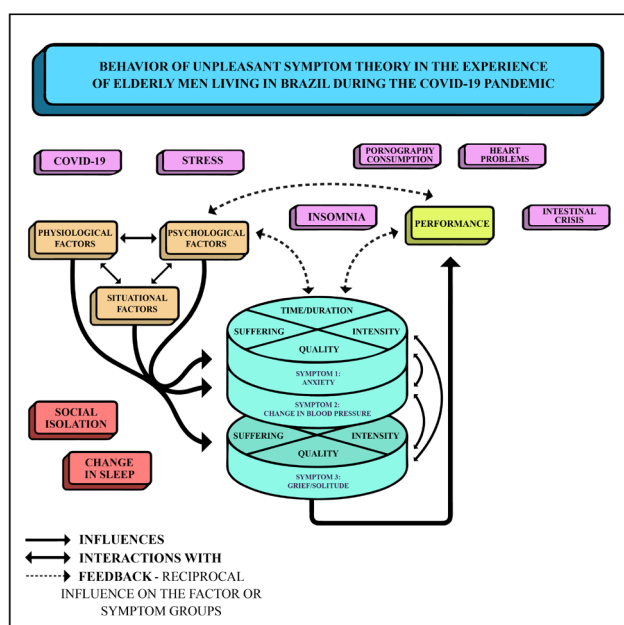
**Chart 3.** Situational unpleasant symptoms experienced by elderly men in two years of the COVID-19 pandemic, Salvador (Bahia), Brazil, 2021.

Situational Unpleasant Symptoms	
<p>[...]I had my health impacted due to the social isolation that altered our daily habits, the absence of freedom, the lack of leisure, and the distance from people that occurred due to the reduction of affective encounters among family members, friends, and the collective as a whole, a fact that caused a period of adaptation because it altered my life dynamics by having to deal with the fact that I was alone. I began to have poor interaction because of family and coexistence problems, which caused a change in my well-being. I felt an absence of true information and a lot of access to experience fake news and the political-party conflicts of disastrous federal misgovernment of dictatorial ideology and business interests, which made me increase my alcohol intake. (DCS of the elderly men during the pandemic)</p>	<p><b>Intensity:</b> [...] absence of freedom [...] lack of leisure</p>
	<p><b>Time/duration:</b> [...] increased alcohol intake; [...] social isolation [...] lack of information.</p>
	<p><b>Quality:</b> [...] change in well-being.</p>
	<p><b>Sofrimento:</b> [...] family problems.</p>

Source: Research data.



create subjectivity about what comes to be a symptom and the influential factors of its four dimensions. Symptoms 1 (anxiety), 2 (change in blood pressure), and 3 (grief and loneliness) influenced the elderly men to present performance results by experiencing them which, in turn, received the influences of the physiological (COVID-19), psychological (stress), and situational (social isolation and sleep alteration) influential factors which, finally, determined the dimensions of intensity, quality, time/duration, and suffering of the symptom(s) reported in the speeches. It can be observed that there is a dynamic interaction between the components of the UST and the results obtained, which can be seen in Figure 1.



**Figure 1.** Pictogram of the dynamic interaction between the methodological components of the UST and the results found. Salvador (Bahia), Brazil, 2021.

Source: Adapted research data.<sup>3,5</sup>

## DISCUSSION

The potentialities are focused on the subjective interpretation of the experience in experiencing unpleasant symptoms without their management in an isolated manner or in a specific disease, but rather, in the interpretative elucidation of the process in a dynamic manner, as the participants were able to identify the several symptoms involving the biopsychosocial aspects which established interactions among them throughout two years of the pandemic. Therefore, this study becomes a scientific potential due to the fact that it developed an analytical character on a set of symptoms that, empirically, had causal relations and that deserve a more systematized approach.

Such potentializing characteristics go beyond the conventional and medicalizing model of the health system, as the need presented has a complex causal multi-etiology that will require more dynamic care devices from Nursing, and that will take into

consideration the aspects of affection and effectiveness<sup>12</sup> necessary when preparing a plan with social, psychological, cognitive, and functional prescriptions for the elderly, with the results intended to achieve symptomatological damping. In this aspect, the possibility of using the UST arises, as there is a focus on the perceived subjectivity of the symptoms instead of the observable objectivity in the signs<sup>3</sup> that, based on the data obtained and analyzed, it was possible to achieve greater concreteness about what the population is facing.

