

## Impacts of the COVID-19 pandemic on children's mental health

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### Abstract

Considering the repercussions of the current public health emergency caused by the coronavirus (COVID-19), it is necessary to understand how children are impacted by their mental health and the strategies that can be adopted while facing this experience. The individual's systemic view, which emphasizes his or her relations and interactions, allows a unique deepening of this matter. Thus, the purpose of this article was to present a critical literature review about the impacts of the new coronavirus pandemic on children's mental health. These impacts can be experienced by the child directly or indirectly and exist in different levels, such as individual, family, and social. Challenges and possibilities for children's mental health care are discussed regarding pandemic's impact.

**Keywords:** pandemic; covid-19; coronavirus; children's mental health.

### Resumo

*Impactos da pandemia de COVID-19 para a saúde mental infantil.* Considerando as repercussões da atual emergência de saúde pública provocada pelo coronavírus (COVID-19), é necessário compreender como as crianças são impactadas em sua saúde mental e quais são as estratégias que podem ser adotadas frente a essa vivência. A visão sistêmica do indivíduo, que enfatiza suas relações e interações, permite um aprofundamento singular desta problemática. Assim, o objetivo deste artigo foi apresentar uma revisão crítica da literatura sobre os impactos da pandemia do novo coronavírus na saúde mental infantil. Identificou-se que esses impactos podem ser vivenciados direta ou indiretamente pela criança e apresentam-se em diferentes níveis, como individual, familiar e social. São discutidos desafios e possibilidades para o cuidado à saúde mental das crianças no que tange aos impactos da pandemia.

**Palavras-chave:** pandemia; covid-19; coronavírus; saúde mental infantil.

### Resumen

*Impactos de la pandemia de COVID-19 en la salud mental de los niños.* Considerando las repercusiones de la actual emergencia de salud pública causada por el coronavirus (COVID-19), es necesario entender cómo los niños se ven afectados en su salud mental y cuales son las estrategias que se pueden adoptar frente a esta experiencia. La visión sistémica del individuo, que enfatiza sus relaciones e interacciones, permite una profundización singular de este problema. Por lo tanto, el objetivo de este artículo fue presentar una revisión crítica de la literatura sobre los impactos de la nueva pandemia de coronavirus en la salud mental de los niños. Se identificó que estos impactos se pueden experimentar directa o indirectamente por el niño y se presentan en diferentes niveles, como individual, familiar y social. Se discuten los desafíos y las posibilidades para el cuidado de la salud mental de los niños con respecto a los impactos de la pandemia.

**Palabras clave:** pandemia; covid-19; coronavirus; salud mental de los niños.

Since December 2019, the world is facing an international public health emergency, which has evolved - due to the rapid spread - from an epidemic to a pandemic: the coronavirus (COVID-19) (Brooks et al., 2020; Sohrabi et al., 2020; Wang et al., 2020). This is a respiratory disease of Chinese origin and caused by the new coronavirus Severe Acute Respiratory Coronavirus Syndrome 2 (SARS-Cov-2), which causes mild to severe physiological symptoms (Sohrabi et al., 2020; World Health Organization [WHO], 2020a). According to the Brazilian Ministry of Health update, until May 26 of 2021, Brazil had 16.194.209 confirmed cases of the disease and 452.031 deaths (*Ministério da Saúde*, 2021). The WHO report, of the same date, points out 166.352.007 confirmed cases and 3.449.189 deaths worldwide (WHO, 2021).

In addition to the biological and economic repercussions, there are concerns about the impact on the mental health of the world population while living with the stressors of the pandemic experience, particularly the consequences of the recommendations of social distance and quarantine (Schmidt, Crepaldi, Bolze, Neiva-Silva, & Demenech, 2020; WHO, 2020a). The literature shows that the main psychological implications of experiences like these are: moderate to severe symptoms of anxiety and depression (Wang et al., 2020); symptoms of posttraumatic stress, confusion and anger (Brooks et al., 2020); fear of personal or family contamination and its consequences (Brooks et al., 2020; Wang et al., 2020); changes in routine and family relationships (Cluver et al., 2020; Ornell, Schuch, Sordi, & Kessler, 2020); intolerance and consequent increase in domestic violence rates against children, adolescents and women (Cluver et al., 2020; Marques, Moraes, Hasselmann, Deslandes, & Reichenheim, 2020; Schäfer, 2020; WHO, 2020b); among others.

