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Social distancing and environmental stressors in homes during times of COVID-19: an Environmental Psychology perspective

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Abstract

The objective was to investigate the factors that generate stress in the residential environment of Brazilians during the social distancing measures that were established to control the pandemic of COVID-19. A survey was carried out with 2,000 Brazilians, who answered a sociodemographic questionnaire and a trigger question, with the results respectively analyzed using descriptive statistics in the SPSS software and textual analysis in IRaMuTeQ. The results were organized into five classes that portray factors relating to the Environmental Stress experienced during this period: "The coexistence house" indicates Crowding and loss of privacy; "The sheltering house" is portrayed as a secure and rooted environment; "The sickness house" signals the relationship with mental health problems; "The multifunctional house" demonstrates the need to organize routine and spaces; and "The closed house" exposes the difficulties in regard to the restriction of mobility and with the physical characteristics of the house. It is concluded that the change in the home environment caused stress and, in turn, environmental comfort is a restoration strategy.
Keywords: environmental psychology; coronavirus; social isolation; psychological stress.

Resumo

Distanciamento social e os fatores de estresse ambiental nas residências em tempos de COVID- 19: uma perspectiva da Psicologia Ambiental. Objetivou-se investigar os fatores geradores de estresse no ambiente residencial de brasileiros durante o distanciamento social estabelecido para controle da pandemia de COVID-19. Realizou-se uma pesquisa de levantamento, com 2.000 brasileiros, que responderam a um questionário sociodemográfico e uma pergunta disparadora, respectivamente analisados por meio de estatística descritiva no *software* SPSS e análise textual no IRaMuTeQ. Os resultados organizaram-se em cinco classes que retratam fatores relacionados ao Estresse Ambiental vivenciado nesse período: "A casa convivência" indica Aglomeração e perda da privacidade; "A casa abrigo" é retratada como ambiente de segurança e enraizamento; "A casa adoecimento" sinaliza a relação com problemas de saúde mental; "A casa multifuncional" demonstra a necessidade de organização da rotina e dos espaços; e "A casa fechada" expõe as dificuldades com a restrição da Mobilidade e com características físicas da casa. Conclui-se que a alteração no ambiente residencial provocou estresse e, por sua vez, o conforto ambiental é uma estratégia de restauração.
Palavras-chave: psicologia ambiental; coronavírus; isolamento social; estresse psicológico.

Resumen

Aislamiento social y estresores ambientales en los hogares en tiempos de COVID-19: una perspectiva desde la psicología ambiental. El objetivo fue investigar los factores que generan estrés en el ambiente residencial de los brasileños durante el aislamiento social establecido para controlar la pandemia de COVID-19. Se realizó una encuesta con 2.000 brasileños que respondieron un cuestionario sociodemográfico y una pregunta disparadora. Los datos se analizaron, respectivamente, utilizando estadísticas descriptivas en el software SPSS y análisis de texto en IRaMuTeQ. Los resultados se organizaron en cinco clases que representan los factores relacionados con el estrés ambiental experimentado en este período: "La casa coexistência" indica aglomeración y pérdida de privacidad; "La casa refugio" se presenta como un ambiente de seguridad y enraizamiento; "La casa enfermedad" señalan la relación con los problemas de salud mental; "La casa multifuncional" demuestra la necesidad de organizar la rutina y los espacios; y "La casa cerrada" expone las dificultades con la movilidad restringida y las características físicas de la casa. Se concluyó que la alteración en el ambiente residencial provocó estrés, a su vez, el confort ambiental es una estrategia de restauración.
Palabras clave: psicología ambiental; coronavirus; aislamiento social; estrés psicológico.

Environmental Psychology is an important area of knowledge that is structured in an interdisciplinary manner, bringing together knowledge from Architecture, Geography, Anthropology, and Sociology among other areas. It focuses on an object of study, not on a specific area of knowledge, dedicating itself to understanding the interrelationships between person-environment (Elali, 1997; Pachêco, Ferreira, & Baquit, 2020).

Thus, it is essential to understand what "Environment" means for Environmental Psychology. Some authors (Campos-de-Carvalho, Cavalcante, & Nóbrega, 2017; Ittelson, Proshansky, Rivlin, & Winkel, 1974; Rivlin, 2003) point out that the environment is multidimensional. It consists of the physical environment - be it natural or built, as well as the context in which that environment is found - social, economic, political and cultural.

The symbolic value of the environment is emphasized, since it produces in individuals memories, feelings and meanings that transform spaces into places. The term "Space" can be understood as the physical aspect of the environment and the concept of "Place" refers to the dimension of the symbolic universe, bringing together individual and collective stories, identities and meanings through the experiences lived in the spaces (Klein, Kuhnen, & Olekszechen, 2017; Leite, 2018; Tuan, 1983).