This confrontation, therefore, appears as a syndemia<sup>13</sup> of COVID-19, due to the fact that cascades of adverse events, rooted in unpleasant symptoms of diverse etiology, are present among the participants' statements, making it necessary to interpret what is subjective. The results brought nothing more than a strong connection between the occurrence of two or more symptoms in the same elderly male being who, in turn, has experienced diverse symptoms with the synergistic characteristics between one and the other, giving body and logical shape to the critical thought of a covidic syndemic. Diverse aspects such as denialism, conspiracism, political and religious fundamentalism, and anti-scientific conduct have been related to the emergence of this epidemiological scenario.<sup>14</sup>

The origin of the neologism syndemia occurred through the interpretation of the association between obesity, malnutrition and climate change on a global scale,<sup>15</sup> which translates a thought that the problems considered epidemic are associated with each other in a synergistic manner and launch a shared challenge for all humanity,<sup>14</sup> which in this sense, the data found are anchored in such syndemic concepts, for having a higher frequency of symptoms of altered blood pressure, anxiety, loneliness, and other sequelae that, besides their connections, also meet the results already brought in previous evidence,<sup>16,17</sup> about the main signs and symptoms arising from COVID-19, which are: cognitive memory disturbances, ageusia, anosmia, myalgia, weakness, thrombosis, dyspnea, fever, depression, anxiety, insomnia, and other sleep disorders, reported in both the acute and post-acute phases of the infection, persisting for more than six months from diagnosis, and with much limitation on the causal relationship between the virus and the lingering sequelae, with emotional stress cited by participants as a disruptive pattern trigger for relapses and relapses to the varied permanent sequelae.<sup>16</sup>

Evidence<sup>18</sup> shows that the pandemic influenced the increase in blood pressure values associated with physical isolation, becoming a complicating factor, as it reduced the practice of physical activity and contributed to weight gain, to psycho-emotional symptoms,<sup>19,20</sup> linked to unemployment, to the drop in income, in which people started eating more and less healthy, giving rise to a causal dynamic and correlation also with sedentarism, in addition to the discontinuity of care in basic health units, thus forming a cluster of unpleasant symptoms.<sup>3</sup> It is worth mentioning that physical activity is a stress and anxiety-controlling factor that provides great benefits to the cardiovascular, metabolic, and immunological systems.<sup>21</sup> However, the triad of a sedentary lifestyle, unemployment, and decreasing income has contributed

exponentially to the emergence of clinical decompensation in the elderly male population, and has triggered serious secondary events such as arrhythmias, acute myocardial injury, strokes, exacerbated fear, and acute panic attacks.<sup>22,23</sup> Added to this, alcohol abuse and even signs and behaviors for depression emerged, due to the susceptibility of psychological distress related to the viral infection.<sup>24</sup> That is, according to the UST, another cluster<sup>5</sup> emerged from COVID-19. In this matter, it is proposed to perform physical activity, in a domestic environment, guided by specialized professionals for its therapeutic effect, which reduces the levels of stress and anxiety, benefiting the quality of sleep.<sup>20</sup>

Thus, the reported lack of concentration, weakness, anxiety, anger, discouragement, and loss of energy, along with the perceived stress linked to the inconsistency of government and unstable health measures, generated insecurity, fear, and depression,<sup>25,26</sup> causing the elements of UST to characterize the analyzed data according to their way of relating to each other through their influential factors, the dimensions of their symptoms, and the performance of the experience in experiencing them, taking into consideration the plurality of clinical manifestations that emerged and were framed in its constructs.<sup>5</sup>

The psychobiological, psychosocial, and psychospiritual repercussions of physical and social isolation, which caused alterations in the health situation and interfered in the well-being and quality of life of the elderly, requiring the action of Nursing professionals in face of this matter, for the prevention of illness and its complications in the lives of the elderly. Social isolation here can be considered a situational influential factor that generated signs and symptoms such as loneliness, the imposition of lack of freedom, and sedentarism which, in turn, can be considered both a symptom and another influential factor for the triggering anxiety and stress.<sup>27</sup>

