**How parents share and limit their child’s access to information about COVID-19: a mixed methods online survey study**

**Abstract**

This study aimed to understand the role that parents play in sharing or limiting their child’s access to information about Coronavirus disease 2019 (COVID-19). A subset of data from an international mixed-method online survey study was analyzed to elucidate the findings from Brazil. An online survey, conducted between April to June 2020, gathered closed and open text views from parents of children aged 7-12 years old. Quantitative data was analysed using descriptive statistics. Qualitative open text data were analysed using the three stages of the Bardin content analysis framework: pre-analysis (data organisation and initial full-content reading); exploration of the material (thematic coding to identify major motifs and develop thematic categories); and interpretation (treating the data as significant and valid). The sample consisted of 112 (89%) mothers and 14 (11%) fathers. The analysis of the parents open text resulted in two categories: ‘How parents share information with their children about COVID-19’ and ‘How parents limit information to their children about COVID-19’. Some parents reported adopting an honest and open approach on how they shared information with their children, whilst some parents chose to minimize their child’s access to information about the pandemic over concerns of the mortality related to COVID-19.

**Keywords:** Child; COVID-19; Health Literacy; Information Literacy; Pandemics; Parents.

**Background**

On 30 January 2020, Coronavirus disease 2019 (COVID‑19) was declared a Public Health Emergency of International Concern by the World Health Organization (WHO), and Brazil declared COVID-19 a Public Health Emergency on 3rd February 2020. On 6 February 2020, Brazil approved the Quarantine Law (No. 13,979), which aimed to protect the community by implementing social distancing, isolation and quarantine procedures, as seen in the SARS-CoV-2 pandemic of COVID-19 (Croda et al., 2020). The social distancing strategy was implemented with autonomy by the states, resulting in the closure of schools and universities and limiting leisure activities and non-essential services. In Brazil, as in many countries, there was a profound inequality between those who had the social and financial assets and health values that enabled the adoption of social distancing as a form of protection (Aquino et al., 2020). The number of cases and deaths associated with COVID-19 in Brazil is growing rapidly, and it spreads differently across the five regions of the country (WHO, 2021 a).

Brazil has distinct population characteristics. According to the Brazilian Institute of Geography and Statistics, it was estimated that in 2019, Brazil had 35.5 million children (under 12 years old), which corresponds to 17.1% of the total population, estimated to be 207 million people (IBGE, 2019). In terms of literacy, 17.4% of people over 25 years old claimed to have higher education and 98.7% of children aged 12 are literate (IBGE, 2020 a).

Although most children appear to experience less severe physical illness and have much lower mortality rates than other age groups from the COVID-19 infection (Ludvigsson, 2020), they remain at substantial risk of negative outcomes given the widespread economic and societal disruption resulting from the pandemic (Fry-Bowers, 2020).

The consequences of COVID-19 on children’s daily lives should not be underestimated (Berasategi Sancho et al. 2021; Panda et al., 2021; Ravens-Sieberer et al., 2021). Different countries have described the negative impacts on children’s lives. The most common new-onset psychological problems in children during the COVID-19 pandemic are anxiety, depression, irritability, boredom, inattention, and fear of contracting COVID 19 (Panda et al., 2021). France revealed that 34.71% of children and adolescents with attention deficit hyperactivity disorder (ADHD) had experienced a worsening in well-being, demonstrated by oppositional/audacious attitudes, emotional explosions, sleep problems, and anxiety (Bobo et al., 2020). Similarly, in Brazil, the prevalence of anxiety among children at the beginning of the pandemic has been reported as 19.4% (n=56) according to the Children’s Anxiety Questionnaire, and 21.8% (n=63), according to the Numerical Rating Scale (Garcia de Avila et al., 2020). A further aspect relating to children’s well-being during the pandemic has been reported, where children with low socioeconomic status, migration background and limited living space were affected more significantly during the pandemic (Ravens-Sieberer et al., 2021). Related findings have been reported in Spain, where girls, younger children, and those with access to an outdoor space showed the greatest levels of well-being (Berasategi Sancho et al., 2021).

Other topics discussed within Brazil in relation to children and the impact of COVID-19 showing differences in clinical manifestations, being the most frequent symptoms asthma, fever, cough, and nasal discharge (Rabha et al., 2021). The profile of deaths demonstrated that children under 1 year old, females, those from rural areas, and indigenous children were the most affected (Hillesheim et al., 2020). Concerns about physical activity levels were raised, as families with children had their physical activity time decreased, while time in front of the screens increased (de Sá et al., 2020). Violence against children and adolescents decreased in the isolation period, which may be due to the difficulties encountered in seeking assistance (Platt et al., 2020). Although there have been multiple studies on adults’ health literacy during the COVID-19 pandemic, this has been under-researched in children (Sentell et al., 2020).

