"Go home, old man!" Ageism in the covid-19 pandemic: netnography on the Youtube™ platform

Abstract

Objective: To analyze the repercussions of ageism directed at older people during covid-19, through the content available on the Youtube™ platform. Method: Netnographic, exploratory and qualitative study, whose data were collected in videos on the Youtube™ platform; a thematic analysis of Bardin's content was performed and the elements were discussed in the light of the Theory of Stigma. Results: Three categories explain the repercussions of the investigated phenomenon: expressions of ageism pre-existing to the pandemic, with expressions of exclusion, disregard and disrespect; expressions of ageism during the pandemic from the risk group label that strengthens stereotypes of sick and incapable people; and feelings and attitudes of the older people towards the repercussions of ageism, which led to repercussions on social interactions, lifestyle and health of older people. Conclusions: The repercussions can cause physical, cognitive, social and psychic sequelae, and the fight against its impacts starts from the educational sphere towards a social pact that allows a respectful and empathetic coexistence between generations.

Keywords: Ageism. Older people. Pandemics. covid-19. Internet use.
INTRODUCTION

The first victims of covid-19 were older people, which raised distinction in the way of treating them and highlighted the ageism present in societies. Ageism manifests itself when one age group addresses another, based on stereotypes created to discriminate against people based on their chronological age, whether due to ideological aspects — based on characteristics attributed to an age group — or practical/behavioral aspects — through judgments, beliefs and attitudes.

In the context of the pandemic, this phenomenon became evident in the treatment given to older people, over 60 years old, in the association with stereotypes/negative images and deterioration of physical and cognitive/behavioral capacities. Prevention procedures were used to justify attitudes of depreciation and discrimination/stigmatization of older people, it is important to emphasize that stigma is a mark/impression that is carried throughout life, established by society to categorize people and the attributes considered as common and natural for members of each of these categories.

The stigma that permeates old age/aging was boosted during the pandemic, when prejudiced attitudes made some people think that the pandemic was an “older people’s problem” and only the older people should be in social isolation, since old age is associated with economic spending, social burden and symbol of unproductivity. This stigma also arises as a consequence of the non-enforcement of laws that protect and guarantee the rights of Brazilian older people.

This problem disregarded a history of epidemic outbreaks that occurred over the centuries and showed that the best preventive measures for the advancement of highly contagious pathogens were vaccination, quarantine and lockdown of the entire population, not just risk groups.

During social distancing, it was necessary to seek means that would serve as a bridge between people and the new knowledge that emerged about the disease, as well as to achieve forms of socialization during distancing. For this, it was possible to use the internet, which despite having negative aspects in its use, such as the consumption of untrue content and excessive time in front of the screen, which cause concerns, repercussions on well-being, exhaustion and sleep disturbance, is of great importance for streamlining communication and disseminating information. Social networks are the methods of choice for posting common activities, especially the Youtube platform, due to the ease of sharing videos capable of expressing opinions, transmitting knowledge, spreading news and being used as a source of information on health-related matters.

In view of this, videos on the Youtube platform gained national repercussion and visibility, raising relevant debates and reinforcing the importance of this study, especially by demonstrating ageism, based on narrated situations, and its repercussions for the older population. In addition, it is important to demonstrate how these narratives relate to the Theory of Stigma, with a view to strengthening the fight against the problem.

In this context, the objective of this article was to analyze the repercussions of ageism directed at older people during covid-19, through the content available on the Youtube platform.

METHOD

Exploratory study with a netnographic qualitative approach developed based on the methodological rigor criteria of the COREQ checklist, which has been frequently used for ethnographic approaches applied to the study of cultures and online communities within consumer and marketing research. Netnography is distinguished from other types of qualitative research on the Internet by presenting, in a single term, a set of guidelines for carrying out computer-mediated ethnography and its integration with other forms of cultural research.

The “YouTube” video sharing site has the virtual address: www.youtube.com. This investigation was not submitted to the Research Ethics Committee for consideration because it was the use of publicly accessible data, as established by the ethical standards of the platform itself, as well as by Resolution 510/2016 of the Brazilian Health Council and by the Federal Law 12527/2011.
Videos were searched based on the following inclusion criteria: having been posted from March 20, 2020 (start of the pandemic) to May 2021 (start of vaccination of older people); address content related to ageism and covid-19; be available in Portuguese, English or Spanish; having been presented by older people, whether they are narrating their own experiences and/or those of third parties.

