

**The mental health of children and adolescents during the COVID-19 pandemic: a  
narrative review**

**A saúde mental de crianças e adolescentes durante pandemia COVID-19: uma revisão  
narrativa**

**La salud mental de niños y adolescentes durante la pandemia COVID-19: una revisión  
narrativa**

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**Abstract**

The study was a narrative review on the mental health of children and adolescents during a COVID-19 pandemic. A search was performed in the PubMed, BVS and Google Scholar databases, between April and June 2020. The studies revealed greater psychological distress due to social isolation, increased family conflicts and violence between parents and children. The closure of schools, lack of social interaction, feelings of uncertainty and fear in the face of a pandemic also contribute to the emergence of anxiety and stress symptoms in families.

The resources of the Internet and social media can be tools of psychosocial support to families during quarantine, enabling therapeutic practices, information and contact between peers; minimizing symptoms of stress, anxiety and depression. Public policies are urgent and demand innovation and new technologies applied to families' mental health care.

**Keywords:** COVID-19; Coronavirus; Child health; Adolescent health; Mental health.

### **Resumo**

O estudo foi uma revisão narrativa acerca da saúde mental de crianças e adolescentes durante a pandemia COVID-19. Foi realizada uma busca nas bases de dados PubMed, BVS e no Google Acadêmico, entre Abril e Junho de 2020. Os estudos revelaram maior sofrimento psicológico em razão do isolamento social, do aumento dos conflitos familiares e da violência entre pais e filhos. O fechamento das escolas, a falta de convívio social, o sentimento de incerteza e medo frente à pandemia também contribuem para o surgimento de sintomas de ansiedade e estresse nas famílias. Os recursos da Internet e das mídias sociais podem ser boas ferramentas no apoio psicossocial às famílias durante a quarentena, viabilizando práticas terapêuticas, informações e o contato entre os pares; minimizando sintomas de estresse, ansiedade e depressão. Políticas públicas são urgentes e demandam inovação e novas tecnologias aplicadas aos cuidados com a saúde mental das famílias.

**Palavras-chave:** COVID-19; Coronavírus; Saúde da criança; Saúde do adolescente; Saúde mental.

### **Resumen**

El estudio fue una revisión narrativa sobre la salud mental de niños y adolescentes durante la pandemia de COVID-19. Se realizó una búsqueda en las bases de datos PubMed, BVS y Google Scholar, entre abril y junio de 2020. Los estudios revelaron una mayor angustia psicológica debido al aislamiento social, el aumento de los conflictos familiares y la violencia entre padres e hijos. El cierre de las escuelas, la falta de interacción social, la sensación de incertidumbre y miedo ante la pandemia también contribuyen a la aparición de síntomas de ansiedad y estrés en las familias. Los recursos de Internet y las redes sociales pueden ser buenas herramientas de apoyo psicossocial a las familias durante la cuarentena, posibilitando prácticas terapéuticas, información y contacto entre pares; minimizando los síntomas de estrés, ansiedad y depresión. Las políticas públicas son urgentes y demandan innovación y nuevas tecnologías aplicadas a la atención de la salud mental de las familias.

**Palabras clave:** COVID-19; Coronavirus; Salud de los niños; Salud del adolescente; Salud mental.

## 1. Introduction

In December 2019, in the city of Wuhan in China, the first case of COVID-19 (Sars-Cov-2) was confirmed (Guo YR et al., 2020). On January 30, 2020, the World Health Organization (Pan American Health Organization [PAHO], 2020) declared that the coronavirus outbreak constituted a Public Health Emergency of International Importance (ESPII), due to the potential of the virus to spread among other countries, including those with less structured health systems when it comes to dealing with possible overcrowding. On March 11, 2020, WHO (PAHO, 2020) declared the COVID-19 pandemic due to its increasing geographical distribution. As a consequence, several preventive measures were being disseminated by the WHO, including social distancing, made up of the school closures, shops and services considered non-essential, in order to avoid agglomerations and the consequent contagion (PAHO, 2020).

The world began to experience the drama and the consequences of social distancing. In the midst of fear and uncertainty, the population of the world follows the most unusual public health condition of the 21st century, in which the geographical spread of the virus restricts and interrupts social and work activities, requiring adaptations in the daily routines for which many people weren't prepared (Santos, 2020), revealing the impact that periods of health epidemics can cause (Lima et al., 2020). The uncertain prognosis, imposition of public health measures that violate personal freedoms and financial losses are among the main stressors that contribute to the spread of emotional distress and increased risk of psychiatric illnesses associated with COVID-19 (Pfefferbaum & North, 2020; Santos, 2020). In Brazil, according to statistical data of In Brazil, according to statistical data of August 12th 2020, from the Ministry of Health's Coronavirus (COVID-19) Panel 2019, there are 3.164.785 disease cases, and 104.201 deaths confirmed (Ministério da Saúde, 2020).

As the virus and social distancing advance, psychosocial problems are taking shape between family members and society. Some studies have identified the presence of neuropsychic symptoms, such as anxiety (Altena et al., 2020; Chew, Wei, Vasoo, Chua, & Sim, 2020; Minihan, Gavin, Kelly, & McNicholas, 2020; Montemurro, 2020; Pfefferbaum & North, 2020; Sani et al., 2020; Santos, 2020), psychological stress (Altena et al., 2020;

Minihan et al., 2020; Montemurro, 2020; Pfefferbaum & North, 2020; Sani et al., 2020), depression (Altena et al., 2020; Chew et al., 2020; Minihan et al., 2020; Pfefferbaum & North, 2020; Sani et al., 2020), insomnia and other sleep problems (Altena et al., 2020; Becker & Gregory, 2020; Minihan et al., 2020; Pfefferbaum & North, 2020; Sani et al., 2020), fear (Minihan et al., 2020; Montemurro, 2020; Pfefferbaum & North, 2020; Santos, 2020), anger (Chew et al., 2020; Pfefferbaum & North, 2020) and addiction and/or substance abuse (Minihan et al., 2020; Pfefferbaum & North, 2020; Sani et al., 2020), revealing signs of society's mental illness in the face of pandemics. Montemurro (2020), reported the possibility of an increase in suicide rates in 2020, bearing in mind that social isolation and subjective feelings of loneliness are associated with an increased risk of suicide (Sani et al., 2020; Witt, Ordóñez, Martin, Vitiello, & Fegert, 2020). Chew et al. (2020), reported that anxiety, fear, depression, anger, guilt, sadness and loss are some psychosocial responses to epidemics, such as Ebola and H1N1.