Progressing further, Environmental Psychology states that everything that is present in a given environment is part of its constitution, including furniture, objects and people. All these aspects together form an inseparable unit, which is neither static nor immutable, that is, effecting a change in the physical or social environment will invariably influence people's subjectivity and vice versa (Campos-de-Carvalho et al., 2017; Ittelson et al., 1974; Rivlin, 2003).

The emergence of the pandemic has impacted in many aspects the environments of daily living, especially in the space of the house. Systematically, it can be understood that this process started with the discovery of the new Coronavirus, at the end of 2019, in Central China, in the city of Wuhan (Aquino et al., 2020, Oliveira, Lucas, & Iquiapaza, 2020). Within a few months, the virus spread to other countries, gaining global dimensions and the classification of pandemic (Aquino et al., 2020), quickly leading the World Health Organization (WHO) to declare a public health emergency.

The ease of contagion and the large number of deaths resulted in the implementation of control measures in several countries around the world, in an attempt to mitigate the rapid spread of the virus (Oliveira et al., 2020). Progressively, Social Distancing measures have been implemented, these include raising awareness so that everyone voluntarily "stays at home", in order to prevent them from becoming sick or even just becoming vectors of contamination. Added to this proposal, there have been actions such as the closing of schools and universities, and the prohibition of events that generate agglomerations (Aquino et al., 2020; Bezerra, Silva, Soares, & Silva, 2020; Haesbaert, 2020). In more extreme situations of the need for Social Distancing, the government can implement a lockdown, which consists of a rigorous intervention, applied to the entire community, with the blocking of streets and imposing that people remain in their homes, being allowed to leave only for services considered essential (Aquino et al., 2020; Faro et al., 2020).

Non-pharmacological control measures are perceived as necessary for the containment of viral dissemination, however, they generate impacts on the countless aspects that make up people's daily environment. Distancing from friends and family, loss of freedom to come and go, mandatory use of masks, and neighborhood monitoring, among other factors, can trigger stress (Faro et al., 2020; Haesbaert, 2020; Silveira & Kuhnen, 2019; Spink, 2015; Zwielewski et al., 2020).

The environment has a determining role in our health and can be associated with stress (Khan, 2020), especially in the residential environment. According to Günther and Fragelli (2017), Environmental Stress refers to an existing condition in the environment and is not limited to an artifact created by the mind. It refers to a set of reactions that occur when facing situations of negative effects in a location. These reactions aim to return the individual to a state of equilibrium. All of the characteristics of the environment considered unfavorable and the psychosocial conditions that people consider stressful are called stressors.

During the period of social distancing, characteristics of a multifunctional environment were imposed on the home environment, changing the relationship of residents with the place and also between themselves. Thus, the concept of Spatial Arrangement is one of the most important when considering the home environment in a pandemic period. This concept is related to the layout and adaptations of the house, directly influencing daily living. This organization expresses messages, values and rules for people inserted in this space (Klein et al., 2017; Leite, 2018; Silvestrin, Kuhnen, & Tribéss, 2019).

The home can also be perceived as a healthy environment, that is, a Restorative Environment, being one that provides the renewal of directed attention and the reduction of mental fatigue. To achieve this, the environment must contain four main characteristics: the possibility of physical and cognitive escape; the scope through the perception of an involvement with the environment; the fascination that awakens the sense of being connected to the environment; and compatibility, insofar as the environment offers people what they want at that moment (Alves, 2017).

In addition to an adequate Spatial Arrangement, a Restorative Environment allows its inhabitant to regulate Privacy (Altman, 1975; Cavalcante & Pinheiro, 2018) and Personal Space (Sommer, 2018). Dealing with this process of approach and distance effectively contributes to the formation of self-identity. This occurs in the understanding that, for the definition and psychological understanding of oneself as unique, it is necessary to know which aspects of the physical and social environment are constituent parts of themselves and which aspects are parts of others (Pinheiro & Elali, 2017).

To understand how we use space in social interactions, the concept of Privacy becomes central to this discussion. This concept encompasses the concepts of Territoriality, Agglomeration and Personal Space (Altman, 1975, 1976). Privacy is defined as the exercise of regulation that is made in regard to the access of others to us and our information. This access can be visual, auditory and olfactory. This regulation is clearly mediated by space and characteristics, both individual and cultural. The regulation of Privacy involves a continuous dynamic, since it occurs both in moments of intense interaction with other people as well as in moments in which interactions cease and we are alone. In this process, the physical environment is used as a way of regulating the degree of social interaction. This management is done by regulating access by visual, auditory and olfactory contact (Altman, 1975; Cavalcante & Pinheiro, 2018; Pinheiro & Elali, 2017).