Although, at first, children do not characterize as a population at risk and focus of medical care in the COVID-19 crisis, there is a need to investigate the impacts - in the short, medium and long term - for child development. There may be an increase or worsening of problems in children's mental health as a consequence of the combination of the current public health crisis, the need for social distance, and the economic recession (Golberstein, Wen, & Miller, 2020). Considered a traumatic event (Bartlett, Griffin, & Thomson, 2020) or stressor (Carvalho et al., 2020), the pandemic can have significant repercussions on children's lives (Bartlett et al., 2020; Jiao et al., 2020; Pisano, Galimi, & Cerniglia, 2020; Zhou, 2020).

Therefore, when investigating the possible impacts on children's mental health due to the COVID-19 pandemic, it is essential to consider that a child's development is multifaceted. In this sense, Bronfenbrenner's Bioecological Theory (1996/2002) provides a systematic view of the individual, understanding him as an integrated being and interrelated to the context of which he or she is a part (Bronfenbrenner, 1996/2002; Eriksson, Ghazinour, & Hammarström, 2018). In this sense, Bronfenbrenner's theory is extremely vast and complex, so this study focuses on the part of the Context (Tudge, Mokrova, Hatfield, & Karnik, 2009). This part has been helpful for understanding problems that affect children and adolescents in the most diverse areas, including the mental health field (Atilola, 2017; Eriksson et al., 2018).

It is noteworthy that studies on past epidemics, such as SARS in 2003 and Avian Flu in 2013, showed a strong association between the experience of these crises and impairment in mental health (Jiang et al., 2020), especially among children (Decosimo, Hanson, Quinn, Badu, & Smith, 2019). That's why it is crucial to gather data on the impacts on children's mental health of those living in a public health emergency to provide theoretical support for implementing evidence-based psychological care for children (Yoder van den Brink, 2019). Therefore, this paper presents a critical literature review about the impacts of the new coronavirus pandemic on children's mental health. This study aimed to synthesize scientific knowledge based on the bioecological perspective levels (Bronfenbrenner, 1996/2002) to provide an integrated view of child development.

## Method

This study carried out a critical literature review. This approach involves critically researching, reviewing, and synthesizing the relevant literature on a specific subject under investigation (i.e., impacts of COVID-19 on children's mental health) to facilitate new theoretical frameworks or perspectives in the field (Snyder, 2019; Torraco, 2005). It is noteworthy that the current moment requires that scientific production be extensively and thoroughly consulted to gather as much evidence as possible on the subject, including considering data from previous epidemics and pandemics.

This paper employed archival data consisting of journal articles. The following databases were consulted: PsycINFO, Scielo, Scopus, Pubmed, Web of Science, and Scholar Google, during April of 2020. The choice

for the first four databases is justified since they gather most of the publications on mental health and the last two by its interdisciplinary character. The descriptors chosen were based on the most common terminology on the subject, namely: “pandemic”, “epidemic”, “COVID-19”, “COVID”, “coronavirus”, “infectious diseases” AND “child development”, “school”, “child mental health”, “children”, “psychological outcomes”, “adverse effects”.

After identifying the articles, their contents were examined to determine inclusions and exclusions. The following inclusion criteria were considered: a) in Portuguese, English, and Spanish; b) without time restriction; c) empirical or review; d) focused on the effects of a pandemic outbreak and/or social isolation on children’s mental health. Duplicate articles, conference proceedings, theses, and dissertations were excluded. From the results found in the database searches, the titles and abstracts were read to define whether the article met the eligibility criteria. If so, the full texts were retrieved, and data related to the research objective were extracted.

According to the theoretical framework used, human development occurs in a manner associated with the environment in which the individual is inserted. Thus, knowledge about the impacts of the new coronavirus pandemic on the child’s mental health is presented considering the different bioecological levels: individual, microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1996/2002). Therefore, the ideas generated by reading the articles resulting from the research were organized in a thematic framework that allowed the identification of risks and challenges and protection measures and recommendations from each contextual development level.