Videos with reproduction difficulties, with duplicate content or of dubious character (checking the news channel and its content for veracity and reliability, giving preference to official channels and those of researchers that presented scientific references), as well as those that did not contain content referring to the repercussions of ageism on the covid-19 pandemic.

The selection and data collection took place in February 2022 through the keywords: ageism; ageism in the pandemic; ageism in covid-19; prejudice against older people in the pandemic; ageism in the pandemic; age discrimination; stereotype; gerontophobia; old age; ageism; old phobia; old age; stigma; prejudice; and its correspondents in Portuguese and Spanish. These keywords were combined to create the expressions: “ageísmo pandemia”; “ageísmo covid-19”; “preconceito contra idosos na pandemia”; “preconceito de idade na pandemia”; “gerontofobia pandemia; etarismo pandemia”; “velhofobia pandemia”; “idosismo pandemia”; “violência idoso pandemia”; “ageism pandemic”; “old age pandemic”; “gerontophobia pandemic”; “ageism covid-19”; “edadismo pandemia”; “discriminación por edad pandemia e discriminación por edad covid-19”.

The content search and selection process was carried out by a researcher and is detailed in Figure 1. The information from the final corpus of the videos was organized in a table in Microsoft Excel and identified by title, access link, channel and date of posting and duration (Chart 1).

Figure 1. Flowchart of the video search and selection process. Feira de Santana, Bahia, Brazil, 2022.

Source: Own elaboration.
Data analysis was guided by an in-depth study of the videos, in which an attempt was made to understand the reports narrated individually through Bardin’s thematic content analysis, which focuses on qualifying the subject’s experiences, as well as their perceptions about an object and its phenomena, allowing the discovery of social processes still little known about specific groups and the adoption of new approaches, in addition to the revision and creation of new concepts and categories during the investigation.

In the pre-analysis, the materials to be used and the keywords were chosen, the videos were searched and the material was selected. By watching all the videos, it was possible to know the content of each one of them, to obtain the first impressions and to constitute the corpus of the study of relevance for the research based on the inclusion and exclusion criteria.

In order to explore the material, all the content of the videos was transcribed into text format in a Word file. Then, the material was read and possible errors were corrected. Videos in English and Spanish have been translated into Portuguese. Subsequently, the typed material was read exhaustively and the contents were codified by cutting out the recording units related to the theme of the repercussions of ageism in the covid-19 pandemic. This phase was validated by two researchers, doctor and master, with expertise in the subject and in the study of the Theory of Stigma.

For the interpretation of the material, the recording units were grouped by similarities and differences, generating the categorization, whose interpretation was performed based on Goffman’s Theory of Stigma, which discusses how society establishes means to categorize people and attributes considered common and natural for the members of these categories — as certain marks or characteristics that stigmatize the subjects —, and as derogatory attributes that can make the subjects react or accept the conditions that are imposed on them as “normal” or “abnormal”. Such theory helps to identify central features of stigmatized people's life situations and how they affect social and personal identity.

Each video was identified with a number from one to nine, and each excerpt relevant to the research was identified with the initials of the person who expressed themselves in the video, with the expression Without Identification (WI) being used for a person whose name was not revealed.

RESULTS

The selected videos are characterized in Chart 1, based on the categories: pre-pandemic expressions of ageism; expressions of ageism during the pandemic; and feelings and attitudes of the older person towards the repercussions of ageism.

Data analysis revealed content related to ageism that was culturally accepted, albeit veiled, directed at older people even before the pandemic (Chart 2).

The content of the videos presented findings that demonstrate ageism in the pre-pandemic period and the subsequent addition of new ageist elements, strengthened from the health, political, socioeconomic and cultural crises.

The repercussions of ageism generated feelings and revealed attitudes of prejudice and discrimination experienced by the older population (Chart 4).