Territoriality is considered as a set of representations, standards of conduct and attitudes of personal or collective investments with intentional control in a territory in line with time, and with social and cultural aspects. The territory can be classified into primary, secondary or tertiary territories according to the degree of control of use and according to the length of stay (Higuchi & Theodovitz 2018).

Primary territories are those that allow for greater privacy and therefore allow more control over them. The house is an example, where you can stay as long as necessary, as well as desired, and control the access of other people. The secondary territory is one in which there is a high degree of permanence, but less control of the territory, for example, the workplace. Control is linked to the length of employment. The tertiary territory is the most temporary of the three types, also called public space, but not restricted to it. The control of access to space is low, that is, there are no rigid barriers to its use, but there are social agreements. For example, we can mention the feeling of understanding shared by students in a university classroom when, based only on the daily use of the place, they assume which chairs "belong" to each one. Thus, the permanence is quite temporary and the regulation of access is low (Russell & Ward, 1982).

The Personal Space refers to the interpersonal distance necessary for personal interaction (Sommer, 1973). It can be considered a non-verbal behavior and its adjustment is made during the moment of the interaction. Agglomeration is the experience of having your Personal Space invaded. It can be calculated by the people / space ratio, thus deriving density, but it is a psychological variable that changes depending on individual, social, and cultural characteristics and, more specifically, depending on the activity that is happening in that particular place, it can be called the experience of Crowding (Altman, 1975, 1976)

The selective control of access to the "I" can be exercised from some aspect of the Spatial Arrangement, such as having a private place. In the absence of this possibility, interpersonal behaviors appear that help to achieve desirable intimacy (Pinheiro & Elali, 2017). The basic notion of social comfort comes from respecting the Personal Space of each person. For the comfortable adjustment of interpersonal distances and maintenance of Privacy and Personal Space, it is necessary that the person has full Mobility.

The concept of Mobility, in turn, presents itself as one of the most important for understanding the effects of social distancing on the health of the population, as it is a natural function of the human being, and has come to be controlled by the government and social surveillance. Mobility can be understood as the set of activities of the individual and the society that integrates the acts of displacement (Cavalcante, Mourão, & Ferreira, 2018).

Based on this understanding, it is questioned to what extent the Social Distancing Policy provides an increase in the level of Environmental Stress in Brazilian homes and causes changes in the way people relate to their families and homes. The house is commonly

seen as a primary territory (Altman, 1975; Higuchi & Theodorovits, 2018), which plays the role of a private place for family coexistence, protection and rest, which leads to the feeling of rootedness (Massola, & Svartman, 2018).

In addition, it is clear that, during the period of social distancing, features of functions such as: work place, study and leisure have been added to the home. This generates important changes in the environment, which can influence the feeling of invasion of privacy, discomfort, increased family conflicts and stress (Bezerra et al., 2020). In this way, the home environment, which used to be an exclusively primary territory, starts to have characteristics of a secondary territory, where the degree of privacy is significantly lower, such as, for example, the work environment. This new dynamic caused by the overload of functions on the home environment, added to the limitations, fears and uncertainties generated by the situation of social distancing and by COVID-19 can generate Environmental Stress.

In view of the complexity of factors that concern human habitation, it is essential to understand the countless experiences of living in residential environments during the COVID-19 pandemic. To meet this demand, researchers in Environmental and Health Psychology are invited to provide answers, supplying international scientific databases and aiding decision-making for more effective preventive care plans during the pandemic and post-pandemic recovery. In response to this demand, the objective is to analyze and discuss the factors that generate residential Environmental Stress in Brazilians during social distancing established as a measure of pandemic control.

Method

Study Design

This is a descriptive, exploratory, national study using the approach of a qualitative study. Through this type of research, it was possible to cover a sample size and describe the phenomenon in a broader and deeper way, from the direct questioning of the participants, and by collecting their experiences (Ferreira, 2015).

Sample

There was a non-probabilistic sample, for convenience, made up of 2,000 Brazilians. As an inclusion criterion, the following was considered: living in Brazil and being over 18 years of age.

Instruments

Participants answered a questionnaire consisting of two parts:

- Sociodemographic data structured questions that addressed sex, age, region of the country where they live, family income and number of people in social isolation in the house;
- Open questionnaire with a single trigger question "Is staying at home during social isolation causing you some level of stress? Explain.

Collection Procedures and Ethical Aspects

The study was approved by the Research Ethics Committee, with ruling No. 4,014,996. For data collection, an online form was generated with the aforementioned instruments. The distribution of the form took place over 15 days (8-22 May / 2020), through posting the link and providing access to the form on social networks, newspaper reports and digital portals. People accompanying these medias were able to autonomously enter the instrument and answer it individually, by themselves and anonymously, with an average duration of 15 minutes. It is highlighted that the ethical aspects for research with human beings required by Resolution No. 466/12 of the National Health Council were respected.