Since the increase in the prevalence of neuropsychic symptoms during the COVID-19 pandemic (Altena et al., 2020; Chew et al., 2020; Montemurro, 2020; Pfefferbaum & North, 2020; Sani, et al., 2020; Santos, 2020), there has been a great movement in favor of conserving mental health. According to the World Health Organization (WHO, 1993), the concept of health goes beyond the absence of disease and is only possible based on the complete balance between physical, mental and social well-being. For WHO *“several factors can put individuals' mental health at risk; among them, rapid social changes, stressful working conditions, gender discrimination, social exclusion, unhealthy lifestyles, violence and human rights violations”* (WHO, 1993). Thus, for the promotion of mental health to occur, there is a demand for actions that allow people to embrace and maintain healthy lifestyles. For the preservation of mental health during the pandemic, the World Health Organization has launched a guide with tips to face the psychological and mental consequences associated with the COVID 19 pandemic. The disease has been developing a high stress load in the population affected by the risk of contamination, uncertainty, social isolation and unemployment, among other reasons. The guide contemplates health professionals, children and seniors, team leaders and quarantined people (Organização das Nações Unidas [ONU], 2020).

Thinking about the growth of mental illness during the COVID-19 pandemic led us to decide to write this article, highlighting the problem in the scope of childhood and adolescence. Childhood and adolescence are phases of the life cycle in which major physical, cognitive, and social changes occur. In this period of life, events can be good or bad

experiences, impacting, and shaping the structure of personality, character, and future behaviors. Thus, we must give special importance to children's and young people's experiences. According to article 7 of the Statute of Children and Adolescents, "*Children and adolescents have the right to protection of life and health, through the implementation of public social policies that allow birth and healthy and harmonious development, under conditions worthy of existence*" (ECA) (1990). For that reason, we developed a narrative review based on publications that discussed childhood and adolescence in times of the COVID-19 pandemic, aiming to highlight how the pandemic may be influencing the mental health of children and adolescents and their future behaviors. Also, this study aimed to discuss intervention alternatives during quarantine, highlighting the importance of public actions and policies that guarantee the rights of children and adolescents for "*...healthy and harmonious development, in conditions worthy of existence*" (ECA, 1990).

We share the opinion that social distance and confinement in homes during the COVID-19 pandemic, although necessary, have been interfering a lot in most families' routines. This has resulted in high loads of stress, anxiety, excessive alcohol use, frequent misunderstandings, violence, among other problems within the home. The distance from the school environment has kept children and adolescents at home and away from their classmates, friends, and the school environment, overwhelming mothers, who need to keep up with remote classes and school tasks. When students have neurodevelopmental disorders, this task becomes even more difficult. Besides, the overload of news about the disease and death rates are also generators of fear and stress. We believe that the use of information technologies enabling virtual social contacts, games of entertainment can be good strategies to reduce idleness and stress among children and adolescents during the pandemic, as long as there are balance and a certain control. The proximity between family members can promote greater dialogue, not just conflict, strengthening parental relationships. The inclusion of families in foster care groups has proved to be an excellent strategy and has been used in university extension projects. We selected some scientific publications that addressed all these aspects and more, discussing these and other difficulties and presenting strategies for maintaining the mental health of children, adolescents, and their families

## **2. Methods**

The present study was a narrative review, defined by Rother (2020), as a large-scale publication, detailing the description and discussion of the state of the art of a given subject.

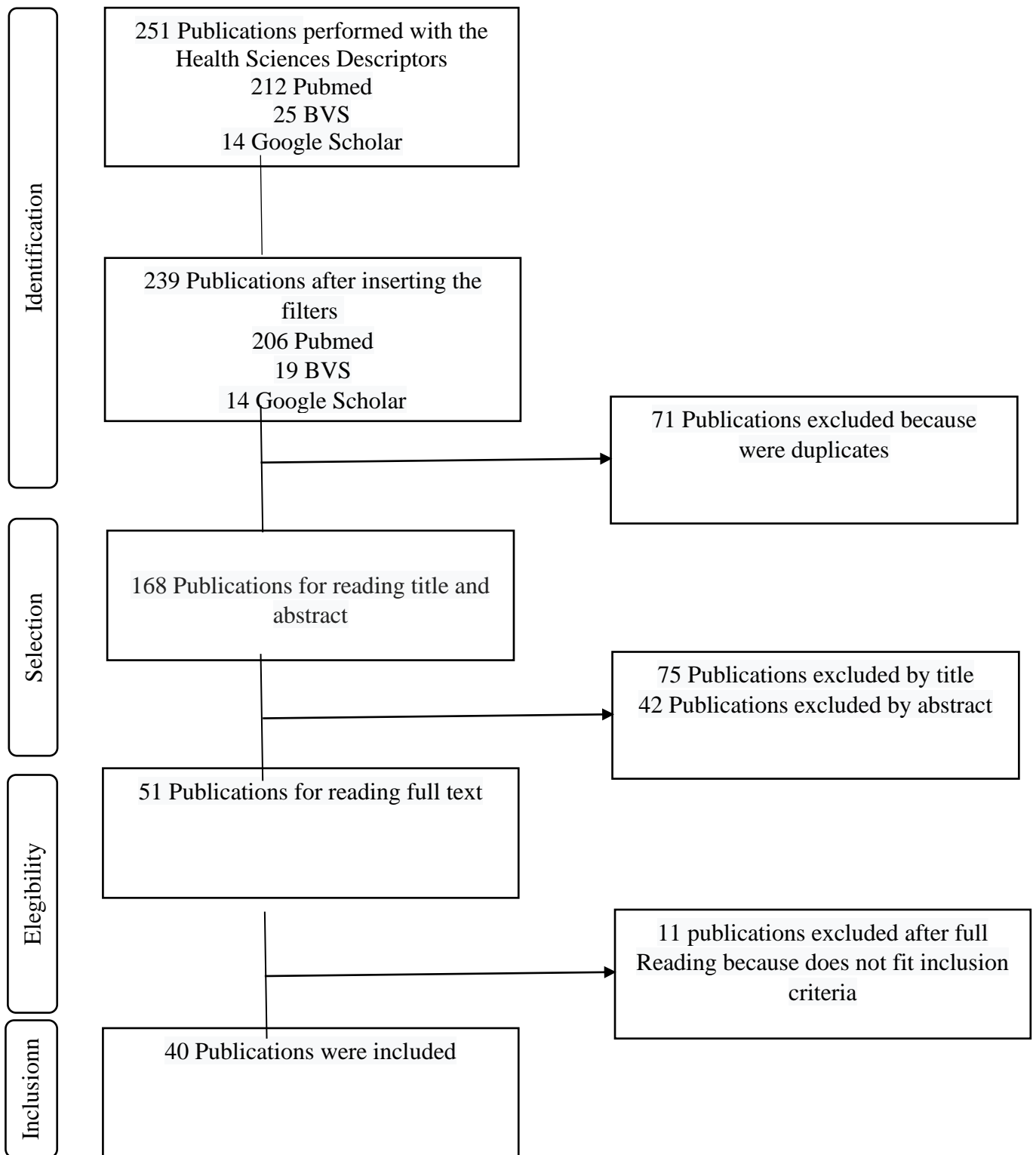
The narratives do not present replicable methodologies or quantitative answers to specific questions, but they can be added to the debate, raising questions and collaborating in capturing and updating knowledge on the topic (Rother, 2020).

