

Bioethics view in the quarantine in the COVID-19 context: an integrative review

Italo Emmanoel Silva e Silva¹, Laís Souza dos Santos Farias¹, Geovana dos Santos Vianna¹, Sérgio Donha Yarid¹, Charles Souza Santos¹, Cezar Augusto Casotti¹

1. Universidade Estadual do Sudoeste da Bahia, Jequié/BA, Brasil.

Abstract

This study seeks to relate the bioethical questions about the quarantine as a mitigation tool of the COVID-19 pandemic in society. It is an integrative review, following criteria of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses at the pertinent phases. The search was carried out in the databases Biblioteca Virtual em Saúde, PubMed and SciELO, searching texts published between 2019 and 2020, in English, Spanish and Portuguese. Among the identified articles, seven were selected to be part of this work, of those, two are from the United States, two from Spain, one from Finland, one from Australia, and one from Bangladesh. The studies show that, despite the quarantine and the distancing being the only strategies known up to this moment, developing politics that consider bioethical principles, focusing on, for example, socially vulnerable populations, who need support to establish this measure, is necessary.

Keywords: Bioethics. COVID-19. Pandemic.

Resumo

Visão bioética na quarentena no contexto da covid-19: revisão integrativa

Este estudo busca relacionar as questões bioéticas acerca da quarentena como ferramenta de mitigação da pandemia de covid-19 na sociedade. Trata-se de revisão integrativa da literatura, seguindo os critérios da Preferred Reporting Items for Systematic Reviews and Meta-Analyses nas etapas pertinentes. A busca foi realizada nas bases de dados Biblioteca Virtual em Saúde, PubMed e SciELO, procurando textos publicados entre 2019 e 2020, em inglês, espanhol e português. Dentre os artigos identificados, sete foram selecionados para compor este trabalho, sendo dois dos Estados Unidos, dois da Espanha, um da Finlândia, um da Austrália e um de Bangladesh. Os estudos ressaltam que, apesar de a quarentena e o isolamento serem as únicas estratégias conhecidas até o momento, é necessário desenvolver políticas que levem em consideração os princípios bioéticos, focando, por exemplo, populações em situação de vulnerabilidade social, que necessitam de suporte para estabelecer tal medida.

Palavras-chave: Bioética. Covid-19. Pandemia.

Resumen

Visión bioética en la cuarentena en el contexto del Covid-19: una revisión integradora

Este estudio pretende relacionar las cuestiones bioéticas sobre la cuarentena como herramienta de mitigación para la pandemia del Covid-19. Esta es una revisión integradora de la literatura basada en los criterios del Preferred Reporting Items for Systematic Reviews and Meta-Analyses en las etapas correspondientes. Se realizó en las bases de datos Biblioteca Virtual en Salud, PubMed y SciELO una búsqueda de artículos publicados entre 2019 y 2020, en inglés, español y portugués. Entre los artículos identificados, se seleccionaron siete: dos de Estados Unidos, dos de España, uno de Finlandia, uno de Australia y uno de Bangladesh. Los estudios destacan que, aunque la cuarentena y el aislamiento son las únicas estrategias conocidas hasta el momento, es necesario desarrollar políticas que tengan en cuenta los principios bioéticos, centrándose, por ejemplo, en las poblaciones en situación de vulnerabilidad social, que necesitan apoyo para cumplir tal medida.

Palabras clave: Bioética. Covid-19. Pandemia.

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In December 2019, China notified the World Health Organization (WHO) of cases of pneumonia of unknown cause among workers at a seafood market in Wuhan, Hubei province. At the beginning of the outbreak, infected people showed symptoms such as fever, dry cough, fatigue and sometimes gastrointestinal symptoms, and about 66% of workers were affected, causing concern among health authorities. On March 11, 2020, considering the millions of COVID-19 cases and deaths reported in several countries, WHO officially declares a pandemic situation. By late November of the same year there were already 63,930,654 infected people and 1,481,580 deaths worldwide^{1,2}.

At the time, the need to implement measures to control its spread became evident. Isolation of symptomatic cases was introduced, and in some places people were “expelled” from cities, which left them vulnerable and devoid of any type of treatment³. Thus, quarantine can be seen as a mitigation strategy, known as “flattening the curve,” or epidemic curve of propagation, contagion, damages and deaths of the pandemic, as this makes it possible to identify the number of cases of infection, how populations are affected and the course of the disease, helping to design public health action⁴.