Data Analysis

The data were analyzed in two stages.

Sociodemographic data were analyzed using descriptive statistics (relative and absolute frequency and measures of central tendency and dispersion), with the aid of the software Statistical Package for Social Science (SPSS), version 25.

The comments from the open questionnaire on Environmental Stress were analyzed with the aid of the software *Interface de pour pour Analyzes Multidimensionnelles de Textes et de Questionnaires - IRaMuTeQ* (Camargo & Justo, 2013). Four textual analyzes were carried out: (1) Classic lexicographic analyzes to verify statistics on the number of text segments (TS), comments and structures; (2) Descending Hierarchical Classification (DHC), for the recognition of the dendrogram with the classes that emerged, considering that the higher the χ^2, the more associated the word is to the class and that words with $\chi^2 < 3.80$ ($p < 0.05$) were not considered; (3) Correspondence Factor Analysis (CFA),

to verify the differences in the discourses between participants from different groups according to the sociodemographic data - level of Environmental Stress presented during the social isolation of COVID-19, salary income and number of people observing social isolation in the house; and (4) Word Cloud, in order to group the words and organize them graphically according to their relevance, considering only those with a frequency equal to or greater than 10, with the largest words in the image being those with the highest frequency.

Results

From the description of the sociodemographic data, it was observed that the participants had an average age of 38 years and 8 months (*SD* = 14 years and 6 months). Most were female (*n* = 1.538; 76,90%), with an income greater than 5.000 reais (*n* = 718; 35,90%). They were distributed throughout different regions of the country: Northeast (*n* = 1.078; 53,80%), North (*n* = 64; 3,20%), Midwest (*n* = 40; 2,00%), Southeast (*n* = 490; 24,50%) and South (*n* = 328; 16,40%). There was a variety in the number of people they lived with during the CODIV-19 pandemic: 1 to 2 people (*n* = 779; 38,90%), 3 to 4 people (*n* = 946; 47,40%) or more than 4 people (*n* = 269; 13,50%).

Classic Lexicographic Analysis and Descending Hierarchical Classification

In order to extract the factors that generate residential Environmental Stress in Brazilians during social distancing, a corpus consisting of 808 text segments (TS) was generated, with the use of 736 TSs (91,09%). 29,070 occurrences emerged (words, structures or vocabulary), with 3,392 different words and 1,748 with a single occurrence. The analyzed content was categorized into five classes, described according to the functions of the house during the period of social isolation: Class 1 - The coexistence house, with 162 TS (22,01%); Class 2 - The sheltering house, with 134 TS (18,21%); Class 3 - The sickness house, with 131 TS (17,80%); Class 4 - The multifunctional house, with 191 TS (25,95%); and Class 5 - The closed house, with 118 TS (16,03%) (see Figure 1).