There are different definitions for health literacy. Sentell et al. (2021) defined it as the skills and situational resources essential for people to find, understand, evaluate, communicate, and use information and services in various forms and settings to promote health and well-being throughout their lives. Research shows that how people obtain, understand, and use information influences their health decisions and choices (Bröder et al., 2017; Nutbeam et al., 2018) within a wide range of contexts, including during a pandemic. In the context of the pandemic, health literacy has an important role in influencing people’s actions to slow down the spread of the virus and how people interact with healthcare systems dealing with the resultant disease (Abel and McQueen, 2020). Applying critical health literacy has never been more critical than when the world is challenged with an infectious virus and the public health crisis has resulted in an excess of information of variable credibility (Abel and McQueen, 2020). Concerning this study, health literacy provides a valuable lens to examine how parents facilitate their child’s access to information during a pandemic.

A collaborative international study conducted by researchers from six countries (United Kingdom (UK), Australia, Sweden, Brazil, Spain, and Canada) aimed to examine the information needs of children (n=390) and their parents (n=1230) in relation to COVID-19 (Bray et al., 2021a). Of the participating countries, Brazil is the only one located in South America and has distinct and different socioeconomic and cultural characteristics compared to the other five participating countries. These differences justify the deepening of the analysis of the Brazilian data set. To our knowledge, this is the first study that directly investigates aspects of health literacy in relation to COVID-19 in Brazil from the perspective of parents.

**Aim**

To understand the role that parents play in sharing or limiting their child’s access to information about COVID-19.

**Research Design**

A mixed-methods online survey using the Survey Monkey® platform was used to collect quantitative and qualitative information from parents. The survey was designed specifically for this study with input from nine children (aged 9-16 years) and five parents from the UK.

The survey had 11 questions (five closed questions and six questions seeking more extended text responses). However, this study focused on two of the closed quantitative questions (‘Where do you access information about COVID-19?’ and ‘Where do you think your child accesses information about COVID-19?’) and two of the open text qualitative questions (‘How do you decide what information to share with your child about COVID-19?’ and *‘*Is there any information you choose not to share with your child about COVID-19?’). The paper also reports the responses to three demographic questions: the number of children in household, the area of Brazil they live, and what is the relationship with the child (father, mother, or caregiver). The survey targeted parents of 7–12-year olds, reflecting middle childhood and a critical age for developing health literacy skills (Bröder et al., 2017). The surveys of children and parents were not linked and both could participate independently. The questions reported within this paper were those of most relevance and highest interest within the Brazilian setting. The data from all the questions and all the participating countries have been reported elsewhere in two peer-reviewed publications (Bray et al., 2021a; Bray et al., 2021b).

Researchers from the United Kingdom developed the survey, and initial testing was conducted with nine children aged 9–16 years and five parents through remote consultation. The survey was translated into Portuguese for use in Brazil; the translation was checked by a native Brazilian to ensure its suitability. In Brazil, the survey was conducted from 29 April to 1 June 2020.

**Sample and Recruitment**

The online survey was distributed through links circulated via social media (Twitter, Facebook, Instagram) and personal contacts. The parents of the children aged 7–12 years were also eligible to participate in the study.

**Analysis**

The data from the two open qualitative survey questions were analysed according to the Bardin content analysis methodological framework (Gondim and Bendassolli, 2014) by three research team members (Gondim and Bendassolli, 2014). This form of content analysis consists of discovering the core meaning of data through acknowledging that the frequency of appearance can be meaningful (Gondim and Bendassolli, 2014). The content analysis consisted of three stages: (1) pre-analysis (organizing the data, initial reading of the full content, selection of documents or records, and determination of criteria); (2) exploration of the material (coding the themes, which allows thematic representation of the content, and developing thematic categories); and (3) interpretation (treating the data to be significant and valid) (Gondim and Bendassolli, 2014).

To examine where parents and children accessed data about COVID-19, numerical data were analysed using SPSS v25 ®. The study is descriptive and therefore inferential statistics were not conducted. Descriptive statistics (percentages and frequencies) are reported.