Evidence<sup>28</sup> indicates that the male population presents a strong relationship between high levels of perceived stress and intolerance to uncertainty, with the occurrence of common mental disorders that include stress, anxiety, and depression, implicating Nursing, for the implementation of interventions that reduce the sources that generate stress, as well as to promote community resilience that allows the occupation of time with meaningful and pleasurable activities in the midst of social isolation,<sup>27</sup> which is also considered a geriatric syndrome, defined as clinical conditions of multifactorial origin, often found in the elderly, capable of directly interfering with the quality of life and well-being of the elderly, as they cause a decline in their functional capacity and result in high rates of morbidity and mortality.<sup>24</sup>

In analyzing the survey data, propositions that the influential category of situational and physiological factors generated psychological, emotional, and cognitive symptoms were established. An example of this would be the report of hand tremors that occurred in the same participant who reported psychological and cognitive symptoms such as stress and forgetfulness. The influential category of situational factors grouped a series of events such as work overload and feeling abandoned by the state, which contributed to the increase of mental symptoms such as anguish, lack of concentration, and fear of the pandemic,

in addition to physiological symptoms such as intestinal crisis and alteration of cholesterol and insulin rates. At this point, COVID-19 can be considered as a physiological symptom-generating influencing factor that, therefore, a weighty predictor for understanding the acute and post-acute consequences of COVID-19, whether infection-related or not, should be centered on people's experiences and lives,<sup>16</sup> in this case, elderly men.

The fact that the elderly men reported a variety of the same symptomatology such as a little anxiety, anxiety crisis, and generalized anxiety, makes the dimension of the quality of the symptom an important indicator, capable of systematically distinguishing a pathological state or stage of progression from one symptom to another, by means of valuable clues for the evaluation and effective management of symptoms, depending on the patient's ability to articulate what he is experiencing.<sup>3</sup>

Thus, it can be stated that COVID-19 produced multivariate psycho-emotional symptomatology with a manifestation of highly stressful and anxiogenic load in elderly men, motivated by restriction of previous habits and loss of significant people. Evidence of insomnia, sleepiness, irritability, and being extremely apprehensive were grouped together for the exemplification of the distress dimension. Among these, they highlighted anxiety, depression, insomnia, and stress as similar symptoms among the discourse synthesis, that is, there was a repetition of such symptoms among the individual discourses, which until then were related to psychological factors.

In this sense, the multidimensional aspect of symptom clusters aims to understand the simultaneous frequency of relationships and interactions of different symptoms that arise in certain pathological situations,<sup>3</sup> but it establishes for researchers, an implicit relationship between symptom dimensions, their influencing categories, and their performance outcomes<sup>5</sup> that should be explored, interpreted, adapted, and incorporated into nursing science and practice whenever the need arises.

Such a scenario has required the promotion of new forms of interaction for elderly men, which have seen, as a performance result, the rise of virtual interactions, remote medical and nursing appointments,<sup>29,30</sup> even religious events and workouts made available and guided online,<sup>20</sup> meditation practices gardening, and reading,<sup>31</sup> which have led to increased resilience<sup>32</sup> and the development of intrinsic reinforcement to cope with uncertain threats, with great opportunities for intergenerationality among family members, with the cognitive and functional benefits, buffering the peculiar signs and symptoms, as age extends.<sup>24</sup> It is worth noting that, in general, the elderly do not have familiarity with technologies, and will require from Nursing professionals a constructive work of digital literacy, capable of reducing the deleterious effects of physical isolation, challenges that must be shared with the reformulation of public policies and new configurations for the coordination and management in Brazilian health, which must establish the strategies for strengthening the UHS amid the new post-pandemic scenario.<sup>23,33</sup>

Therefore, the statements presented similarities of symptoms, and this brings considerations anchored in reflections for the

practice of nursing through biopsychosocial care, taking into account the concern with oneself and with others from an existentialist perspective. Therefore, based on this, Nursing can base itself on the diversity of feelings expressed, since evidence pointed out that elderly men suffer and feel pain, and that in a diversity of situations, it does not have a physical-physiological origin.<sup>34</sup>

## CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

The study showed that the syndemic exposure to COVID-19 gave rise to clusters of unpleasant symptoms, of a biopsychosocial nature, in the health of elderly Brazilian men, with the possibility of structuring new professional care by the Nursing practice, based on the relational factors between the onset of one symptom and the other. Meanwhile, the findings of this research may arouse interest in new forms of care production by nurses, such as in the prescription of non-pharmacological interventions and in their clinical performance in supporting the health care of elderly men, which will stimulate the re-signification of already consolidated practices and their increments, from the perspective of nurses' performance in virtual environments that subsidize digital health.