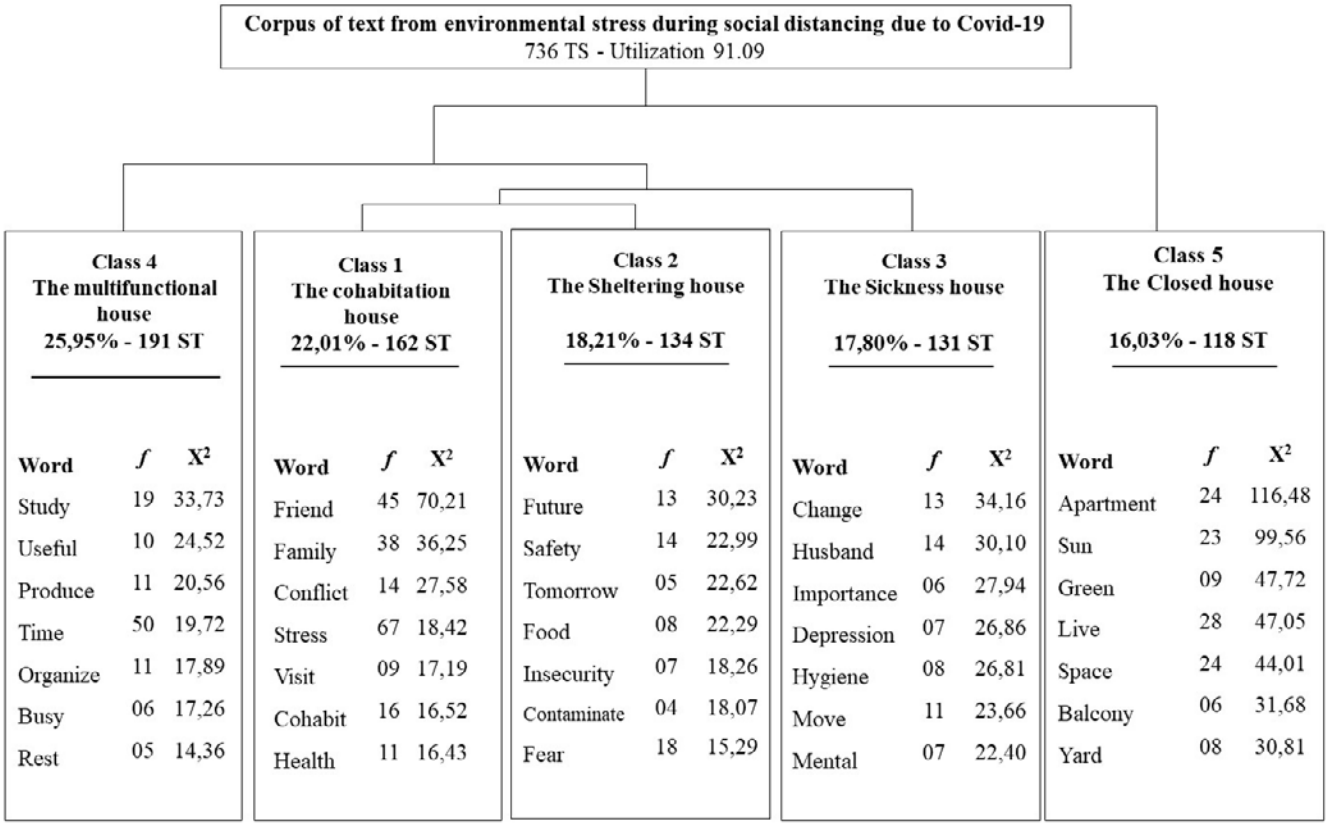

Figure 1. Dendrogram with the Organization of Classes Based on the Descending Hierarchical Classification.

Class 01 - The coexistence house - comprised 22,01% (*f* = 162 ST) of the total analyzed corpus (see Figure 1). Antagonistic discourses emerge about the stress experienced at home due to social relationships. It is identified that the limitation of Mobility, caused by the social distancing measures, leads to feelings such as missing family and boredom or anguish due to the lack of contact with social groups. On the other hand, the intensification of family life, without the possibility of a minimum distance that makes it possible to regulate Personal Space and the feeling of Privacy, enhances the appearance of problems in relationships.

> I didn't think I could stand it at home, but I'm not feeling any stress about it. My stress is not having physical contact with my friends, who I miss a lot. And also about not being able to follow a routine as I did before the quarantine (Participant 482).

> Because relationships end up wearing us out, the feeling of being stuck without leaving home builds up, it is the desire to be with friends and to be able to have fun. The mixture of these desires ends up making you stressed (Participant 52).

The excess of family life and the invasion of other spaces (work, school, etc.) in the home interior also cause a perception of reduced Privacy and Personal Space. The loss of balance between closeness and social distancing leads to a loss of the home's role as a restorative environment. Always being with my family made me notice many family problems, and living with those problems 24 hours a day is very tiring. I think people need to balance living together at home and being outside (Participant 1370).

I don't have many family problems, however, staying at home, without the option of going out and meeting friends and my girlfriend, ends up being a stress factor. I feel like I'm under house arrest (Participant 714).

Class 02 - The Sheltering house - involves 18,21% (*f* = 134 TS) of the total corpus (Figure 1). The comments demonstrate the insecurity of the health and economic context, highlighting social vulnerabilities: the fear of being contaminated; of losing loved ones; the collapse of the health system; the large number of deaths; and the possibility of economic crisis, among others. This period of uncertainty makes the person / home interrelation a central aspect of security through the perception of "home as a shelter"; the "feeling of home", formed by the idea of the term Rootedness. The house assumes the position of the only place of belonging at the moment. It is only in the home that living can exist safely, physically and emotionally maintaining at a distance the factors that generate fear and uncertainty. The house is the central shelter, rooted, the place for living. The city's environment has become strange, frightening, a space for disease.

Stress comes mainly from thinking about the vulnerability of other people, family, friends, acquaintances, my closest family, my husband and children and the uncertainty of the near future (Participant 1237).

The uncertainty of not knowing what will happen tomorrow increases stress (Participant 829).

Class 03 - The Sickness house - involves 17,80% (*f* = 131 ST) of the total corpus (Figure 1). The comments indicate that the distancing, social control and its consequences enable the occurrence or worsening of mental health problems, with signs of acute stress and depression, sleep disturbances, changes in eating behaviors and excessive concern with the need for hygiene.

My husband lost his job and is depressed. He attempted suicide (Participant 1590).

> I have a sister-in-law who is bipolar, a mother with depression, my brother suffering anxiety/panic syndrome and I am anxious. All their treatments stopped, due to our not being able to go to the psychiatrist and lack of medication in pharmacies (Participant 739).