Thus, a non-systematic literature review was carried out between April and June 2020. PubMed, BVS and the Google academic search tool were used as a scientific database. A search was performed with the Health Sciences Descriptors (MeSH/DeCS) "COVID-19", "Coronavirus"; "Child", "Adolescent", "Mental health"; "Social isolation"; "Quarantine". The initial search gathered a total of 251 publications, 212 in PubMed, 25 in VHL and 14 in Google Scholar. As a way of delimiting the research, research filters related to the COVID-19 pandemic period, between April and June 2020 were used; publication language (English, Portuguese and Spanish). Finally, the body of analysis of this narrative review was composed of 40 articles (Table 1). Google Scholar alerts have been added according to the requirements described above. The flowchart for selecting publications is shown in Figure 1. Using the publications selected, the authors studied all papers and extracted and organized the information needed to the current study.

### 3. Results

As a result of searching the databases, it was possible to make a flowchart (Figure 1) and a table (Table 1), according to a selection of relevant publications and organization of the most discussed issues, respectively. The details of the search procedure were: Pubmed (Descriptors: 1) COVID-19, Mental Health, Child, Adolescent; 2) COVID-19, Mental Health, Child; 3) COVID-19, Social Isolation, Child; 4) COVID-19, Child, Adolescent./Filters: 1) Time: last 5 years; 2) Language: Portuguese, English, and Spanish. BVS (Descriptors: 1) COVID-19, Mental Health, Child; 2) COVID-19, Child, Adolescent./ Filters: 1) Time: last 5 years; 2) Language: Portuguese, English, and Spanish; 3) Database: Pubmed was excluded because the database search had already been carried out. Google Scholar (Descriptors: 1) COVID-19; child, adolescent; 2) COVID-19, Mental Health, Child, Adolescent; 3) COVID-19, Quarantine, Mental Health./Filters: 1) Time: last 5 years; 2) Language: any language. Relevance was given to articles dealing with the mental health of children and adolescents during the quarantine due to the COVID-19 pandemic.

**Figure 1.** Flowchart for selecting scientific publications



Source: Authors' own elaboration.

Figure 1 shows the selection of scientific publications. Gradually, some publications were eliminated by the filters and there remained the publications that best portrayed the difficulties experienced by children, adolescents, and their families during the COVID-19 pandemic. Duplicate publications were discarded. We highlight that most publications were in the Pubmed database.

**Table 1.** List of selected scientific publications: Author/Year; Title and Highlighted issues.

Author/Year	Title	Highlighted issues
Becker e Gregory (2020)	Editorial Perspective: Perils and promise for child and adolescent sleep and associated psychopathology during the COVID-19 pandemic.	Family Relations, home confinement and mental health
Cluver et al. (2020)	Parenting in a time of COVID-19.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Colizzi et al. (2020)	Medically unexplained symptoms in the times of Covid-19 pandemic: a case-report.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health;
Cortese et al. (2020)	ADHD management during the COVID-19 pandemic: guidance from the European ADHD Guidelines Group.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Dalton, Rapa e Stein (2020)	Protecting the psychological health of children through effective communication about COVID-19.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Deslandes e Coutinho (2020)	The intensive use of the internet by children and adolescents in the context of COVID-19 and the risks for self-inflicted violence.	COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
dos Santos Rodrigues, J. V., & de Almeida Lins, A. C. A. (2020).	Possíveis impactos causados pela pandemia da COVID-19 na saúde mental de crianças e o papel dos pais neste cenário.	Family Relations, home confinement and mental health



<b>Author/Year</b>	<b>Title</b>	<b>Highlighted issues</b>
Douglas, Katikireddi, Taulbut, McKee e McCartney (2020)	Mitigating the wider health effects of covid-19 pandemic response.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health
Fegert, Vitiello, Plener e Clemens (2020)	Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Fernández-Aranda et al. (2020)	COVID-19 and implications for eating disorders.	Social Isolation and the impact on Mental Health
Garcia e Duarte (2020)	Intervenções não farmacológicas para o enfrentamento à epidemia da COVID-19 no Brasil.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health
Golberstein, Wen e Miller (2020)	Coronavirus Disease 2019 (COVID-19) and Mental Health for Children and Adolescents.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health
Green (2020)	Risks to children and young people during covid-19 pandemic.	Family Relations, home confinement and mental health
Holmes et al. (2020)	Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication
King, Delfabbro, Billieux e Potenza (2020)	Problematic online gaming and the COVID-19 pandemic.	COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Király et al. (2020)	Preventing problematic internet use during the COVID-19 pandemic: Consensus guidance.	COVID-19, Social Media and Effective Communication
Lee (2020)	Mental health effects of school closures during COVID-19.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health