In addition, the study contributes to the strengthening of teaching and the use of Nursing theories that corroborate with clinical practice by directing the evaluation of unpleasant symptoms from the recognition of human responses affecting the health of elderly men.

The study brings as an obstacle the fact that it was developed in a virtual environment, so some limitations are inherent to Internet access, which may determine biases in the selection of participants. Furthermore, access was restricted to a profile of elderly men with greater digital literacy, and it was not possible to reach a sample with a lower level of education and without access to different forms of digital inclusion. It is also observed the scarcity of sufficient studies that discuss the positioning of Nursing in face of the management of the clinical repercussions of COVID-19, which brought discomforts in the ways of being the target audience, a fact that prevented the realization of a supervised follow-up, as the unpleasant symptoms appeared.

Original studies on the applicability of the UST in the investigated population are still rare, implying the difficulty in managing the different symptoms by Nursing professionals, which justifies the technical and scientific need for this study for the creation of new coping strategies, suggesting the production of new experiments with new reflections on the theme and in the clinical practice of nurses. It is necessary to develop new studies to monitor the evolution of unpleasant symptoms brought by COVID-19 and its consequences for the health of elderly men, considering the vulnerability of this population.

## AUTHOR'S CONTRIBUTIONS

Study design. Vinícius de Oliveira Muniz. Anderson Reis de Sousa. Priscila Oliveira de Araújo.

Data collection. Vinícius de Oliveira Muniz. Anderson Reis de Sousa. Franciele Silva dos Santos. Evanilda Souza de Santana Carvalho.

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## REFERENCES

- Leite VF, Rampim DB, Jorge VC, Lima MCC, Cezarino LG, Rocha CN et al. Persistent symptoms and disability after COVID-19 hospitalization: data from a comprehensive telerehabilitation program. *Arch Phys Med Rehabil*. 2021;102(7):1308-16. <http://dx.doi.org/10.1016/j.apmr.2021.03.001>. PMID:33711279.
- Nalbandian A, Sehgal K, Gupta A, Madhavan MV, McGroder C, Stevens JS et al. Post-acute Covid-19-19 syndrome. *Nat Med*. 2021;27(4):601-15. <http://dx.doi.org/10.1038/s41591-021-01283-z>. PMID:33753937.
- Lenz ER, Pugh LC. The theory of unpleasant symptoms. cap. 8. In: Liehr P, Smith MJ, editores. *Middle range theory for nursing*. 14<sup>th</sup> ed. New York: Springer Publishing Company; 2018. 690 p. <http://dx.doi.org/10.1891/9780826159922.0009>.
- Lopes-Júnior LC, Tuma MC, Amorim MHC. Psychoneuroimmunology and oncology nursing: a theoretical study. *Rev Esc Enferm USP*. 2021;55:e20210159. <http://dx.doi.org/10.1590/1980-220x-reeusp-2021-0159>. PMID:34516609.
- Gomes GLL, Oliveira FMRL, Barbosa KTF, Medeiros ACT, Fernandes MGM, Nóbrega MML. Theory of unpleasant symptoms: critical analysis. *Texto Contexto Enferm*. 2019;28:e20170222. <http://dx.doi.org/10.1590/1980-265x-tce-2017-0222>.
- Veras RP, Oliveira M. Envelhecer no Brasil: a construção de um modelo de cuidado. *Cien Saude Colet*. 2018;23(6):1929-36. <http://dx.doi.org/10.1590/1413-81232018236.04722018>. PMID:29972500.
- Patias ND, Hohendorff JV. Quality criteria for qualitative research articles. *Psicol Estud*. 2019;24:e43536. <http://dx.doi.org/10.4025/psicoestud.v24i0.43536>.
- Minayo MCS. Amostragem e saturação em pesquisa qualitativa: consensos e controvérsias. *Rev Pesq Qualit [Internet]*. 2017; [citado