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>URL</th>
<th>Channel</th>
<th>Posting date</th>
<th>Video duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ágora Abrasco: Painel: Idadismo e a pandemia de coronavirus - só o fez aumentar!</td>
<td><a href="https://www.youtube.com/watch?v=urLIoxk43lA&amp;t=2841s">https://www.youtube.com/watch?v=urLIoxk43lA&amp;t=2841s</a></td>
<td>TV ABRASCO</td>
<td>August 17, 2020</td>
<td>1h 42min 06seg</td>
</tr>
<tr>
<td>2</td>
<td>Casos de violência contra idosos dispararam no Brasil durante a pandemia</td>
<td><a href="https://www.youtube.com/watch?v=pEnrKu-ww_Y&amp;t=1s">https://www.youtube.com/watch?v=pEnrKu-ww_Y&amp;t=1s</a></td>
<td>Acta Oficial</td>
<td>July 14, 2020</td>
<td>5min 56seg</td>
</tr>
<tr>
<td>3</td>
<td>Coronavírus e o preconceito contra idosos no brasil</td>
<td><a href="https://www.youtube.com/watch?v=e1p_heSuwlg">https://www.youtube.com/watch?v=e1p_heSuwlg</a></td>
<td>UOL</td>
<td>May 21st, 2020</td>
<td>3min 32seg</td>
</tr>
<tr>
<td>4</td>
<td>Depoimento - Ageísmo</td>
<td><a href="https://www.youtube.com/watch?v=4FzBxZlfC9w&amp;t=16s">https://www.youtube.com/watch?v=4FzBxZlfC9w&amp;t=16s</a></td>
<td>Programa USP 60 mais</td>
<td>April 06, 2020</td>
<td>2min 53seg</td>
</tr>
<tr>
<td>5</td>
<td>Discriminación que sufren los adultos mayores, incrementado en ésta pandemia del Coronavirus</td>
<td><a href="https://www.youtube.com/watch?v=ZL.CuBWFlqZw&amp;t=1s">https://www.youtube.com/watch?v=ZL.CuBWFlqZw&amp;t=1s</a></td>
<td>ASV</td>
<td>July 1st, 2020</td>
<td>2min 56seg</td>
</tr>
<tr>
<td>6</td>
<td>Margaret Morganroth Gullette, Instead...How Ageism Worsened in the Pandemic</td>
<td><a href="https://www.youtube.com/watch?v=49b656cchEA">https://www.youtube.com/watch?v=49b656cchEA</a></td>
<td>Lise Gottell</td>
<td>October 16, 2020</td>
<td>1h 28min 28seg</td>
</tr>
<tr>
<td>7</td>
<td>Pandemia de covid-19 e a evidência da &quot;velhofobia&quot;</td>
<td><a href="https://www.youtube.com/watch?v=MMqSvKystI8&amp;t=65s">https://www.youtube.com/watch?v=MMqSvKystI8&amp;t=65s</a></td>
<td>Rádio UERJ</td>
<td>September 29, 2020</td>
<td>10min 15seg</td>
</tr>
<tr>
<td>8</td>
<td>Pandemia fez aumentar violência sobre idosos</td>
<td><a href="https://www.youtube.com/watch?v=xRSOhi6j3WE">https://www.youtube.com/watch?v=xRSOhi6j3WE</a></td>
<td>Euronews</td>
<td>February 23, 2021</td>
<td>2min 45seg</td>
</tr>
<tr>
<td>9</td>
<td>Preconceito na pandemia: idosos sofrem com piadas nas ruas</td>
<td><a href="https://www.youtube.com/watch?v=PdzHIPjogNs">https://www.youtube.com/watch?v=PdzHIPjogNs</a></td>
<td>TV Portal Terceira Idade</td>
<td>April 21st, 2020</td>
<td>4min 13seg</td>
</tr>
</tbody>
</table>

Source: own authors.

Chart 2. Fragments of the repercussions of pre-pandemic ageism on the Youtube™ platform. Feira de Santana, Bahia, Brazil, 2022.

GENERAL EXCLUSION

“...to get old, to survive, it’s a struggle between life and death.” (V1_LV)

“...I thought it was important to emphasize the issue of inclusion, it is impossible to be including and feel included if you lead a life of exclusion, having to endure prejudices”. (V1_AK)

“...Question: Have you ever suffered any kind of ageism? Answer: I go through this practically every day”. (V4_MJ)

EXCLUSION IN LEARNING SPACES/DIGITAL EXCLUSION

“...and I include myself, as an older person, knowing that I can collaborate in some way in the transmission, in the use of these digital means, now that I am somehow in the process. I am included as an older person in this community that uses digital media to act against the prejudice that excludes me. It seems to be intentional, taking us back to the holds of the ship, especially when you’re black. So you have to face these teachings”. (V1_LV)