<b>Author/Year</b>	<b>Title</b>	<b>Highlighted issues</b>
Loureiro, Alves, Lopes, Barros e Halpern (2020)	Nota de Alerta: Pais e filhos em confinamento durante a pandemia de COVID-19.	Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Marques, Moraes, Hasselmann, Deslandes e Reichenheim (2020)	Violence against women, children, and adolescents during the COVID-19 pandemic: overview, contributing factors, and mitigating measures.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health
Melo et al. (2020a)	Saúde mental e atenção psicossocial na pandemia COVID-19: recomendações para cuidado de crianças em situação de isolamento hospitalar	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Melo, Pereira, Serpeloni, Kabad, Kadri, Souza e Souza e Rabelo (2020b)	Saúde mental e atenção psicossocial na pandemia COVID-19: crianças na pandemia Covid-19	Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Minihan, Gavin, Kelly e McNicholas (2020)	Covid-19, Mental Health and Psychological First Aid.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication;
Ministerio de Salud Argentina (2020)	COVID-19: Recomendaciones sobre la salud mental de niños, niñas y adolescentes en contexto de pandemia.	COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Ni et al. (2020)	Mental Health, Risk Factors, and Social Media Use During the COVID-19 Epidemic and Cordon Sanitaire Among the Community and Health Professionals in Wuhan, China: Cross-Sectional Survey.	COVID-19, Social Media and Effective Communication
Oliveira, Vilela, Warkentin, Araujo, Ramos e Lopes (2020)	COVID-19: Comportamentos alimentares e outros estilos de vida saudáveis em tempo de isolamento social	Family Relations, home confinement and mental health
Ornell, Schuch, Sordi e Kessler (2020)	Pandemic of fear and Covid-19: impact on mental health and Possible strategies.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; COVID-19, Social Media and Effective Communication; Coping Strategies during Pandemic COVID-19
Perrin, Rybarczyk, Pierce, Jones, Shaffer e Islam (2020)	Rapid telepsychology deployment during the COVID-19 pandemic: A special issue commentary and lessons from primary care psychology training.	Coping Strategies during Pandemic COVID-19

<b>Author/Year</b>	<b>Title</b>	<b>Highlighted issues</b>
Schmidt, Crepaldi, Bolze, Neiva-Silva e Demenech (2020)	Impactos na Saúde Mental e Intervenções Psicológicas Diante da Pandemia do Novo Coronavírus (COVID - 19)	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Souza Junior, Ribeiro, Santos, Soares e Raasch (2020)	“#Fiqueemcasa e cante comigo”: Estratégia de entretenimento musical durante a pandemia de COVID-19 no Brasil.	Social Isolation and the impact on Mental Health
Tsamakis et al. (2020)	COVID-19 related stress exacerbates common physical and mental pathologies and affects treatment (Review).	Family Relations, home confinement and mental health
Usher, Bhullar, Durkin, Gyamfi e Jackson (2020)	Family violence and COVID-19: Increased vulnerability and reduced options for support.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health;
Vasconcelos, Feitose, Medrado e Brito (2020)	O novo coronavírus e os impactos psicológicos da quarentena.	Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Vélez, Vélez e Patiño (2020)	Impacto del cierre de escuelas en el comportamiento epidemiológico de la enfermedad COVID-19 y en la salud física y mental de los niños, niñas y adolescents.	Family Relations, home confinement and mental health;
Viner et al. (2020)	School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review.	Social Isolation and the impact on Mental Health
Wagner (2020)	Addressing the Experience of Children and Adolescents During the COVID-19 Pandemic.	Family Relations, home confinement and mental health
Wang, C., Pan, Wan, Tan, Xu, Ho e Ho (2020)	Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China.	COVID-19, Social Media and Effective Communication
Wang, G., Zhang, Zhao, Zhang e Jiang (2020)	Mitigate the effects of home confinement on children during the COVID-19 outbreak.	Social Isolation and the impact on Mental Health; Family Relations, home confinement and mental health; Coping Strategies during Pandemic COVID-19
Witt, Ordóñez, Martin, Vitiello e Fegert (2020)	Child and adolescent mental health service provision and research during the Covid-19 pandemic: challenges, opportunities, and a call for submissions.	Social Isolation and the impact on Mental Health;

<b>Author/Year</b>	<b>Title</b>	<b>Highlighted issues</b>
Xie, Xue, Zhou, Zhu, Liu, Zhang e Song (2020)	Mental Health Status Among Children in Home Confinement During the Coronavirus Disease 2019 Outbreak in Hubei Province, China.	Family Relations, home confinement and mental health
Zhang et al. (2020)	Acute stress, behavioural symptoms and mood states among school-age children with attention-deficit/hyperactive disorder during the COVID-19 outbreak.	Family Relations, home confinement and mental health

Source: Authors' own elaboration

As a result of the selection of publications and their content, the highlighted issues by the authors were organized into four topics, which can be seen in Table 1: “Social isolation and the impact on mental health”; “Family relationships, home confinement, and mental health”; “COVID-19, Social media and effective communication” and “Coping strategies during the COVID-19 pandemic”. Family relationships and the impact of social isolation and distance during the pandemic on children, adolescents, and their families were the most discussed issues.

### 3.1 Social Isolation and the Impact on Mental Health

Social distance makes children, adolescents and their parents, members of the nuclear family, live together and have contact with each other most of the time; which generally causes an increase in tensions and possible conflicts (Douglas, Katikireddi, Taulbut, McKee, & McCartney, 2020). Thus, several authors explain the negative effects on the physical, social and mental health of children and adolescents as a reflection of the closure of schools, the removal of social circles and living with the uncertainties and fears of the adult facing the pandemic (Douglas et al., 2020; Garcia & Duarte, 2020; Lee, 2020; Viner et al., 2020; G. Wang, Zhang, Zhao, Zhang, & Jiang, 2020).

COVID-19 is changing the lives and routines of several families, due to the extended effects of social isolation and the current moment, generating higher levels of stress, anxiety, frustration, boredom, excessive information, intolerance to uncertainty and financial losses (Cluver et al., 2020; Douglas et al., 2020; Fegert, Vitiello, Plener, & Clemens, 2020; Lee, 2020; Witt et al., 2020). For individuals with some neurodevelopmental disorder and/or pre-existing psychiatric condition, this routine change is even more intense, leaving them more

vulnerable to the suffering caused by pandemic containment measures (Colizzi et al., 2020; Cortese et al., 2020; Fegert et al., 2020; Ornell, Schuch, Sordi, & Kessler, 2020). Children with autism spectrum disorder, for example, may show greater frustration and be more irritable to changes in routines imposed by social isolation, demanding greater attention (Lee, 2020).