- 2022 jul 6];5(7):1-12. Disponível em: <https://editora.sepq.org.br/rpq/article/view/82/59>
9. Lefreve F. Discurso do sujeito coletivo: nossos modos de pensar nosso eu coletivo. 1ª ed. São Paulo: Andreoli, 2017. 90 p.
  10. Santos LS, Santos Jr CJ, Silva MR, Zimpel SA. Metodologia do discurso do sujeito coletivo na avaliação das contribuições de um projeto de extensão universitária. *Rev Docência Ens Sup.* 2020;10:1-17. <http://dx.doi.org/10.35699/2237-5864.2020.16197>.
  11. Özel F, Türeyen AE, Şenuzun Aykar F, Keser G. Development and testing of a novel symptom assessment scale for Behçet's disease. *Turk J Med Sci.* 2018;48(3):491-502. <http://dx.doi.org/10.3906/sag-1706-123>. PMID:29914243.
  12. Sousa AR, Oliveira JA, Almeida MS, Pereira A, Almeida ES, Vergara Escobar OJ. Implementation of the National Policy for Comprehensive Attention to Men's Health: challenges experienced by nurses. *Rev Esc Enferm USP.* 2021;55:e03759. <http://dx.doi.org/10.1590/s1980-220x2020023603759>. PMID:34287486.
  13. Bispo Jr JP, Santos DBD. COVID-19 as a syndemic: a theoretical model and foundations for a comprehensive approach in health. *Cad Saude Publica.* 2021;37(10):e00119021. <http://dx.doi.org/10.1590/0102-311x00119021>. PMID:34644754.
  14. Veiga-Neto A. One more lesson: Covid syndemic and education. *Educ Real.* 2020;45(4):e109337. <http://dx.doi.org/10.1590/2175-6236109337>.
  15. Peres J, Matioli V, Swindurn B, Boyd Swinburn, a sindemia global e a classificação NOVA. *Cad Saude Publica.* 2021;37(Suppl. 1):e00312520. <http://dx.doi.org/10.1590/0102-311x00312520>.
  16. Nolen LT, Mukerji SS, Mejia NI. Post-acute neurological consequences of COVID-19: an unequal burden. *Nat Med.* 2022;28(1):20-3. <http://dx.doi.org/10.1038/s41591-021-01647-5>. PMID:35039657.
  17. Melchers M, Festen B, Dekker BM, Mooren ERM, Binsbergen AL, Bree SHW et al. A 67-year-old male patient with COVID-19 with worsening respiratory function and acute kidney failure. *Chest.* 2022;161(1):e5-11. <http://dx.doi.org/10.1016/j.chest.2021.08.045>. PMID:35000717.
  18. Silva WBH, Côrtes EMP, Lima TA, Gouvêa NA, Marta CB, Ferreira MA et al. What did the COVID-19 pandemic do to systemic blood pressure? *Glob Acad Nurs.* 2021;2(spe 2):e105. <http://dx.doi.org/10.5935/2675-5602.20200105>.
  19. Botero JP, Farah BQ, Correia MA, Lofrano-Prado MC, Cucato GG, Shumate G et al. Impacto da permanência em casa e do isolamento social, em função da COVID-19, sobre o nível de atividade física e o comportamento sedentário em adultos brasileiros. *Einstein.* 2021;19:eAE6156. [http://dx.doi.org/10.31744/einstein\\_journal/2021AE6156](http://dx.doi.org/10.31744/einstein_journal/2021AE6156). PMID:33681886.
  20. Cruz LMC, Pires MM, Reis VMN, Chaves AD, Nascimento CAC. Physical exercise, food intake and anxiety/stress status among participants of the MOVIP Project in the midst of the COVID-19 pandemic. *HU Rev.* 2021;47:1-6. <http://dx.doi.org/10.34019/1982-8047.2021.v47.32209>.
  21. Pitanga FJG, Beck CC, Pitanga CPS. Atividade física e redução do comportamento sedentário durante a pandemia do coronavírus. *Arq Bras Cardiol.* 2020;114(6):1058-60. <http://dx.doi.org/10.36660/abc.20200238>. PMID:32638894.
  22. Lemos FA, Almeida MC. Principais complicações cardíacas em idosos infectados pelo SARS-CoV-2: uma revisão sistemática. *R Pesq Cuid Fundam.* 2022;14:e10517. <http://dx.doi.org/10.9789/2175-5361.rpcf.v14.10517>.