Due to the global high rate of infections and deaths associated with COVID-19, the importance of implementing measures to contain the virus became clear, otherwise the impacts related to its morbidity and mortality would be devastating (estimated 40 million deaths worldwide)⁵. Such projections supported decision-making in countries aiming at the suppression and mitigation of the pandemic. Thus, social distancing as a mitigation measure was the means found to reduce morbidity and mortality from the coronavirus^{5,6}.

Another recommended measure was the creation of bioethics and palliative care committees made up of professionals in health care and several other areas, community representatives and users. Its members must have knowledge in several areas in order to associate the reality with the current health situation. Their main goal is to support professionals in decision-making, especially in end-of-life situations, the so-called “Sophie’s choice”⁷.

Given the global scenario of the pandemic, difficult choices had to be made by healthcare professionals, the community and governments

due to the steady increase in cases that progress to the severe form of the disease and the lack of sufficient resources to care for all those affected. However, it is worth noting that such decisions should be guided by bioethical principles (autonomy, justice, beneficence and non-maleficence)^{1,8}.

The principle of autonomy establishes that each individual has the right to decide on issues related to their body and life; the principle of justice defines equity as a fundamental condition; the principle of beneficence concerns choices that maximize the patient’s benefit; and the principle of non-maleficence establishes that the action of the multiprofessional team should cause the least possible damage or harm to the patient’s health³.

In view of the above, the need to know the impact of COVID-19 on the community is evident. Thus, this study aims to address bioethical issues of quarantine as a tool for the mitigation of the COVID-19 pandemic in society.

Method

Protocol

This is an integrative literature review of studies on bioethics in the pandemic context. An integrative review consists of combining data from different study designs, aiming to synthesize evidence and the state of the art, as well as support health practices. The study followed the criteria of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Prisma) in the relevant steps⁹.

Eligibility criteria

The review included complete studies published in 2019 and 2020, in English, Spanish and Portuguese, related to the bioethical aspects of the COVID-19 pandemic.

Sources and search strategies

The search was carried out in databases in the area of health sciences and education: Virtual Health Library (VHL), PubMed and SciELO. In cases

of studies identified in the databases and with restricted access, the authors were contacted for inclusion in the review.

The search used terms indexed in the Health Science Descriptors (DeCS) and Medical Subject Headings (MeSH) databases: “justice,” “bioethics,” “ethics,” “pandemic,” “quarantine,” “pandemic” and “COVID-19.” The descriptors were searched in the three languages and the Boolean terms used were “and” and “or.” Following the analysis of the results, the search was redone to include new studies (Table 1). The strategy used the PICO system, characterized as population, interest and context: *population*: individuals impacted by the COVID-19 quarantine; *interest*: bioethical aspects; *context*: COVID-19 pandemic.

Table 1. Search result distributed by combining search descriptors and codes before filters

Descriptors	PubMed	VHL	SciELO
Bioethics and COVID-19	293	129	9

Study selection

The research was conducted by three researchers, simultaneously and independently, who initially chose the references in the aforementioned databases. Next, they selected the publications eligible for review by reading their titles and abstracts and, later, the full text.

Data extraction

After the texts had been read, the articles were sorted and analyzed, considering author, year of publication, study site, type of study, objectives, bioethical aspects addressed and problems.

Quality evaluation

The levels of evidence scale was used, based on the list by Stetler and collaborators¹⁰, in which they define six levels. This scale evaluates the methodological quality of studies based on the level of quality with which the evidence can affirm an outcome, with level 1 being the most reliable (Chart 1).

Chart 1. Analysis of evidence quality according to criteria related to type of study

Level of evidence	Type of study
Level 1	Systematic reviews with meta-analyses and controlled and randomized clinical trials
Level 2	Case-control studies with experimental design
Level 3	Quasi-experimental studies
Level 4	Observational descriptive studies or with a qualitative approach
Level 5	Case or experience reports
Level 6	Based on expert opinions

Results summary

The main results found were synthesized in the form of text and charts, ordered by author and date, type of study, objectives, method and outcome, besides evaluating the level of evidence of the study according to the quality analysis proposed by Stetler and collaborators¹.