The socioeconomic issue is associated with an increase of problems related to mental health of children and young people, as they are affected by a greater stress burden on adults in view of possible unemployment and difficulties in family support (Cluver et al., 2020; Douglas et al., 2020; Golberstein, Wen, & Miller, 2020). Therefore, this creates environments with greater risks of substance misuse, such as excessive alcohol consumption (Minihan et al., 2020); family violence, even without a previous history; and child abuse (Douglas et al., 2020; Fegert et al., 2020; Usher, Bhullar, Durkin, Gyamfi, & Jackson, 2020). Garcia et al. (2020) and Marques, Moraes, Hasselmann, Deslandes e Reichenheim (2020) highlight that mostly women, children and adolescents are more vulnerable to domestic violence in this period.

It is evident that social isolation exacerbates the vulnerabilities of the individual and his family, in addition to limiting accessible support options (Usher et al., 2020), which increases the risk of child neglect and abuse (Witt et al., 2020), whether physical, sexual or emotional (Lee et al., 2020; Melo et al., 2020a; Usher et al., 2020). As for the schools closures, the impact on children and adolescents has been observed with regard to greater exposure to domestic violence (Cluver et al., 2020; Holmes et al., 2020; Schmidt, Crepaldi, Bolze, Neiva-Silva, & Demenech, 2020), due to the role that schools play in the identification of abuse and mistreatment. Douglas et al. (2020) and Golberstein et al. (2020) point out that after the schools closures, low-income families are deprived of access to assistance and physical and mental health care provided by such an institution.

Parents and caregivers face several tensions related to remote work and the risk of financial instability while caring for children and adolescents, also dealing with uncertainty regarding the duration of this scenario (Cluver et al., 2020; Garcia & Duarte, 2020). Thus, concerned with the evolution and implications of COVID-19, they may not be aware of the distress experienced by these children and adolescents, who perceive the emotional state of adults and the change in their context, which may result in mental health damages (Dalton, Rapa, & Stein, 2020). For Fernández-Aranda et al. (2020), Souza Junior, Ribeiro, Santos, Soares e Raasch (2020) and by recommendation of the Ministry of Health together with the Oswaldo Cruz Foundation (Melo et al., 2020a), providing entertainment strategies in this period of social isolation is an important tool for preserving mental health, for children,

adolescents and adults alike, through drawings, games, ways of expressing feelings and connected ways of maintaining social contact.

The isolation and social distance caused by the pandemic context promote new routines, such as home office, closing schools, home confinement, increase how long family members stay home, and keep children, adolescents, and their parents away from their peers. Public health institutions, schools, and universities must become involved with the social demands of mental, physical, and social health, to avoid or minimize conflicts and more serious consequences such as the emergence of different forms of domestic violence, including vulnerable parts, such as children, adolescents, and women.

### **3.2 Family Relationships, home confinement and mental health**

The psychological effects of the COVID-19 pandemic have been demonstrated in several studies, which reinforces the fact that they can affect mental health now and in the future (Holmes et al., 2020). According to G. Wang et al. (2020), these symptoms can generate even more harmful consequences in children and adolescents, although some deny or act indifferent towards the repercussions of the current situation, such as, being distant from family and friends (Melo et al., 2020a). In situations of adversity there is an elevation of stress hormones, such as cortisol and adrenaline, generating risks to healthy brain development (Loureiro, Alves, Lopes, Barros, & Halpern, 2020). Therefore, while some of these symptoms may have a situational impact and can be resolved over time, others may demand professional intervention in case of occurring progression or intensification in severe disorders (Wagner, 2020).

The study by Xie et al. (2020), on the state of mental health during home confinement due to coronavirus disease, made with Chinese students from two primary schools, demonstrated that 22.6% of students reported depression symptoms and 18.9% reported anxiety symptoms. According to the authors, these numbers are higher than those found in other investigations in Chinese primary schools and may be linked to the reduction of social interaction and outdoor activities during isolation (Xie et al., 2020). Other factors seem to contribute to the impact on mental health of children and adolescents, such as changes in routines, lifestyle (Holmes et al., 2020; Tsamakis et al., 2020) and the excess of information to which they are exposed. Furthermore, the levels of stress and anxiety of the surrounding adults can be perceived and conducive to the appearance of these symptoms. Dalton et al. (2020) state that children are “linked” to the emotional states of adults and research shows

that even children as young as two years old, are able to perceive the changes that occur around them. Thus, the children represent a group of great psychological vulnerability in the current period, since social distancing combined with the general concerns of those responsible for health and economic issues can generate higher levels of stress and anxiety (Dalton et al., 2020; Minihan et al., 2020; Oliveira et al., 2020).

The effects of these symptoms can manifest themselves in different ways and the short-term behaviors resulting from this state are often presented through changes in sleep (Becker & Gregory, 2020) and food, difficulties in concentration, irritability, restlessness, fear, feeling of loneliness and boredom (Melo et al., 2020b). They can also show aggressive behaviors, disobedience, challenging externalizing behaviors (Dalton et al., 2020; Marques et al., 2020) and regressive behaviors, such as bed-wetting. In the future, there may be developmental delays, anxiety and depression disorders, in addition to a decrease in school performance and unhealthy lifestyle (Ornell et al., 2020). In addition to increasing the risk of post-traumatic stress (Douglas et al., 2020; Fegert et al., 2020; Tsamakidis et al., 2020).

On the other hand, for those with pre-existing conditions, there may be a risk of relapse (Colizzi et al., 2020) and the possibility of worsening (Golberstein et al., 2020; Marques et al., 2020; Vasconcelos, Feitose, Medrado, & Brito, 2020). Social detachment, changes in lifestyle and support interruptions can also affect those with learning disabilities and neurodevelopmental disorders (Holmes et al., 2020). The school closures, specifically for children and adolescents with mental health problems, can represent a more significant interruption in their routines, leading their symptoms to relapse (Lee, 2020; Vélez, Vélez, & Patiño, 2020).

It is noteworthy that children and adolescents with attention deficit hyperactivity disorder (ADHD), can experience the COVID-19 crisis in a very challenging way. This disorder is one of the most frequent neurobehavioral disorders in children, with negative impacts in several aspects, including learning, interpersonal relationships, self-esteem and emotion dimensions (Zhang et al., 2020). Children with this diagnosis generally show oppositional and challenging behavior, which can be increased due to the vulnerability and suffering to which they are exposed with the measures of social distancing imposed by the current scenario; and that can make the behavior even more disorganized.