  23. Nabuco G, Oliveira MHPP, Afonso MPD. O impacto da pandemia pela COVID-19 na saúde mental: qual é o papel da Atenção Primária à Saúde? *Rev Bras Med Fam Comunidade.* 2020;15(42):2532. [http://dx.doi.org/10.5712/rbmfc15\(42\)2532](http://dx.doi.org/10.5712/rbmfc15(42)2532).
  24. Caldas CP, Silva BMC. Ressignificação do cuidado de enfermagem ao idoso no mundo pós- pandemia Covid-19. In: Santana RF, editor. *Enfermagem gerontológica no cuidado do idoso em tempos da COVID 19.* Brasília: Editora ABen; 2021. 171 p. (Serie Enfermagem e Pandemias, 5). <http://dx.doi.org/10.51234/aben.21.e05.c22>.
  25. Silva JK, Albuquerque SC, Santos SSN, Santos VMF, Farias KF, Figueiredo EVMS et al. The relationship between coronavirus infection and susceptibility to mental disorders and suicide risk: what is the literature evidencing? *J Health Biol Sci.* 2020;8(1):1-7.
  26. Pedrozo-Pupo JC, Pedrozo-Cortés MJ, Campo-Arias A. Perceived stress associated with COVID-19 epidemic in Colombia: an online survey. *Cad Saude Publica.* 2020;36(5):e00090520. <http://dx.doi.org/10.1590/0102-311x00090520>. PMID:32490918.
  27. Freitas AVS, Menezes TMO, Pedreira LC, Amaral JB. Repercussões do isolamento social de pessoas idosas durante a pandemia da COVID-19. *Rev Baiana Enferm.* 2022;36:e37598. <http://dx.doi.org/10.18471/rbe.v36.37598>.
  28. de Sousa AR, Teixeira JRB, Palma EMS, Moreira WC, Santos MB, Carvalho HEF et al. Psychological distress in men during the COVID-19 Pandemic in Brazil: The Role of the Sociodemographic Variables, Uncertainty, and Social Support. *Int J Environ Res Public Health.* 2021;19(1):350. <http://dx.doi.org/10.3390/ijerph19010350>. PMID:35010610.
  29. Paloski GR, Barlem JGT, Brum AN, Barlem ELD, Rocha LP, Castanheira JS. Contribuição do telessaúde para o enfrentamento da COVID-19. *Esc Anna Nery.* 2020;24(spe):e20200287. <http://dx.doi.org/10.1590/2177-9465-ean-2020-0287>.
  30. Iodice F, Cassano V, Rossini PM. Direct and indirect neurological, cognitive, and behavioral effects of COVID-19 on the healthy elderly, mild-cognitive-impairment, and Alzheimer's disease populations. *Neurol Sci.* 2021;42(2):455-65. <http://dx.doi.org/10.1007/s10072-020-04902-8>. PMID:33409824.
  31. Muniz VO, Braga LCA, Araújo PO, Santana PPC, Pereira GS, Sousa AR et al. Self-care deficit among older men in the COVID-19 pandemic: implications for nursing. *Rev Bras Enferm.* 2022;(75, Suppl 4):e20210933. <http://dx.doi.org/10.1590/0034-7167-2021-0933pt>. PMID:36287487.
  32. Fernandes ETP, Souza MNL, Rodrigues SM. Group practices of the family health support center: users' perspective. *Physis.* 2019;29(1):e290115. <http://dx.doi.org/10.1590/s0103-73312019290115>.
  33. Gleriano JS, Fabro GCR, Tomaz WB, Goulart BF, Chaves LDP. Reflexões sobre a gestão do Sistema Único de Saúde para a coordenação no enfrentamento da COVID-19. *Esc Anna Nery.* 2020;24(spe):e20200188. <http://dx.doi.org/10.1590/2177-9465-ean-2020-0188>.
  34. Sousa AR, Queiroz AM, Florêncio RMS, Alves GV, Pedreira LC, Teixeira E. Meanings and perspectives of men on what they lived during the COVID-19 pandemic. *Rev Esc Enferm USP.* 2021;55:e03763. <http://dx.doi.org/10.1590/s1980-220x202004603763>. PMID:34346968.