**Ethical aspects**

This research was approved by the Research Ethics Committee of Brazil (Botucatu Medical School Research Ethics Committee opinion n˚ 3.994.298) and complied with resolution No. 510/2016, which establishes the guidelines and regulatory rules for research involving humans. Without remuneration, parents agreed to participate in the research by completing and submitting the online survey. A brief written information leaflet was provided with a link to the Brazilian online survey, which contained contact details for the Brazilian research team, should participants have questions or require more information. The study information made it clear to participants that they were providing permission (consent) for their answers to be used as part of the project by submitting their answers.

**Results and Findings**

The international study recruited 390 children and 1,230 parents from the United Kingdom, Australia, Sweden, Brazil, Spain, and Canada. Of these, 58 children and 132 parents were from Brazil. In total, 132 Brazilian participants (parents and caregivers) responded to the survey. This paper reports on the 126 parents (112 mothers and 14 fathers) who responded to the four questions that are the focus of this paper. These parents participated from across three regions of Brazil, Southeast (80% n=101), Midwest (14% n=18), and South (6% n=7). Of the parents who participated, the majority reported having one or two children. The results were structured to first report the quantitative responses to ‘Accessing information about COVID-19’ and then the parents’ qualitative responses concerning ‘Parents’ decisions to share or limit information about COVID-19 with their child’.

**Accessing COVID-19 information**

The parents reported accessing their information about COVID-19 from a range of sources, with the Ministry of Health Website being the most prevalent (56%, n=71) and TV being the second most accessed source of information (Table 1).

*Insert Table 1*

Parents reported that they were the main sources of information for their children (91%, n=114), followed by TV (55%, n=44) (Table 2).

*Insert Table 2*

**Parents’ decisions to share or limit COVID-19 information with their children**

The analysis of the open text responses resulted in two thematic categories: ‘How parents share information with their child about COVID-19’ and ‘How parents limit COVID-19 information from their children’.

**How parents share COVID-19 information with their children**

The parents reported using playful strategies to adapt and filter information according to their child's age, clearly showing how careful they were when informing their children:

‘*Through didactics. Information only in a playful way’. (M12)*

They considered their child’s age and provided information using strategies to help their child understand the situation; that information is:

*‘That is easy to understand at his age’ (M4) and:*

*We speak in a general and subtle way; he is only 7’ (M51).*

In addition, many parents chose to filter information about COVID-19, as seen in the following quote:

*‘I try to filter the information not to panic or despair them. I talk in a simple way to justify why we are not leaving home and why they are not going to school, but I do not go deeper into the subject because I believe they cannot understand it’ (M100).*

It was clear that many parents chose to emphasise the prevention measures for COVID-19; including raising awareness about the use of a mask and:

*‘ About prevention, hands washing and quarantine, just the basic to not scare them. (M75).*

‘*I share what I think is more important and what they should know. They must not put their hands on their face (mouth, eyes, nose); they must wash their hands very well and use hand sanitiser when their hands cannot be washed. They must sneeze inside their clothes or on the forearm. I talked about the use of a mask when we leave home. I believe it is necessary’ (M 17).*

In contrast to the parents who chose to filter or adapt information, some parents made decisions to openly share all the information they had about COVID-19 with their children. These parents reported adopting an honest and open approach to sharing information, such as ‘*We share all the information we know and talk openly about it’ (M15).*

Information also included the severity of illness and prevention:

*‘I talk about prevention, how we contract the virus, how we can protect ourselves and that it can kill’ (M52).*

Some parents shared information with their children only in response to their questions, although some explained:

‘*I try to answer only what he asks’ (M89), and they are careful:*

‘*Through the questions he asks me, I answer nicely not to shock him, but I try not to hide the facts’ (M13).*

Parents also reported that they checked the veracity of information by sourcing reliable information and *‘being sure that the information respects minimum scientific principles’(F6)* before sharing it with their children.

‘*I share the news that comes from serious news, so they are conscious about the severity of the pandemic. I avoid tabloids that have tendentious information or political bias. I advise them that Science must be our North’ (M31).*

**How parents limit COVID-19 information from their children**

Many parents reported that they avoided talking to their children about COVID-19 related deaths. This can be seen in answers to the question: ‘Is there any information you have chosen not to share with your child’? Many chose not to talk  *‘about COVID-19 deaths in Brazil.’(M50)* and the ‘*numbers of deaths and contagion of relatives. ’ (F1)*andavoid *´the**television when it talks about number of deaths and burials. ’ (M52)* On parent explained*:*

‘*I avoid talking too much about the deaths with my 9-year-old son. Of course he knows that deaths occur, but I try not to comment too much, but with my 15-year-old daughter I do, because she is familiar with everything. ’ (M6)*