The study by Zhang et al. (2020) made with parents of children (6 to 15 years old) diagnosed with ADHD identified that, during the COVID-19 outbreak, behavioral symptoms worsened significantly, in addition to observing higher levels of daily stress when raising children, due to emotional and behavioral problems and how to deal with children, in a more

intense way. In other cases, including autism, Down syndrome and physical disabilities, changes in routine and social isolation have also been able to cause impacts on mental health and behavioral aspects, including sensory and psychological disorganization and motor losses (Melo et al., 2020b).

In order to deal with the specific care demands of these groups, family members and/or caregivers may experience higher levels of stress and anxiety regarding the behaviors that children may experience, involving increased agitation and communication difficulties (Melo et al., 2020b), in addition to feeling overwhelmed and the psychological suffering caused by the economic, psychological and interpersonal effects they already face. However, the importance of special care with the most vulnerable groups is highlighted, through the identification of effective risk reduction strategies (Zhang et al., 2020). For cases such as parents of children with attention deficit hyperactivity disorder (ADHD), it is recommended the use of behavioral strategies in order to reduce opposing and challenging behaviors (Cortese et al., 2020). Furthermore, it is advised to create schedules of daily activities as a way of reducing anxiety in children and adolescents (Lee, 2020), establishing a routine.

Another highlighted issue refers to family violence to which children and adolescents are exposed. According to Wagner (2020), the impact of COVID-19 is not uniform among families and social inequality is a determining factor in the levels and conditions of vulnerability on the experience of childhood (Melo et al., 2020b). For some families, staying at home may correspond to the increase in chances of child abuse (Green, 2020), because in this period families have lived together for a longer time at home, which can lead to increased tensions in interpersonal relationships, generating episodes of violence against children and adolescents (Douglas et al., 2020; Marques et al., 2020; Melo et al., 2020b) and leading to significant damage to their physical and mental health.

Family violence corresponds to violent behaviors that can be of physical, sexual, psychological or economic nature, and can include child abuse (Usher et al., 2020). During the period of social isolation, family members may experience a greater burden of stress and fear, which can be intensified due to the economic crisis, considering that some caregivers are unable to work, which raises concerns about the family's subsistence conditions (Cluver et al., 2020). The impacts of economic effects, on the other hand, can lead to increased violence and abuse against children (Cluver et al., 2020; Lee, 2020), due to the greater irritability and less patience of those responsible for dealing with their needs (Melo et al., 2020b). According to Golberstein et al. (2020), economic crisis are associated with an increase in mental health



problems among children and adolescents, as these can be affected by way that economic crisis affects the mental health of adults.

Marques et al. (2020) pointed out that international organizations, researchers and the lay press, based on situations of social distancing previously experienced by the population, are concerned with the increase in domestic violence, which has been observed in different countries (Usher et al., 2020), considering that one's home is often not a safe option (Melo et al., 2020b; Tsamakis et al., 2020). Furthermore, due to the sole contact with the family, the period of social isolation creates perfect conditions for a failure in protection (Green, 2020), since children and adolescents are without access to school and health professionals and hence, the options for supervision and support are reduced, making it more difficult to identify the abuse, keeping it hidden (Green, 2020; Usher et al., 2020).

In addition to physical violence, there are situations of psychological violence in which the parents or legal guardians use methods that are harmful to the mental health of children and adolescents, such as by means of insults, shouting and lack of attention to the child's needs (Melo et al., 2020b). The risk of violence is also increased due to the rise in alcohol consumption (Green, 2020; Usher et al., 2020), which can be explained by the effect of alcohol causing the elevation of the neurotransmitter dopamine that acts in the reward circuits of the central nervous system (Oliveira et al., 2020). However, the use of undue substances should be avoided as a measure of coping, because in the long term, there is a worsening in the physical and mental well-being (Fegert et al., 2020; Vasconcelos et al., 2020).

Therefore, the restriction of social contact and the impacts of the pandemic in general, can trigger profound consequences for the mental and physical health of children and adolescents, in addition to making this public more susceptible to domestic violence (Garcia & Duarte, 2020), considering that alone they may not be able to break this cycle (Melo et al., 2020b); which is established associating with several factors, such as: stress related to economic issues, instability related to disasters, exposure to abusive relationships and little support (Usher et al., 2020). However, taking the opposite direction and recognizing that, despite the atypical moment, the family connections can be comforting for children (Wagner, 2020), the period of social isolation can represent an opportunity for families to build stronger relationships with children and adolescents (Cluver et al., 2020; G. Wang et al., 2020), reinforcing the bond between parents and children, which is fundamental for child development (Melo et al., 2020b). Parenting practices are very important as a strategy for coping with psychological distress. Parents' participation in promoting their children's mental

health is essential. In addition, parents should seek psychological support when necessary, as the parents' psychological illness can compromise their children's mental health (dos Santos Rodrigues & de Almeida Lins, 2020).

The mental health of families, including children and adolescents, can be affected when home confinement takes place for long periods. Constant conflicts resulting from difficulties in adapting to new routines destabilize the natural order of family dynamics affecting the relationships between its members. Children and adolescents must be heard and properly assisted, not just fathers and mothers. The high-stress overload caused by financial problems, remote education, feelings of fear and helplessness, among other factors, can generate greater anxiety and depression than expected under normal conditions.

### **3.3 COVID-19, Social Media and Effective Communication**

Social isolation has presented great challenges, for adults, children and adolescents alike. Parents and caregivers are faced with a frightening prospect of keeping children at home without knowing how long this situation will last (Cluver et al., 2020). Furthermore, research indicates that the general population, which has symptoms of COVID-19, weakened health or family history of chronic diseases, is more susceptible to stress, anxiety and depression (C. Wang, Pan, Wan, Tan, Xu, Ho, & Ho, 2020). While, social isolation, by itself, can cause: anxiety, depression, stress and negative feelings (Deslandes & Coutinho, 2020; Holmes et al., 2020; Minihan et al., 2020).

For the general population, among the communication strategies, the importance of including codes and accessible language is emphasized, so that the majority of the population can understand the information present in the media. In addition, more accurate information causing greater population satisfaction can result in less stress, anxiety and depression. News about the number of recovered people, medications, vaccines, number of infected people and geographical location of the virus were also associated with lower levels of stress and anxiety (C. Wang et al., 2020).