Results

Of all the articles identified in the databases, seven were selected to compose this work (Figure 1). Regarding the origin of the articles, there are six from developed countries: two from the United States, two from Spain, one from Finland and one from Australia, and one from Bangladesh (Chart 2). Of the seven articles, five addressed the four bioethical principles (justice, autonomy, beneficence and non-maleficence), of which one addressed more significantly the principles of autonomy, justice and beneficence and one focused on the principle of justice. As for evidence quality, two of the studies are classified at level 4 and five at level 6.

The main problems were identified and classified according to the four bioethical principles, such as the moral relations of utilitarian thinking and the issue of freedom of movement guaranteed by human rights.

The studies by Bhuiyan¹¹ and Silva and Smith¹² address population bioethics and ethics, as well as the impacts on quarantine-related policies designed by the state, aimed at protecting society as a whole and caring for minorities. The studies by Harter¹³ and Ferguson and Caplan¹⁴, in turn, address more frequent issues, largely related to population and, more specifically, its relationship with information and the impact of political-social decisions adopted and how they should be treated in order to guide the population as a whole.

The works by Häyry¹⁵ and Bellver¹⁶ cite utilitarianism as a main line of thought during the ideation process about quarantine and bioethical principles, defining it as a key aspect representing morality in decisions, establishing a relationship

between utilitarianism and the implementation of quarantine, taking into account the principles of non-maleficence and beneficence.

The study by Bellver¹⁶ also addresses ethical-legal aspects related to freedom of movement and the intrinsic link between human rights and bioethical principles, more specifically autonomy, at the time in which this right was suspended for reasons that overrule other principles and human rights.

Porras-Povedano, Santacruz-Hamer and Lomeña-Urbano¹⁷ discuss the complexity of designing measures that will impact different populations, reinforcing the understanding of bioethical principles and how to meet them in the light of evidence from other countries.