“...I looked on the internet for a course that I was interested in, but when I accessed the site I saw that it was only for people aged 18 to 35. I was at a loss to understand why, as I am a technologically active person. Why discriminate against age? Maybe I learn slower, in the face of artificial intelligence, but that doesn’t mean I can’t learn”. (V4_MJ)

to be continued
DISREGARDING THE VARIOUS WAYS OF BEING AN OLDER PERSON

“[...] most people set standards and don’t give older people a chance. There are people aged 65 who have more difficulty with mobility, but not all 65-year-olds will be the same, they vary according to experience and cannot be leveled. It’s rude situations that have been happening”. (V4_MJ)

“[...] in addition to the various forms of reproducing prejudices, I experience aesthetic behavioral pressure. When a person turns 60, it’s as if they were given a list of behaviors and those who don’t follow them receive a series of judgments. It is as if certain practices, such as sex for example, become inappropriate just because the person has aged”. (V7_D)

DISRESPECT OF THE RIGHT OF OLDER PEOPLE TO HAVE ACCESS TO PUBLIC TRANSPORTATION

“[...] when I get on public transport, people discriminate against me, they don’t give me a seat”. (V4_MJ)

LABEL OF SICK, WEAK, BURDEN AND UNPRODUCTIVE

“[...] ageism has developed very quickly and is built on existing hostilities, but the new ageism of the covid-19 era, surprisingly, has increased these hostilities, especially in the US, in the face of the belief that we are old, sick, susceptible to die and we live too long, whose treatment with health would be useless and expensive, acting with indifference to our well-being. The problem has become common in Reddit posts and non-serious tweets, but also in articles published in respected magazines.”. (V6_MM - translated)

“[...] although they seem harmless, many comments have a strong negative, unproductive and unnecessary charge towards the older person”. (V7_D)

MISTREATMENT AND VIOLENCE

“[...] I was hungry, I had nothing to eat, I was treated badly by my family, because I was old”. (V2_SJ)

Source: own authors.

STEREOTYPE OF SICK, BURDEN AND DISPOSABLE

“[...] ageism is lethal, it meant wishing us dead, naturalizing older people to die naturally in an epidemic”. (V6_MM - translated)

“[...] authority figures in some popular discourses have found our supposed weakness to be a useful mortal destiny. A Vice Governor in Texas said on FOX NEWS that we should be willing to risk our survival for the sake of the economy, that we older people wouldn't matter in a revived economy. A Fascist version of fantasy coming from your own governor”. (V6_MM - translated)

“[...] I was taking a document to the city hall when a car passed by and shouted at me ‘go home, “you old man”’ that’s not what he said, but I’ll say that was it. Older people, when they need to go to the street, eventually buy a medicine, or in a supermarket, they cannot be questioned and be embarrassed that way”. (V9_P)

OLDER PEOPLE AS A RISK SUBJECT

“[...] it’s pretty sad. At the beginning of the pandemic, I observed the spread of several prejudiced discourses: ‘This disease only affects old people’. Inappropriate speeches by our president of Brazil: ‘Put grandpa and grandma in the corner’, when suggesting isolation only for older people. These inappropriate speeches negatively impacted health, bringing psychological distress”. (V7_D)

DISRESPECT OF THE RIGHT OF PRIORITY IN VACCINATION

“[...] when imagining that older people could be given priority to get the vaccine, I feared that the population could complain and make negative statements, with jokes”. (V1_AL)

Source: own authors.
DISCUSSION

The netnographic findings made it possible to verify the configuration of the ageist manifestation that stigmatizes older people, by excluding this population from digital learning spaces, disregarding the ways of being an older person, and disrespecting the right to have access to public transport. Thus, the labeling and stereotype of “sick”, “weak”, “burdensome”, “unproductive”, “disposable”, contributed to mistreatment/violence, marking as “subject of risk”, disrespect for the right of priority in vaccination and the outbreak of negative feelings and attitudes to face the problem of ageism.

The establishment of normative attributes to categorize people in what is considered common and natural imputes estrangement and deterioration of social identity, making it “different”. The installation of these normative attributes can revert to stigma: what is negative about the moral status of a person in relation to another. Such normative determination imposes social categories of forced framing/fitting, permeated by stereotypes about the older person, which implies prejudice/discrimination. The exclusion derived from stigma surprised men diagnosed with covid-19, marked by class and gender privileges, not used to being demoted in interactions when compared to other groups.