Class 04 - The Multifunctional house - involves 25,95% (*f* = 191 ST) of the total corpus (Figure 1). Here changes are mentioned in the routine and organization of the home during the period of social distancing. The pandemic changed the routine in relation to work, study, activities outside the home, the way to resolve financial issues, the relationship between family members as well as with oneself, how to organize time and how to take care of oneself.

The "new" routine implemented in the home, such as online classes and working from home, also requires that there is a place that enables concentration on these activities, at the same time that it is necessary to supply the need for space for games for children, leisure and rest for the whole family. All of these elements are reported as a source of stress. At the same time, when people indicate a negative point, they also show a positive point or a way of dealing with the situation.

There is no way to plan clearly. I like to stay at home, but spending a lot of time with people in a closed place, as well as organizing work and study time, is very stressful (Participant 192).

Pressure at work, many college activities, little conversation with family and friends, lack of leisure, lower back pain (Participant 351).

Class 05 - The Closed house - involves 16,03% (*f* = 118 ST) of the total analyzed corpus (Figure 1). These comments portray the mobility difficulties generated by social distancing due to two factors: the intrinsic limitations to the home environment and the impossibility of going out into the city.

The size of the houses influences well-being, facilitating or hindering the distance between people and respect for each other's personal space. The reduced physical space of the house also limits the existence of Restorative Environments in the house such as a balcony, yard, green areas, among others.

I live in a 32m apartment with another person and a pet. I have no balcony to get air or any green space to move around and breathe fresh air (Participant 892).

Due to living in an apartment, we don't have space to do many things. And, depending on the condominium rules, we can't just do any activity to change the routine a little (Participant 1666).

The second factor of Class 05 was generated by the main containment guidance of COVID-19, which is "stay at home". This recommendation leads to a reduction in the number of trips for physical activities, visits to friends and family, routine work (not essential) and leisure. Effectively reducing the mobility of the population has been causing the level of Environmental Stress to increase. One of the factors that make this increase possible is the impossibility of using the physical space of the house to carry out activities which were previously carried out in other environments.

Sometimes I miss doing the things that I enjoy, like going to the park or the beach (Participant 1931).

I have two children at home - 2 and 4 years old. There comes a time when they can't even stay at home. They ask to go to the playground, school, they miss friends and cousins and are very agitated (Participant 1609).

Correspondence Factor Analysis

From the Correspondence Factor Analysis (CFA) it was possible to make comparisons of comments (considering the frequency of word incidence and their hypergeometric indices / χ^2) between different sociodemographic variables: level of Environmental Stress presented during the social isolation of COVID-19, income, and number of people in social isolation in the house.

The comments of participants with "Absence of Stress" focus on aspects related to respect for measures to contain the pandemic and leading one's life (e.g., "Respect", "Follow", "Live" and "Caring"). People with "Low Stress Level" contemplate the need to get out of home isolation (e.g., "Go out", "Visit" and "Travel"). People with "High Stress Level" focus on the problems resulting from the pandemic and social isolation (e.g., "Anxiety", "Argument", "Imprisoned" and "Overload").

The comments of participants with "Lower income" focus on aspects related to relationship problems in social isolation (e.g., "Crisis", "Coexistence", "Annoyed", "Argument"). People with "Higher Income" address welfare needs (e.g., "Comfort", "Travel", "Safety" and "Work").

The comments of participants with "Fewer people at home" consider the desire to end the pandemic and the need for well-being (e.g., "Passing", "Necessity", "Health", "Comfort", "Travel"). People with "Largest number of people at home" address the problems of relationships in social isolation (e.g., "Living together", "Understanding" and "Talking").

Word Cloud

Subsequently, the word cloud generated from the participants' comments was obtained, verifying that the most evoked words were: "Home" (*f* = 662), "Stay" (*f* = 391); "Leave" (*f* = 243); "Stress" (*f* = 260); "Feel" (*f* = 222); and "Routine" (*f* = 153) (see Figure 2):

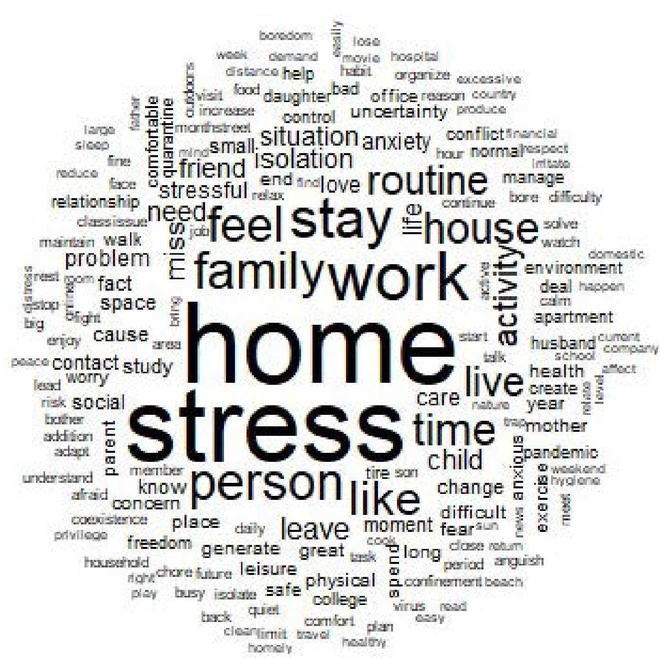

Figure 2. Word Cloud.