## Discussion

### ***Individual Level: The Subjective Psychological Impact on Children***

On an individual level, understanding the child and its biological and subjective characteristics involves studying an individual in rapid development and growth, who dynamically and progressively penetrates the environment in which he or she resides and restructures him or her (Bronfenbrenner, 1996/2002).

*Challenges and Risks.* Children are more vulnerable than adults to traumatic events (Bartlett et al., 2020; Dziuban, Pavão, & Frogel, 2017; Schonfeld & Demaria, 2015). This vulnerability happens because the skills and

resources to cope independently with their socio-emotional, mental, or behavioral needs are still developing (Schonfeld & Demaria, 2015). Studies highlighted that the psychological effect of a stressful event like a pandemic caused by an infectious disease could be influenced by the person’s perception (Carvalho et al., 2020). In this way, children will respond in different ways to stressful events, with some having more significant difficulties managing their emotions and behaviors than others (Bartlett et al., 2020; Dziuban et al., 2017). Besides, there is also each child’s self-regulation skills, that is, their ability to regulate their emotions, behaviors, and cognition, which occurs from the role of parents as co-regulators and the child’s characteristics, such as temperament (Linhares & Martins, 2015).

The child development stage is also crucial as it will influence the child’s capacity to understand an infectious disease and its causality (Dalton, Rapa, & Stein, 2020; Marques et al., 2020). Besides that, the stage of child development influences the child’s understanding of death and mourning (McGoldrick & Shibusawa, 2018). From a cognitive perspective, children will understand the irreversibility of death only after achieving concrete operative thinking around seven (Delval, 2011). In this sense, the deaths of family members or close people during the epidemic can be a trauma during child development (Liu, Bao, Huang, Shi, & Lu, 2020), including the impossibility of conducting mourning rituals conventionally due to social isolation.

In addition, whenever there is no available information that children can understand (and often even adults), it can reinforce the use of their imagination to answer their questions (Bartlett et al., 2020). Thus, dealing with the effects of a new and unexpected event, such as a pandemic, can be even more problematic in contexts of greater vulnerability, in which caregivers cannot provide the support the child needs (Jiao et al., 2020). Also, those who have experienced previous traumatic events may experience additional stressors (Weaver & Wiener, 2020).

As previously mentioned, children in situations of trauma or adverse events may present symptoms such as depression, anxiety, difficulties in sleeping and eating, impaired social interaction, behavioral problems, confusion regarding changes in routine, fear, and anguish at the possibility of their family members becoming ill (Bartlett et al., 2020; Jiao et al., 2020), regressive symptoms, intolerance to rules and mood changes (Pisano et al., 2020).

*Protective Measures and Recommendations.* Among the evidence found, it stands out that resilience (Jiao et al., 2020) and the previous non-existence of mental disorders in the family were identified as protective factors for children's mental health during the COVID-19 outbreak (Marques et al., 2020). As for coping strategies for the current pandemic, one critical issue is understanding the reactions, interpretations, and manifestations of children's emotions (Jiao et al., 2020). In general, they tend to recover from an adverse or traumatic event and resume their development when they have an environment in which they receive adequate support from sensitive and responsive caregivers. Thus, they need their caregivers to help them regulate their emotions, validating their feelings and helping them feel loved and safe (Bartlett et al., 2020). Through this support and internal resources, children can develop new skills to deal with future adversities (Schonfeld & Gurwitch, 2012).

In practice, such reality is even more complex because, in addition to the child's pre-existing coping skills, how he or she will face the adverse situation depends on other factors related to the context in which the child lives and the direct effects of the pandemic on his or her life (such as the loss of someone close, the need of distancing or hospitalization of a family member) (Bartlett et al., 2020). However, considering the child on an individual level, these studies support important target points for intervention with families with children. Parents could benefit from orientation regarding children's different stages of development to be aware that children are also feeling and suffering the effects of the pandemic but need their help to understand the pandemic and its impact. In this sense, parents play an essential role in transmitting and communicating information about the pandemic. They should do it in a playful, honest, and respectful way, so children can truly comprehend changes caused by the pandemic, according to their age and individual characteristics (Bartlett et al., 2020; Fegert, Vitiello, Plener, & Clemens, 2020).