Figure 1. Prisma flowchart of the search strategy results

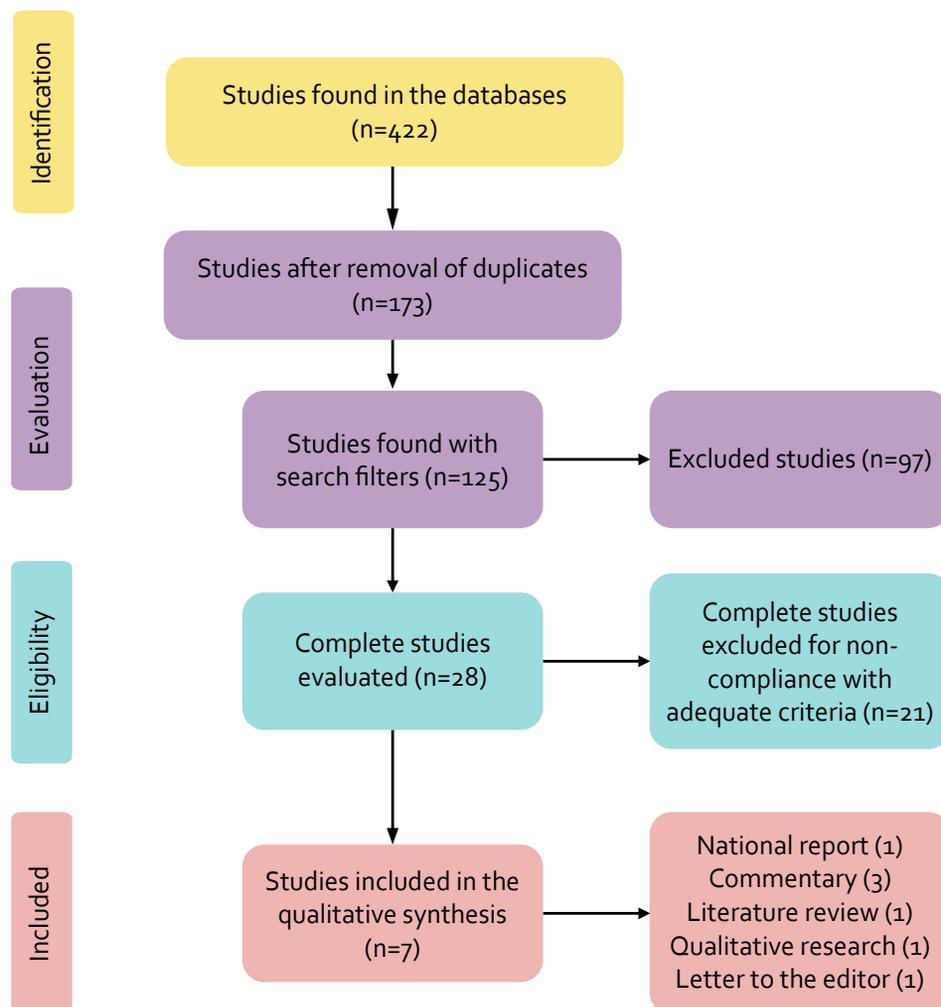


Chart 2. Summary of results according to author’s name, publication date, type of study, study site, objective or title, reported bioethical aspects and problems

Author and publication date	Type of study	Study site	Objective/title	Bioethical aspects	Problems
Bhuiyan; 2020 ¹¹	National report	Bangladesh	To explore genesis, constraints, limitations and implications of current ongoing pandemic management policy in Bangladesh	To reinforce population bioethical aspects related to all principles	Failure to design policies aimed at emphasizing public protection and an ethical pandemic management system based on normative values such as “saving one’s life,” “feelings of social responsibility” and “equal sharing of pain, harm and cooperation”
Bellver; 2020 ¹⁶	Review	Spain	To reaffirm the close relationship that must exist between bioethics and human rights	Autonomy, justice; beneficence	Suspension of freedom of movement. Preventive controls of population movements
Ferguson, Caplan; 2020 ¹⁴	Commentary	USA	To discuss concerns related to fair healthcare rationing	Justice	Fair healthcare rationing. Increased inequities. Prioritization of care by occupation or health status
Harter; 2020 ¹³	Commentary	USA	To comment on ethical considerations for “reopening” healthcare organizations amid COVID-19	To reinforce population bioethical aspects related to all principles	Economic interests that may affect the quality of safety in care
Häyry; 2020 ¹⁵	Qualitative research	Finland	Survey of bioethical aspects discussed in Finland amid the COVID-19 pandemic	Act utilitarianism; justice; beneficence; non-maleficence; autonomy	Acknowledging the prioritization of the population’s well-being and reducing morbidity and mortality, also acknowledging vulnerabilities. Informing the population about well-founded propositions in bioethics
Porras-Povedano, Santacruz-Hamer, Lomeña-Urbano; 2020 ¹⁷	Letter to the editor	Spain	“Covid-19: a look from the perspective of bioethics”	To reinforce population bioethical aspects related to all principles	Difficulties in ensuring bioethical principles in the same practice
Silva, Smith; 2020 ¹²	Commentary	Australia	“Social distancing, social justice, and risk during the Covid-19 pandemic”	To reinforce population bioethical aspects related to all principles	Considerations about housing situations, especially of the homeless population. Government actions that provide social support for people in vulnerability

Discussion

The analyzed studies address bioethical issues and mitigation strategies of the COVID-19 pandemic. One notes a relationship of complementarity and contrast between bioethical issues and quarantine. Social distancing was necessary to reduce the risk of contamination and, consequently, the accelerated spread of the virus. On the other hand, social distancing increased social and economic inequality and unequal access to healthcare services.

The studies by Bellver¹⁶, Häyry¹⁵, Bhuiyan¹¹, and Silva and Smith¹² address the imposition of limitations on population movements as a health safety measure, as well as the recommendations of health authorities to keep the population isolated in their homes, without considering the social risks to which they are exposed. This sheds light on the need for reflection on the following bioethical principles: autonomy, non-maleficence and justice.

According to the cited authors^{11,12,15,16}, social distancing policy was introduced to protect the community as a whole by avoiding mass contamination and the consequent overloading of health services, which may lead to a lack of support and resources in caring for thousands of patients at the same time, potentially causing the system to collapse and resulting in an even greater number of deaths than caused by the attempted social distancing measure.