Discussion

In general, it can be seen that interpersonal relationships, the uncertainty of the future, environmental quality and routine are related to stress. The comments of Class 01 (The Coexistence house) demonstrate the house to be a place that arouses antagonistic feelings in this period of social distancing for Brazilians. At the same time that the increased coexistence with family members who live in the same environment generates stress and creates conflicts, there is also the feeling of longing for people who do not live at home.

A change in the social aspect of the home environment is evident (Campos-de-Carvalho et al., 2017; Ittelson et al., 1974). Before, the home was a place of retreat, rest and recharging for the resumption of social relations, now it is an environment of intense and constant contact with the family, generating the feeling of Agglomeration (Pinheiro & Elali, 2017; Tuan, 1983), due to the decrease in Privacy (Altman, 1975; Cavalcante & Pinheiro, 2018; Pinheiro & Elali, 2017). This is associated with the entry of work and educational institutions into this environment. Furthermore, the house has become a locus of imprisonment and is no longer a place of return. The possibility of experiencing diverse environments and multiple social relationships is nullified. There is a loss of the original sense of the house as a restorative environment (Alves, 2017, Felippe, Hodecker, Pichetti, & Kuhnen, 2020; Günther & Elali, 2018; Nóbrega, Elias, & Ferreira, 2018) and an intense need to experience other places, to return the home to its original position in people's daily lives.

In comments from Class 02 (The Sheltering house) feelings of vulnerability, helplessness, insecurity and abandonment arise, provoked by the consequent crisis of the pandemic of COVID-19, which made evident the high degree of vulnerability of part of the population, generated by social inequalities and the absence of adequate investments in the public health system. These social factors weaken the healthy physical and psychological balance, since the concept of health affects the integrality of the subject, in addition to the absence of illness, which affects one's physical, social and mental well-being (Faro et al., 2020; Zwielewski et al., 2020).

It was also observed that the house routine, now altered by the measures of containment of COVID-19 and the uncertainty of the future, takes on an antagonistic sense, since, on the one hand it is confining and stressful, and on the other it is recognized as necessary. In the face of insecurity and vulnerability existing in the "outside world", the house dominates as shelter and protection, strengthening Rootedness (Massola & Svartman, 2018). However, new spatial arrangements are required to enable (re)organization of the house, improving adaptation of its inhabitants in this period (Aquino et al., 2020; Faro et al., 2020; Silvestrin et al., 2019).

The comments of Class 03 (The sickness house) demonstrate that distance and social control enable the emergence of illness in mental health and worsening of previous clinical conditions. Health care emphasizes that affective relationships are necessary to maintain an individual's physical, psychological and emotional well-being, especially in times of great stress and sudden changes. Social detachment and the rupture of family ties provide opportunities for the manifestation of symptoms of various psychological illnesses (Faro et al., 2020; Spink, 2015; Zwielewski et al., 2020). Containment and social control promoted to a lesser or greater degree produce an excessive dominance over the body and, consequently, a reduction / loss in the individual's autonomy. The reduction of freedom, associated with environmental changes considered hostile, are conducive to increased levels of stress and suffering and, as a consequence, become a gateway for psychic illnesses (Faro et al., 2020; Haesbaert, 2020; Silveira & Kuhnen, 2019).

Despite being commonly understood as a place of belonging and safety, the breach of normality and the violation of the principle of autonomy cause a break in the balance of the person-environment relationship, changing the way individuals relate to the home. Scenarios of anxiety are observed, due to the lack of control over the present and the uncertainty regarding the future. Furthermore, the imposition of sanitary measures of confinement causes feelings of fear, instability, boredom and unproductiveness, and further compromises people's ability to deal effectively with the pandemic situation (Bezerra et al., 2020).

The use of restorative environments in homes makes it possible to reduce aspects of confinement and social distancing, as well as helping in the diminishing or loss of autonomy. In addition, they help reduce stress and fatigue, expanding components of well-being for physical and mental health (Alves, 2017; Bomfim, Delabrida, & Ferreira, 2018; Felippe et al., 2020; Günther & Elali, 2018; Nóbrega et al., 2018).