### ***Microsystem: Children and Their Families***

The child-family relationship includes proximal processes, which are forms of interaction that happen over time and influence the child's development (Bronfenbrenner, 1996/2002). Suddenly, the COVID-19 pandemic has led families to reorganize their routines and relationships, which can impact children's mental

health and psychological well-being (Cluver et al., 2020; Weaver & Wiener, 2020).

*Challenges and Risks.* It should be considered that parents are facing the unknown, having to organize their routines and work at the same time that they have to take care of their children full time (Marques et al., 2020). In addition, at the same time, many of them are facing symptoms of stress, anxiety, and fear (Cluver et al., 2020). They also must manage their children's emotions and behaviors. Besides, parents have to create strategies to maintain healthy eating and sleeping routines (Weaver & Wiener, 2020) and also manage screen time, which has increased during the pandemic (López-Bueno et al., 2021; Weaver & Wiener, 2020).

The home environment can become very tense and stressful once parents have to explain the reason for regular changes in routine and family organization due to challenges and uncertainties caused by the pandemic (Fegert et al., 2020). Many children need to be separated from one or both parents when they were infected. This situation can be very harmful to children's development as they may feel vulnerable and insecure in any separation from caregivers (Singh et al., 2020).

For families in situations of poverty and vulnerability, these challenges can be exacerbated, including an increase in cases of domestic violence and abuse against children (Cluver et al., 2020). Emergencies such as pandemics are potential risk factors for the rise in violence against women and children because of economic insecurities, social isolation, relational instabilities and conflicts, reduced availability of access to health services or assistance, among other factors (Marques et al., 2020). The possible lack of access or interruptions in ongoing treatments due to measures of isolation or even possible closure of institutions, such as with children with Autism Spectrum Disorder, for example, can be challenging for parents to manage (Echavarría-Ramírez, Díaz-Reyes, & Narzisi, 2020). Thus, recent literature outlines a critical role regarding situations of isolation and confinement in the home that require attention from health professionals and researchers, which may consist of risk factors for child well-being.

*Protective Measures and Recommendations.* According to Bronfenbrenner (1996/2002), the availability of parents to interact with their children and maintain a compelling performance of parental roles depends on the existence of a favorable social context. In this sense, sources of support from other environments are of crucial importance. As interventional

alternatives in pandemics or other crises, parents can receive assistance through parental education programs or parent-child therapies (Perrin, Leslie, & Boat, 2016). Psychological services using information and communication technologies have been suggested, and the use of technologies can also act in strengthening support networks (Jiang et al., 2020; Wang et al., 2020).

Positively, other studies also point to the increase in family interaction of people living in the same house and the greater proximity between parents and children in situations of social distance. Creatively, family members can share household activities, experiencing feelings of comfort, security, fulfillment, and contribution - including playtime, stories, and games (Weaver & Wiener, 2020). Besides, confinement allows parents to be the primary resources and role models for their children (Wang et al., 2020). Thus, family life and interactions between parents and children demand parental approaches to strengthen bonds and adequately address children's psychological needs (Perrin et al., 2016).

In a similar sense, evidence suggests that parents need to be sensitive to their children's behaviors (Dalton et al., 2020; Pisano et al., 2020), paying attention to the expression of their feelings of fear, anger, insecurity, among others. In addition, they must be attentive to children who may be facing difficulties without, however, showing apparent symptoms, such as those who avoid or fail to express their concerns and complaints (Pisano et al., 2020; Schonfeld & Demaria, 2015).

To this end, it is recommended to create an environment of exchange and effective communication, which allows parents to identify and act on possible problems, including conversations about the child's fears and anxieties related to the pandemic or crisis (Weaver & Wiener, 2020; WHO, 2020a). This is because if the child feels that the information is withheld or unreliable, their recognition of the parents as sources of support and security can be impaired (Schonfeld & Demaria, 2015). In some situations, it may be necessary for parents to inform their children with objective data. In other cases, parents should dialogue about the feelings and emotions experienced by the child, such as anger, guilt, or fear (Bartlett et al., 2020; Dalton et al., 2020).