Through the principle of beneficence, bioethics provides support when considering the dilemmas arising from the evidence on the impacts of non-pharmacological interventions, such as quarantine and social distancing. In this sense, mortality prediction studies, such as those by Melo and collaborators¹⁸ and Walker and collaborators⁵, provided input for decision-making. González-Duarte, Kaufer-Horwitz and Aguilar-Salinas²⁰ discuss dilemmas involved in public policies for COVID-19 which were adopted based on the principle of the “greater good,” through the choice of the intervention that poses the least risk, at the expense of individual autonomy.

However, in evaluating quarantine in the context of a pandemic, other problems are noted, among them: social vulnerability, unequal access to healthcare services, unemployment and lack of financial resources to comply with health

recommendations (hand washing with running water and soap, using hand sanitizer and wearing face masks). Thus, these social characteristics directly impact people’s survival, in addition to being potential determinants of illness, whether due to COVID-19 or other pathologies.

In view of this, studies stress that COVID-19 mitigation policies adopted by government authorities in several countries should respect the principle of social justice. In addition, although the measures adopted sought to reduce the spread of contamination, they ignored social issues by defining a universal measure for the entire population^{11,12,15,16}.

Corroborating these findings, the study by Johns²⁰ emphasizes that social justice safeguards the moral value of the population, besides ensuring respect for people. Thus, historically marginalized and oppressed populations must have a voice in policies designed for their care. In addition, disadvantaged representatives should be included in policy making so that it is guided by ethical principles.

In this sense, the political decisions and strategies introduced are expected to maximize survival without further increasing social inequalities. This discussion is corroborated by Bellver¹⁶ and Vizcaino and Esparza²¹, who argue that the strategies must also be considered at an individual level to ensure a balance in the process of implementing actions.

The South African study by Moodley and Obasa²² points out that, despite the legality of implementing quarantine and social distancing, individual aspects were not considered in greater depth. Thus, public opinion and discussions about individual rights are raised and, according to the authors, the measures started to take on a punitive nature for the population.

Still with regard to justice, Ferguson and Caplan¹⁴ discuss the importance of a fair global distribution of the vaccine against the coronavirus, corroborating the view that government decisions must be based on the complementarity between protection of community health and bioethical principles. These principles should guide decision-making that prioritizes beneficence and justice. In view of this, the authors acknowledge that the health system should not contribute to increasing

social inequalities and, therefore, the scientific advances achieved must be accompanied by ethical advances¹⁸.

Act utilitarianism was another topic identified in the studies. Authorities argue that quarantine is the known strategy that produces the best results in situations of pandemic. The study by Häyry¹⁵ discusses ethical issues in the context of the COVID-19 pandemic of the decision of the Finnish government to isolate the province of Uusimaa from the rest of the country for 15 days, in addition to the closure of schools, universities, restaurants and some businesses. This measure was adopted in order to slow the spread of the virus and generated a series of protests due to the economic damage and the mental illness of older adults, who would be forced to live alone and under restrictions throughout the period.

According to Häyry¹⁵, if, on the one hand, lawyers criticized the imposed restrictions for violating human rights, on the other, academic philosophers drew on utilitarian ethics to defend the government's decision, stating that the government must recognize the needs of more vulnerable people and the reality of population minorities. Thus, in the face of a crisis such as the COVID-19 pandemic, protecting the life and health of the population must be prioritized. Therefore, the measures adopted by the Finnish government were aimed at the good of the greatest possible number of people.

Also from the viewpoint of act utilitarianism, Vizcaino and Esparza²¹ address the need for social distancing and quarantine as a means to reduce the effects of the pandemic, due to the absence of vaccines and other effective therapeutic measures. The authors acknowledge that these measures may negatively affect individual rights to autonomy and freedom; however, they stress that, in the circumstances, the principle of beneficence must be prioritized, as it guarantees the common good and thus overrides individual interests.

Dagnino and collaborators²³, in a study with 3,919 inhabitants of Chile on the impacts of social distancing on mental health, report that the main psychological impact cited by the sample was worry for 67.1%; fear for 32.4%; frustration for 26.1%; boredom for 34.8%; anxiety for 60.3%; and loss of control for 9.5%; among several other factors.

Harter¹³, in discussing the issue of the negative impacts of quarantine on the economy due increased unemployment, caused by the closure of some services deemed non-essential by the authorities, highlights that, in the United States, as the physical distancing restrictions decreased, the immediate reopening of healthcare facilities became necessary to increase the offer of services and achieve financial recovery in the short term. The author reports that there was greater concern with the recovery of the local economy, without considering protection of the health of employees, service users and the local population, since there was no plan to guide the reopening of those services.