Exclusionary attitudes can be implemented against older people, reverting to ageism. In this sense, stereotyped expressions about the perceptions one has about other people based on age are aggravated by the intersection of social markers of discrimination throughout life: when the stigmatized person starts to have the same beliefs about his identity as those who stigmatizes.

In order to avoid negative experiences and feelings related to the deterioration of the social image, many stigmatized older people can assume behaviors/attitudes/practices in advance to respond and/or create barriers and defend themselves against ageism through withdrawal, social isolation or even aggressiveness. In view of this, it is essential to carry out actions that promote the self-care of the older person in order to avoid biopsychosocial deficits; inter-institutional strategies aimed at advocating and supporting the older population to know, recognize and establish effective measures to face ageism and its repercussions.

The absence of effective responses and/or coping strategies includes not only those that can be taken by those who suffer stigmatization, but those that could be carried out by the entire apparatus of public devices, which makes many older people ignore their own wills, become depersonalized and abdicate their rights, favoring the growth of ageism as an inappropriate but common practice. However, there was a loss of hope, meaning/purpose in life, the imposition of marks of asexuality, mental illness and suicide, as they judged themselves to be inappropriate to live collectively in old age.

---

**Chart 4.** Fragments of the feelings and attitudes of older people towards ageism on the Youtube™ platform. Feira de Santana, Bahia, Brazil, 2022.

<table>
<thead>
<tr>
<th>FEELINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>“[...] the biggest offense I’ve ever experienced is when they say to me: ‘Wow, but you have a 30-year-old spirit’”. (V3_DV)</td>
</tr>
<tr>
<td>“[...] I feel upset at being treated like someone who has problems and difficulties”. (V4_MJ)</td>
</tr>
<tr>
<td>“[...] I have friends who have experienced issues such as threats of sexism, racism, classicism and ageism”. (V6_MM - Translated)</td>
</tr>
<tr>
<td>“[...] An example of ageism is when we are treated in a childish way”. (V7_D)</td>
</tr>
<tr>
<td>“[...] there are thousands of older people who are in the same situation as me, isolated, living alone, it’s terrible”. (V8_WI - Without identification)</td>
</tr>
<tr>
<td>ATTITUDES</td>
</tr>
<tr>
<td>“[...] we seniors are disciplined, we take care of ourselves, we find different ways of living, we make handicrafts or masks, we cook, we practice gardening, we read and we connect with our emotions, to face discrimination”. (V5_MT - Translated)</td>
</tr>
</tbody>
</table>

Source: own authors
The labeling of older people in the covid-19 pandemic was another significant finding in our study. It should be noted that the ageist label imputes the idea of being “incapable”, favors discrimination, limits opportunities and reverberates in a feeling of indignation at the “impossibility” of learning to use technology, especially in the period of greater social isolation and lockdown, despite having the intellectual capacity to do so and showing a strong advance in the number of older people with internet access, especially in relation to the use of smartphones.

Another important finding concerns the derogatory images and attitudes of life in old age, which constitute the pillar of support of ageism and are manifested through expressions of “sick” and “burdensome” to the health system, which highlights a serious social problem installed, which can put the lives of the older population at risk, as seen in countries like Spain and Italy, which have established genocidal measures against older people in nursing homes.

In some countries, protocols explicitly used age as a criterion for the allocation and non-allocation of treatment, with an age limit for access to intensive care and the use of ventilators. The establishment of purely age criteria strengthens labels that are harmful to health, which directly compromise access to health services and interfere with the quality of health care. This bad practice, through decision-making on whether or not to maintain the life that is breathing with the help of a mechanical ventilator, in the occupation of an Intensive Care Unit bed, continues to be perverse and takes many lives, as it takes into account, mainly, the age of the subject. Restrictions based only on chronological age reinforce discrimination and reduce human life to arbitrary numbers, which disregard values and choices. Thus, despite ethical recommendations aiming at fairer resource allocation protocols, it is still essential to educate health professionals to recognize institutional ageism.

Negligence in care and the occurrence of physical/psychological violence in spaces of protection, such as Long Term Institutions (LTI), were not exempt from suffering from ageism. Both managers and professionals who work in these spaces are able to perceive the configuration of violence in some particular situations: (1) violence before institutionalization, motivating reason for sheltering; (2) institutionalization as an act of violence, when the family disregards the older person's autonomy regarding their desire to go to the institution or not (absence of any assistance/attention) or when they abandon the older person; and (3) absence/limitation of public policies, lack of State actions, little effectiveness of existing legislation.