It is notorious how social media plays an important role in the life of the population in a pandemic context. The impact of social media in people's mental health during the pandemic is not yet known, but they can contribute to maintaining social contact even with physical distance, in addition to contributing to psychological and medical care through virtual means (Király et al., 2020; Ni et al., 2020). On the other hand, they can also spread fake news and speculation, generating negative feelings (Ni et al., 2020).

Given this scenario, children are susceptible to stress and anxiety from their caregivers. Bearing in mind that children since the age of 2 years can already notice and absorb the impacts of what happens in the environment that surrounds them, it is necessary to think about clear and adequate ways to communicate about the risks of COVID-19, for each age and level of understanding. Thus, effective communication can help promote psychological well-being, restraining anxiety (Dalton et al., 2020; Deslandes & Coutinho, 2020; Fegert et al, 2020; Ministerio de Salud Argentina, 2020).

Objectively, communication with children should not be underestimated or overestimated. Children aged 4 to 7 years are developing a sense of conscience and understanding that is permeated by magical thinking, which may lead them to understand that what is happening may be the result of a punishment for past behavior or that they are guilty in some level, for the situation. So, listening and questioning the child about what he/she understands about the disease and its transmission, in addition to providing a clear explanation, can help to mitigate the feeling of guilt and fright (Dalton et al., 2020).

Along with the pandemic, consumption of games and digital entertainment has grown considerably, however it is recommended that screen time be limited. Online games will not always be harmful to players, and may be less harmful than other strategies for dealing with emotions. However, it is necessary to pay attention to vulnerable individuals, who are not always benefited by the increase in playing time, being this great interaction through virtual means a risk factor for the development of disorders related to technology and difficulty of readaptation when the COVID-19 crisis is solved (King, Delfabbro, Billieux, & Potenza, 2020; Király et al., 2020). The increase in adherence to online games also raises the concern of the Addiction Policy Forum 2020 (King et al., 2020), regarding the illness related to games, as social isolation can discourage the search for help.

The use of information and communication technologies for therapeutic and social purposes, adapted to children and adolescents, as well as to their families, seems to be a good strategy in times of pandemic, representing a way of welcoming and channeling attention. The use of video games can be a good distraction tool for children and adolescents, as long as they are under adequate control, as they stimulate cognition and visual-motor skills, decrease focus on stressful facts and improve well-being.

### 3.4 Coping Strategies during Pandemic COVID-19

The measures of social distance imposed by the COVID-19 pandemic, with the closure of schools and workplaces, among others, lead to a reduction in social interactions, which can trigger stress reactions (Schmidt et al., 2020). The increase in stress levels may also start within the family relationships, through intense coexistence during this period, causing significant losses especially on the mental health of more vulnerable groups, including children and adolescents. To cope with the impact of the pandemic, some coping strategies can be quite effective. In addition, this period can be seen as an opportunity for greater interaction between parents and children (G. Wang et al., 2020) and strengthening family relationships in general, bearing in mind that family support is essential in preventing damage to children's health and development (Fegert et al., 2020; Loureiro et al., 2020).

Several evidences demonstrate that during periods when children are out of school, such as during holidays, they become physically less active, spend more time facing screens, and face changes in sleep and eating habits (Schmidt et al., 2020). However, it is essential to understand that the current moment is not a vacation, but a health emergency situation that requires the reorganization of activities (Loureiro et al., 2020), which should prioritize the organization of days as close as possible to the usual routine, as this can be beneficial against the symptoms of anxiety and stress (Melo et al., 2020b; Ministerio de Salud Argentina, 2020). Thus, maintaining a daily routine is essential, especially in homes with the presence of children (Deslandes & Coutinho, 2020).

Loureiro et al. (2020), Ornell et al. (2020) and Melo et al. (2020) highlight that the planning of a daily schedule and routine made by adults is essential, organizing their chores, whether they are labor or domestic related, and including children and adolescents in housework, physical exercises or moments for fun and games. Furthermore, it is extremely important to include in the schedule common breaks during the day to bring the whole family together, generating pleasure and well-being, which can be during meals, in constructive conversations and even in practices and techniques of mindfulness and relaxation (Loureiro et al., 2020).

Currently, technology is an important tool and should be used in favor of everyone. For children and adolescents, it is important to establish usage times and prevent them from accessing inappropriate content without supervision (Loureiro et al., 2020; Ministerio de Salud Argentina, 2020). It is also necessary to limit the amount of news they are exposed, as

they can cause anxiety and fear (Ornell et al., 2020; Vasconcelos et al., 2020). In addition, it is always very prudent to seek reliable sources of information (Vasconcelos et al., 2020).

Maintaining a balanced diet is another important aspect during the home confinement, and it is recommended to carry out meal planning, avoiding sugar and high-calorie foods. It is also necessary to eat calmly and at intervals not too long, always paying attention to signs of satiety. Another issue is the practice of physical exercise, which can be performed at home, for at least 60 minutes in the case of children and adolescents (Oliveira et al., 2020). This practice can be performed in the accompanied by parents, who can stimulate their children's creativity using bottles and pillows to set up circuits (Loureiro et al., 2020). Regarding sleep, physical activities can contribute to regularization (Vasconcelos et al., 2020), but it is necessary to keep the screens away from the room and organize good sleep hygiene, with relaxation routine and regular schedules to lie down and wake up (Oliveira et al., 2020).

Conversation, open communication, is a key piece and a crucial support strategy so that all the stress involved in the pandemic period does not become toxic (Dalton et al., 2020; G. Wang et al., 2020; Loureiro et al., 2020). Adults should be open to showing their feelings, explaining them and talking to the child/adolescent with simple and appropriate language to the age group. Furthermore, creative games are useful in creating ways of expressing feelings and emotions (Melo et al., 2020a).

Another strategy to deal with the pandemic is to include children and adolescents in domestic chores, according to their age, as it can be a great learning opportunity. To avoid boredom, games can be allies, and when created by children and teenagers, they can encourage creativity (Loureiro et al., 2020). Online games can also contribute to reducing loneliness (King et al., 2020).

In addition to these measures, it is emphasized that assistance to individuals with some neurodevelopmental disorder must be maintained, with the phone and virtual means of communication, through the use of telepsychology, telepsychiatry and telemedicine in general (Cluver et al., 2020; Perrin et al., 2020), always used in order to monitor school performance, social and emotional well-being (Cortese et al., 2020). For dealing with cases of violence and child abuse, several institutions have sought to expand their reporting channels, mainly online and by phone, but also in person (Schmidt et al., 2020).