In this sense, the adult must encourage the child to express his or her emotions, proposing coping skills, for example, when talking about his or her anguish, focusing on sharing strategies to deal with this feeling that may apply to the child's context (Schonfeld &

Demaria, 2015). Strategies can focus on what the child can control, such as washing

their hands during influenza or coronavirus pandemic or even include techniques such as relaxation and distraction. Finally, limiting or controlling children's excessive exposure to screens, especially in terms of their content, are also practical alternatives, as they are highly susceptible to the influence of the media, and their elements can serve as triggers or reminders of the situation of the established crisis (Dziuban et al., 2017; Schonfeld & Demaria, 2015).

### ***Microsystem: Children and Their Schools***

After the family, school plays a fundamental role in children's lives. Therefore, the school is an essential microsystem in which the child is inserted and builds close relationships, which has a critical impact on their mental health (Atilola, 2017).

*Challenges and Risks.* In the public context, face-to-face classes were suspended in March 2020 for an indefinite period, causing many children to find themselves without access to one of their main microsystems. After some time, some schools joined efforts and tried to reorganize their classes in an online format (Cardoso, Ferreira, & Barbosa, 2020). In some countries, schools opened again and are functioning in a so-called "hybrid format," allowing children to have classes both online and presential.

Some evidence suggests negative effects of children's lack of contact with the school, such as decreased physical activity, more prolonged exposure to screens, irregular sleep patterns, and worse eating habits (Wang, Zhang, Zhao, Zhang, & Jiang, 2020). As a result, school activities were identified as of fundamental importance not only for learning purposes but also for interaction with teachers and maintaining a stable routine amid the instability of the pandemic (Wang et al., 2020). Considering the current evidence, it is clear that maintaining school activities at home can be a protective factor for children's mental health.

There was an implementation of a virtual learning environment in most private schools as the school year began in March 2020. Evidence regarding the effect of COVID-19 on child behavior highlighted that school-age children in urban centers are the most prone to behavior problems during the pandemic (Wang et al., 2020). It turns out that some parents are overwhelmed with the emotional and operational load generated by the pandemic and have felt that children have been demanding more of them more than usual (Pisano et

al., 2020). In this sense, regardless of whether the child is taking online classes, the family dynamics with the children at home has demanded a great effort from parents, who need to manage remote work, domestic activities, and care for their children (Marques et al., 2020), as previously discussed.

*Protective Measures and Recommendations.* At the same time that the excessive demand of the school routine can be a risk factor, maintaining it as a protective factor for children's mental health is essential (Jiao et al., 2020; Pisano et al., 2020; Wang et al., 2020). In this sense, it is suggested that the Government prioritize actions to protect children in situations of greater socioeconomic vulnerability. Frequent follow-up with families by telephone and the availability of self-explanatory and educational printed hand-out materials to families can be a helpful strategy to support children during this period (Bartlett et al., 2020).

In children who maintain an online school routine, the suggestion is to promote greater flexibility in the activities and attention, not overloading them with excessive exercises and becoming another stressor. Tasks should consider not only the child's age and autonomy but the entire family context. School content can focus on issues related to physical activities, teaching how to have a balanced diet, sleep routine, or personal hygiene (Wang et al., 2020). With this, it is expected that the school can overcome the idea of conventional learning content, focusing on affective and relational aspects, expanding the importance of communication with teachers, adapting class time, and, finally, considering the family's emotional and operational availability.

Besides, considering the return to schools in the post-pandemic, children need help to return to their routine activities with continuous support systems and the necessary adjustments. The behaviors in the classroom and the time to perform tasks, for example, should be made more flexible, as they can change until aspects of the child's cognitive, emotional and social functioning are (re)adapted (Schonfeld & Demaria, 2015).

### **Mesosystem: The Interrelationship between Family and School**

The mesosystem is the level that encompasses the possible interrelationships between microsystems. For the child, generally, the family-school relationship is significant for later development (Bronfenbrenner, 1996/2002).

*Challenges and Risks.* Faced with the COVID-19 pandemic, suddenly there is a new demand from the

family-school mesosystem, in which teachers need to learn to transform their profession into online activities, and parents need to take on, amid so many concerns, the role of facilitators of this learning model (Kent, Ornstein, & Dionne-Odom, 2020). These demands during the pandemic tend to create stress and fear in parents, reducing their ability to contain their children's feelings, which can generate an increase in violence at home against children (Cluver et al., 2020; Marques et al., 2020). Parents also report difficulties in helping their children with school activities due to their own knowledge about the content or even feeling unable to teach children (Garbe, Ogurlu, Logan, & Cook, 2020).