In view of this, the institutionalized older population that already suffered from the effects of isolation and social negligence saw itself as a victim of discrimination, through the media discourse that revealed exclusionary speeches, of social non-acceptance, provoking identity shame, self-hatred, self-deprecation and self-isolation.

If, on the one hand, there was a narrative that the older population was the most affected by covid-19, on the other hand, there was the representation of the “vulnerable subject”, “dangerous” and “ disposable”, becoming the “other” of the pandemic. In this sense, older people would be the only ones capable of dying from the disease or transmitting it, an idea that was perpetuated for a long period of disease dissemination. As a consequence, there was a lack of priority in investments in the health of these people, which led to the curtailment of the right and opportunity of the older population to benefit from therapeutic measures.

In this sense, it is urgent to insert the principles of geriatrics/gerontology as a strategy to face ageism: clinical-functional assessment; implementation of individualized care for older people/families; combating the stigma of old age, aging and ageism; and investment in mental health literacy to recognize specific disorders and psychological distress and seek professional help.

Combating ageism involves directing care to older people in terms of their physical, mental and social health needs; evaluate the specificities of the subject, its context, autonomy and independence, fulfillment of rights and duties and, mainly, respect for the individualities, limitations and potentialities of each subject. It also means establishing a social education pact as a pillar of intergenerational reconnection, respect and empathy.
The contributions of this study to geriatrics/gerontology are: highlighting the need to disseminate knowledge about ageism, the repercussions and ways to combat this phenomenon, which, although old, was originally evidenced in 1969 by the psychiatrist and gerontologist Butler, and strengthened during the covid-19 pandemic. In addition, it encourages the development/implementation of focal public policies, capable of including older people and respecting their rights.

The limitations of the study are: search for videos on only one platform; and the time frame, since, due to the fact that the pandemic was not over by the end of this study, other videos continue to be published on the platform. In order to deepen these phenomena, future studies are needed, based on primary data, which listen to older people about the repercussions of ageism.

The implications for the geriatric-gerontological practice lie in: recognition of situations of ageism and stigma that surround social relations; adoption of self-monitoring postures to avoid deleterious consequences; remediation of traumatic situations, including post-pandemic ones.

Thus, older people actively seek well-being, to continue their lives in the best possible way, with the exchange of knowledge and experiences, various activities that help financially, relax and help in the redefinition of life, as they see themselves as capable subjects with high self-esteem and personal affection.

CONCLUSIONS

The repercussions of ageism directed at older people involve the social spheres generated from social isolation as a measure to contain the pandemic; feelings of worthlessness and self-deprecation; non-compliance with the rights of older people by institutions; generational conflicts between older people and the young; repercussions on lifestyle, as they fail to carry out their common activities of daily living because they feel incapable and because of the effort to use technology more and more as a means of communication; and repercussions on health, as older people are victims of negligence and recklessness within health institutions. These repercussions can cause physical, cognitive, social and psychic sequelae, whose permanence time and consequences require future investigations.

The demands brought about by this study affirm the need to deconstruct the idea that aging is a painful and survival process, the need for greater socio-professional and media inclusion of appropriate content, with a focus on health education to increase digital literacy. It is also essential to teach coping measures so that older people know how to handle prejudiced situations.

Professional gerontologists need to act through an expanded clinic, focusing on the therapy of psychosocial repercussions in the face of social stigma and discrimination, which were enhanced throughout the pandemic, through the use of compassion, empathy and solidarity.

AUTHORSHIP

- Isis Bastos Barbosa- Conceptualization, Data Curation, Writing - First Drafting, Writing - Revision and Editing, Research, Methodology;
- Pricila Oliveira de Araújo- Project Administration, Formal Analysis, Conceptualization, Data Curation, Writing - Proofreading and Editing, Research, Methodology, Obtaining Funding, Supervision;
- Vinicius de Oliveira Muniz- Formal Analysis, Data Curation, Writing - Proofreading and Editing;
- Isabela Machado Sampaio Costa Soares- Formal Analysis, Data Curation, Writing - Proofreading and Editing;
- Anderson Reis de Sousa- Formal Analysis, Data Curation, Writing - Proofreading and Editing;
- Evanilda Souza de Santana Carvalho- Project Administration, Formal Analysis, Conceptualization, Data Curation, Methodology, Supervision.

Edited by: Yan Nogueira Leite de Freitas
REFERENCES