The comments of Class 04 (The Multifunctional house) demonstrate the need for organization of a new home routine to go with the various activities performed in the home work and study environments that rely on the excessive use of computers for functions such as: remote meetings, online classes for children, teenagers and university students, live transmissions and networks for leisure and entertainment as well as the considerable increase in domestic work. This aggregation of functions in the home routine has generated stress, difficulties in maintaining attention and concentration in work and educational activities, and feelings of unproductiveness, among others. One can also identify a concern with the uncertainty of the end of confinement and the need for strategies to compensate for the stress experienced as a result of the pandemic situation. All these changes generate an overload, making the house, at times, a Stressful Environment, as defined by Günther and Fragelli (2017).

The comments of Class 05 (The Closed house) deal with the mobility difficulties generated by social distancing. The size of houses or apartments influences "being at home" due to the greater ease or difficulty of having a sense of invasion of Personal Space (Sommer 1959, 1973, 2018) when there is the presence of the whole family. The reduced physical space of the house also makes it difficult to offer Restorative Environments (Felippe et al., 2020; Gunther & Elali, 2018; Nóbrega et al., 2018) such as a balcony, backyard, green area, among others. The absence of these environments indicates that the significant and symbolic Spatial Arrangement (Klein et al., 2017; Leite, 2018; Silvestrin et al., 2019) is deficient to meet the new environmental demands of the house in a situation of pandemic and seclusion.

The second part of this discussion looks at the correlations brought about by the CFA. Respondents with a higher level of stress, lower income and a greater number of people inside the house made comments in regard to family conflicts due to: the small size of the houses, which makes it difficult to have restorative spaces such as balconies, gardens, a backyard and the impossibility of maintaining privacy to carry out work, study activities as well as the increase in family life (Bezerra et al., 2020).

All of these factors are considered environmental stressors, as they bring on loss of control, self-regulation of privacy and social contact. "... the lack of control over the environment and the barriers that can hinder access to nature are factors whose negative effects contribute to the increase in Environmental Stress" (Günther & Fragelli, 2017).

The word cloud consolidates the idea of the house as a "place" for people's interactions during the period of social distancing. It brings to this place conflicting feelings of security and welcoming described more fully in class 02, in contrast to the increase in chores due to the sudden changes in routine and the increase in conflict in family relationships. The house as a place of rest became, during this period, a place of work, study, stress, tiredness, fear and anxiety.

Final considerations

Certain contributions of the present research must be highlighted. First, it can be identified that the realization of a study with this theme contributes to reveal the experience of Brazilians in the private environment of their homes during the pandemic. This contextual analysis proved to be extremely adequate to understand the current world of change in the relationship of people with their home, work, and school. In addition, data collection at the national level made it possible to analyze this reality in different cities in the country.

The second refers to the results obtained that represent a significant contribution to the current moment of pandemic. It is possible to better understand how Environmental Stress is impacting Brazilians in this context of social distancing. It seems clear that it is necessary to pay attention to how people are maintaining their social networks, how interpersonal relationships are taking place at home and being mediated by technological resources. The context of uncertainty is a reality, but thinking about the future in an active way seems to empower resilience. The home routine was altered, causing stress. But there is a way to use environmental comfort to promote a form of restoration from stress. From these data, the population can reflect on the possibilities of changes in routine, organization and relationships at home that can generate well-being. Therefore, this work does not end here, this is just an invitation for health professionals, experts and managers to discuss, research and create effective intervention strategies for the comprehensive care of Brazilians during the necessary period of distancing and home isolation.

This study, however, is not without limitations. A first limitation concerns the sample and its characteristics, as this sample, selected in a non-probabilistic manner and being primarily northeastern, cannot be considered as representative of the Brazilian population, and there may be biases in the results obtained. It

is reinforced, however, that it is not the purpose of this article to generalize the results, but to explore this reality. A second limitation refers to the online collection format, with a written response, which may have limited the access of certain groups without access to the internet or who are unable to read or write and / or may have generated more synthetic comments than oral speech would. This was, however, a methodological decision based on cost-benefit, since the online collection method would allow us to reach sample groups from different realities and regions of the country, providing a variety of comments. Other studies addressing this theme can be carried out. It is suggested to carry out surveys with more representative samples, as well as with a longitudinal design to assess factors and assess the consequences of Environmental Stress during and after the pandemic.

In this way, new studies of Psychological Science and Environmental Psychology are recommended, and which would allow a better assessment of human-environmental impacts due to social distancing. Concepts such as spatial arrangement, restorative environment, privacy, personal space, agglomeration and others, have become guidelines for understanding the elements that cause stress and illness. Therefore, they are essential for the projection of future models that allow for a better adaptation of the houses and individuals in the face of the need for confinement, as well as the prevention of diseases and the promotion of the health of the populations.

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