It is essential to highlight that not only children and their families need to be the focus of attention, but also teachers (Zhou, 2020). They can face difficulties in teaching not only because of the changes in online classes, but also because they can feel increased levels of stress, which can impair their interaction with students and teaching (Zhou, 2020). In contexts of social vulnerability it can be even more problematic once both teachers and families usually do not have adequate access to the internet or not even a computer. Moreover, most teachers don't have enough training to simply transform their classes in an online format (Cardoso et al., 2020; Pereira & Barros, 2020). Given the exposed evidence, depending on the quality of the family-school relationship, this activity can also be a risk factor for children's mental health.

*Protective Measures and Recommendations.* As a coping strategy, the school and the family can establish collaboration and mutual understanding. To make the contents, the number of tasks and the type of assessment more flexible, school psychologists and the pedagogical team should maintain frequent contact with families, watching the needs of each family and serving as a support and information network. Still, it is necessary to create communication channels amongst schools and parents to share experiences and learn from each other (Carlson, 2020).

When primary conditions are attended, there is no doubt that online classes are a safe and positive way to maintain classes during the pandemic and isolation measures. However, even in this scenario, families are struggling to maintain online classes. Difficulties to keep children's attention, lack of patience and teaching skills from parents, and problems during classes are reported (Dong, Cao, & Li, 2020). Besides, it is essential to emphasize that online classes can be excluding the children

in poverty who don't have access to the internet and other necessary resources (Cardoso et al., 2020). In this sense, this population needs to be the focus of public education policies.

### **Exosystem: Indirect Impacts on Children's Mental Health**

As previously evidenced in this article, the COVID-19 pandemic has implications for children's mental health in different spheres. The exosystem is not directly related to children but still affects their experiences, such as, for example, the environment and the parents' working conditions (Bronfenbrenner, 1996/2002).

*Challenges and Risks.* In the pandemic scenario, the increase of contagion by the virus and the consequent need for social distance has strongly impacted the economy since several sectors have undergone significant and sudden changes in their operations (Rossoni, 2020). Because of this, several families have suffered or will suffer reductions to their incomes. Their members lost their jobs and/or radically changed their work configuration. Situations like these during the pandemic can impact children's mental health as well (Golberstein et al., 2020).

There is evidence associating economic conditions and children's mental health, such as those brought up in the study by Golberstein, Gonzales, and Meara (2019). The study showed that a worsening of the country's economic situation was associated with worsening children's mental health scores. However, the "parental unemployment" factor did not fully explain these results. From this, it may be possible that the parents' constant fear of losing their jobs and the possibility of a cut in income explained the different effects on families in the same conditions.

As well as in unfavorable economic situations, periods of crisis and recession, after a significant natural disaster, it is also common to see an increase in unemployment or underemployment, resulting in financial stress for families or even in below ideal life situations, temporary or not (Schonfeld & Demaria, 2015). Thus, fear and insecurity on a large scale concerning work and the economy are constant debates in the current scenario, which affect the mental health of the subjects (Ornell et al., 2020).

Still, another factor not directly related to the child that poses a risk factor for children's mental health is the social distance, although extremely necessary to contain the pandemic outbreak of an infectious disease (Sprang & Silman, 2013; Wang et al., 2020). For

example, a third of children in social isolation or quarantine due to the H1N1 outbreak in 2009 showed symptoms of posttraumatic stress (Sprang & Silman, 2013). The changes caused by confinement affect routine activities, leisure, and socialization and can generate stress at that time (Wang et al., 2020).

*Protective Factors and Recommendations.* Given the above mentioned, it is clear that the current economic scenario and the constant fear and insecurity of losing financial stability are some risk factors for children's mental health. For this reason, several international initiatives establish that education and information for the population when handling public health emergencies are insufficient, as one must also pay attention to social and cultural factors. It is noteworthy that the pandemic impacts tend to be greater in developing countries, such as Brazil, which in addition to the virus, deal daily with poverty and deep social inequality (Victor & Ahmed, 2019).