According to Françoise and collaborators²⁴, to institute public policies during a pandemic process, organizational ethics must follow four principles: 1) restore the population's trust in the public service; 2) obtain public confidence in scientific evidence; 3) ensure transparency in the administrative process; and 4) ensure that there is an adequate information system, as only then will the recommendations be effective. Recommendations for the design of public policies after the pandemic must take these aspects into account, involving citizens in the building of science and public policy.

In the context of the United States, Harter¹³ suggests five values to guide the country's next steps in the reopening of healthcare institutions —prudence, safety, moral imagination and flexibility —to balance financial recovery with minimizing the spread of the virus. In this sense, Ruh and Hohman²⁵ deem it essential to understand the four principles of bioethics for decision-making in the pandemic context.

With this, the authors highlight the importance of considering the increased risk and threat of the virus before making any decision (non-maleficence). In addition, professionals must be transparent with patients and provide them with the necessary information so they may take part in the process of caring for their own health (autonomy). They also mention trying to offer the best possible result to the patient (beneficence). And, lastly, while using all possible resources to benefit the patient, the risks to health professionals (justice) must be reduced as much as possible.

Thus, one notes once again in the abovementioned studies the close relationship between bioethical

principles and health promotion and disease prevention policies. In this context, government and health authorities, when planning policies and strategies to mitigate the effects of COVID-19 on society, such as quarantine, should take into account the greatest possible number of benefits to the population, without neglecting the diversities and inequities that coexist in their countries, so that health systems do not become contributors to or key factors in increasing the structural inequalities of society.

The lack of studies on the subject in underdeveloped countries is an important finding of this work, for, as previously described, vulnerable populations, which are more numerous in those countries, must be considered in the process of designing public policies. Studies that encourage the discussion of the formulation of public policies and bioethical principles in this population are of paramount importance, given the population adversities when compared to developed countries, where the impact of social distancing is lower.

Final considerations

The studies address the importance of quarantine as a strategy to reduce the effects of the

pandemic and the spread of the COVID-19 virus. However, they stress that, although quarantine and social distancing were the only known strategies in the first year of the pandemic, as it was still an unknown disease and there was no consensus on treatment in the studied period, it is necessary to design policies that take into account populations in situations of social vulnerability. Thus, this study provides input for the discussion about the adoption of distancing measures.

Therefore, political and health authorities must give greater attention to bioethical aspects, especially the principles of beneficence and justice, aiming to provide the best possible results for the population, in addition to employing all necessary resources to ensure respect for people's individuality. This helps reduce structural differences and social inequities.

Thus, this article reaffirms the need for new scientific studies that address the political strategies adopted by countries as a means of mitigating the effects of the COVID-19 pandemic and its impact on bioethical principles. Hence, there is a gap to be filled, since these measures imply arguments from different trends, as each human collectivity differs in several aspects, especially with regard to the socioeconomic and cultural context.

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Italo Emmanoel Silva e Silva – Master’s student – italo.emmanoel@gmail.com

 0000-0001-7496-9218

Laís Souza dos Santos Farias – Master’s student – lais.farias25@hotmail.com

 0000-0002-0855-082X

Geovana dos Santos Vianna – Master’s student – g.svianna@hotmail.com

 0000-0002-7410-6612

Sérgio Donha Yarid – PhD – yarid@uesb.edu.br

 0000-0003-0232-4212

Charles Souza Santos – PhD – charless@uesb.edu.br

 0000-0001-5071-0359

Cezar Augusto Casotti – PhD – cacasotti@uesb.edu.br

 0000-0001-6636-8009

Correspondence

Italo Emmanoel Silva e Silva – Av. Acesso, 6A, ap. 302, Pompílio Sampaio CEP 45206-115. Jequié/BA, Brasil.

Participation of the authors

Italo Emmanoel Silva e Silva, Laís Souza dos Santos Farias, Geovana dos Santos Vianna and Cezar Augusto Casotti conceived and designed the study and performed the data analysis, writing and critical review of the article. Sérgio Donha Yarid and Charles Souza Santos helped critically review the material and design the article. All authors approved the final version.

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