Therefore, we reinforce that the coping strategies aim to reduce the impact of the pandemic on the mental health of children and adolescents, since physical distancing has been imposing some challenges for this population. Finally, the need to use effective strategies is highlighted, both to cope with, and combat the impacts of the current situation. We believe

that the use of telepsychology, telepsychiatry, and telemedicine should be expanded and applied to all social stratification.

#### **4. Discussion**

In the present study, we highlight the impacts of the COVID-19 pandemic on the mental health of children and adolescents, in addition to presenting and discussing coping strategies in the face of the COVID-19 pandemic. The emergency situation resulting from the greatest public health crisis faced by the world in recent times has had repercussions in different ways in daily routines and in work, family and human relationships. Uncertainties about the disease, fear of falling ill, fear of death, losing loved ones threaten the mental health of families, children and adolescents, representing a risk to family relationships and the children's socioemotional development (Witt et al., 2020). The moment is difficult and conducive to family conflicts caused by impatience to the adversities caused by confinement at home and by new family and life dynamics. Other important issues are the overburden of domestic work, job loss, suspension of classroom activities, daily conflicts between family members, disruption of routines, removal of family and friends, are some examples of adverse situations resulting from the pandemic, the home confinement and the subsequent social isolation, affecting the socioemotional balance of families, children and adolescents (Douglas et al., 2020; Garcia & Duarte, 2020; G. Wang et al., 2020; Lee, 2020; Viner et al., 2020). In the case of children and adolescents, there is an increase in vulnerabilities, considering that all these adversities act as triggers for violence at home (Garcia & Duarte, 2020; Marques et al., 2020).

It is important to resort to the use of strategies and tools to minimize the impacts on children's mental health. Encouraging dialogue, welcoming and creating routine activities are good resources for healthy development, which should prevail amid the problems faced during the COVID-19 pandemic and social isolation.

Therefore, this moment demands that family members, health and education professionals join forces in combating stimuli that generate stress, anxiety, depression and insomnia among children and adolescents, promoting dialogue and communication, guiding and explaining the current problem taking into consideration the age of each child and adolescent (Dalton et al., 2020). Thus, special attention should be directed to children and adolescents with a history of difficulties in the cognitive, behavioral and neurodevelopmental scopes (Colizzi et al., 2020; Cortese et al., 2020; Ornell et al., 2020). It is important to

maintain healthcare that was already started before the pandemic, even if it is in a remote format, so that the child does not feel deprived of his rights and at the same time, the spaces for listening and therapeutic monitoring are preserved.

In addition, maintaining good eating, sleeping and leisure routines are crucial to keeping children and teenagers mentally healthy. Extension and/or research projects developed by universities have favored the welcoming of families, helping children and adolescents with learning difficulties and other disorders through remote practices. The extension project “Neuropsychological Assessment of Children and Adolescents with Learning Disabilities (PANDA)”, developed at the Federal University of Rio de Janeiro, is a good example of this initiative. PANDA invites family members of children or adolescents who were assisted in person, before the COVID-19 pandemic, to participate in a group of messaging and communication app in audio and video over the internet, available for smartphones. The objective is to provide reports, guidelines, recommendations and educational videos, mindfulness activities, in addition to cognitive and socioemotional stimulation tasks. This form of entertainment has been well received by family members who feel welcomed and less unaided. Initiatives like this have been shown to be a good strategy for children, adolescents and family members during quarantine, minimizing symptoms such as anxiety and stress, resulting from the situation of social isolation (Projeto PANDA [homepage na internet], 2020).

All efforts to maintain mental health corroborate to health in its entirety, because mental health is an integral and essential part of health (OMS, 1993). In this context, public and private initiatives have been adopting measures and actions in order to minimize the problem of social isolation, removal from work activities and unemployment, as a way to overcome the difficulties imposed by the current public health problem. Live streamings, informative booklets, posts and apps have been used as ways of disseminating quality information and knowledge, in order to establish a relational mechanism among people, revealing that innovation and technology can be great allies in the prevention of the disease and promotion of health.

In addition to this issue, it is very important to ensure that the National Policy for Comprehensive Child Health Care (PNAISC) (Ministério da Saúde, 2015) within the scope of the Unified Health System (SUS) and the Child and Adolescent Statute (ECA, 1990), based on its guidelines and planning and developing actions, ensure the monitoring of the physical and mental well-being of children and adolescents, including the increased risk of violence between parents and children during the COVID-19 pandemic (Marques et al., 2020).

The experiences resulting from the period of pandemic and social isolation will leave scars on everyone and nothing will ever be the same as before, reinforcing, therefore, that public initiatives to restore and monitor the psychological suffering of individuals, especially children and adolescents, need to be encouraged and implemented. Thus, the public health crisis generated by the pandemic COVID-19 in the world demands more innovation and new technologies applied to health and education, in order to improve coping with future emergencies and risk to the maintenance of physical, mental and social health. Caring for the mental health of children and adolescents, in addition to guaranteeing the rights of minors, represents an important initiative for reducing the rates of future mental disorders, reducing healthcare costs and developing a healthier and more productive society.

## **5. Final Considerations**

In conclusion, we consider that the longer social isolation and home confinement last, the greater the risk of psychological distress, family conflicts, and violence between parents and children. The closure of schools, lack of social interaction, feelings of uncertainty and fear in the face of a pandemic also contribute to the emergence of anxiety and stress symptoms in families. The resources of the Internet and social media, when properly used, can be tools of psychosocial support to families during quarantine, enabling therapeutic practices, information and contact between peers; minimizing symptoms of stress, anxiety and depression. These coping strategies are good alternatives to maintain and promote the physical, mental and social well-being of children, adolescents and families during home confinement.

However, there are still few studies on the mental health of children, adolescents, and families during the COVID-19 pandemic. Cross-sectional studies on the efficiency and effectiveness of interventions and emergency therapeutic resources used in quarantine are also insufficient. In this way, we suggest more studies in the field of mental health and that more information and communication technologies can be adapted to the context, promoting inclusion, monitoring, and assisting families under psychological suffering. Therefore, public policies and initiatives are urgent, requiring innovation and the construction of new technologies in the mental health field, especially in pandemic contexts.



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