### **Macrosystem: Effects of Social on Children's Mental Health**

The macrosystem refers to the level that involves society and its cultural, social, and political values and a belief system and culture involved in the child's context, which, in turn, influence his or her development (Bronfenbrenner, 1996/2002).

*Challenges and Risk Factors.* The main challenges for child mental health care in the country are expanding the different services that make up the care network and the need for integration and articulation between existing programs with mental health actions. There are public services in different sectors aimed at children in most states, which need to articulate with each other. Another aspect is the urgency of increasing specialized services, such as the Psychosocial Care Center for Children and Adolescents (CAPSi) in regions such as the North and the Midwest (Couto, Duarte, & Delgado, 2008).

Because of the enormous proportions of changes caused by the pandemic, most of society's environments have undergone changes affecting the lives of the entire population. A meaningful change was the implementation of measures of isolation and social distance, which on the one hand, are necessary to contain the pandemic spread, while on the other, can have negative impacts. In this sense, these challenges may be aggravated by the demands after the potentially traumatic period of the pandemic and must be taken into account by these institution managers when making decisions.

*Protective Measures and Recommendations.* The government and health authorities can reduce the impact of the pandemic by providing accurate and evidence-based information. Higher levels of satisfaction with the information received are associated with less psychological impact, including lower stress levels, anxiety, and depression (Wang et al., 2020). How the population receives information can influence even the adoption or not of the measures implemented by the Government, such as social distancing itself (Jones & Salathé, 2009).

Recommendations to protect children in adverse situations exist, such as the 2009 H1N1 Influenza pandemic, the collapse of the reactor at the Fukushima nuclear plant in 2011, the Ebola outbreak from 2014 to 2015, and the Zika virus since 2016, i.e. This demonstrates ongoing progress, but there are still gaps in meeting the needs of children during public health emergencies. To improve outcomes during and after emergencies or disasters, children's recognized mental health needs must be considered in national and international planning efforts, including both health actions, in hospitals and outpatient clinics, as well as social activities in the community, in schools, or social assistance centers (Dziuban et al., 2017).

The mental health situation of children after the pandemic must also consider the social determinants of health. It is known that social, cultural, ethnic/racial, psychological, and behavioral factors influence the population's health problems (Buss & Pellegrini Filho, 2007). A systematic review of studies in Brazil found that adverse environmental and socioeconomic conditions make children more susceptible to emotional issues (Halpern & Figueiras, 2004).

Thus, for mental health care at a national level after the pandemic, one must also consider the different childhood contexts. Effective public policies for the mental health care of street children must be considered (Hutz & Koller, 1997), as well as of indigenous children (Batista & Zanello, 2016), children living in slums (Vieira & Zornig, 2015) or in the rural context (Beheregaray & Gerhardt, 2010), among other traces of race, ethnicity, gender, and socioeconomic level. In this context, given the challenges to child and youth mental health care in the country and the necessary consideration of different social determinants and different childhood contexts, it is understood that the Family Health Strategy (FHS) is an essential possibility for this care. The FHS is the first and the main access point for children's mental health demands (Carvalho et al., 2020).

## Final considerations

Through a critical review of the literature, the present study presented relevant scientific knowledge related to possible impacts on children's mental health in the context of the current pandemic of the new coronavirus. Through the systemic view of the child and his or her development, it was possible to understand risks and bring possible forms of intervention to help the child and their family cope with the COVID-19 pandemic. With these actions, it is possible to create individual, relational and social transformation based on the crisis experience.

This paper presents a critical look at the evidence regarding children's mental health and the areas that need care and attention. However, it was not possible to include, explore or deepen all environments in which the child is inserted in this discussion, such as relationships between peers or with the extended family, participation in the community, neighborhood, or in religious groups. Therefore, future studies about this subject are suggested.

Based on the scientific knowledge covered in this article, the importance of family interaction and the environmental settings in which the child is inserted also require attention. Therefore, the present review advances the existing literature to contemplate challenges and possibilities for the family and school dynamics of the child and the professional practices of those who work with children's mental health during the COVID-19 pandemic.

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