Some parents particularly noted that they chose not to share specific pandemic elements, including any unreliable information, ‘*fakes news and those that put politics above people's safety. ’ (M36)* and issues related to Brazilian politics, for example:

‘*I avoid sensationalist news with biased information or with a political bias. ’ (M31)*

Some parents avoided sharing the challenges faced within health care systems because of the pandemic, such as the ´*collapse of health system with lots of dead people. ’ (M112)´*and*:*

*‘The suffering of sick people, families and professionals that work at hospitals: the problems of saturation of the health system (M105)’.*

‘*We do not talk about the rate of deaths or lack of hospital beds. ’ (M35)*

**Discussion**

This study aimed to gain insight into the reported information exchange between parents and their children during COVID-19 within Brazil. Although the study did not address how parents judged the credibility of information or how the information exchange between parents and their children impacted choices and decisions, the exchange of information is important to examine because health literacy is rarely addressed in the Brazilian context. This study provided parents with a voice and contributed to our understanding of how parents were accessing information and informing their children about COVID-19 at the beginning of the pandemic, a moment marked by essential changes in children's lives.

Parents reported receiving COVID-19 information from a range of sources. Despite some recognised challenges, the Ministry of Health linked to the Unified Health System’s (SUS) importance in fighting the pandemic has been recognised by parents. The nearly unanimous recognition of the need for more health care resources to deal with the crisis makes this an especially appropriate moment for reinforcing and adequately financing the SUS (Daumas et al., 2020). In Brazil (Malta et al., 2020), as in other countries like the United States (Bhutani and Cooper, 2020) and Greece (Skarpa and Garoufallou, 2021), statistics show an increase in adults watching television (TV) and using the internet during the pandemic. The internet has been reported as used in 79.1% of Brazilian households, mainly through cell phones, and 96.4% of the population had access to television. Among children aged 10 to 13 years old, internet use reached 75% (IBGE, 2020 b). Therefore, it is not surprising that most parents who responded to this survey were accessing COVID-19 information from both the internet and television. Parents reported the importance of checking that information was credible, and this aligns with other work reporting on how amid the ‘infodemic’ about the COVID-19 pandemic (Pennycook et al., 2020), accessing clear, consistent, and evidence-based information was important in line with other evidence (Garcia and Duarte, 2020).

Providing adequate information for children is extremely important since today’s children have multiple ways of obtaining information. Many parents in the study chose to emphasise the prevention measures for COVID‑19, stating that their primary responsibility was to protect and inform their children. A study surveying 810 Jordanian parents showed that their primary information sources were social media (n=520; 65%) and news channels (n=532; 66.5%), and they considered their knowledge about the COVID‑19 symptoms, means of transmission, and prevention to be good. Many parents admitted that their main means of protecting the kids was practising social isolation. (Abuhammad, 2021)

The importance of parents’ roles in children’s behaviour has already been shown in research before the current pandemic, reinforcing the need to listen to and speak with parents to ensure children’s health. A Korean study investigating 2,323 sixth-grade students and 2,089 parents found that the parents’ handwashing practices, parent and child bonding, and shared time significantly correlated with the children’s hand hygiene practices (Song et al., 2012). That study found that the thoroughness of children’s hand cleansing is associated with health education, the parents’ practices of proper handwashing, greater parent-child bonding, and more shared time with parents, affirming the importance of educating parents about pandemic-related health practices. (Song et al., 2013).

Although Brazil did not issue a complete lockdown, social distancing measures (closing non-essential services, schools, and universities) required a significant change in families' daily lives. In most families, as reported by this study, parents became the main source of information in their children's lives. The important role of parents was exacerbated as most Brazilian children were in remote education from March 2020, with less support than usual from school and teachers. The full findings based on data from the international study show that Brazil’s parents, as with parents from the other four countries involved, were the main source of information for children during the pandemic (89%, n=347). Sweden was the exception, as children were still attending school, and it was the primary source of their information (Bray et al., 2021 a).

The statements from parents indicate that those who chose to share COVID-19 information with their children, used playful strategies, filtering of information and age-appropriate adaptation, as reported in previous studies (Bubadué et al., 2020; Radhakrishnan et al., 2020; Thampi et al., 2020). Guidance from UNICEF related to discussing information about the pandemic advises parents to ask their children open questions, listen to the answers, provide truthful information, use age-appropriate language, watch their children’s reactions, show sensitivity to their anxiety levels and close conversations with care (UNICEF, 2020). Accurate information from parents can make children safer and minimise the negative effects of the pandemic (Ornell et al., 2020).

Anxiety, depression, irritability, boredom, inattention and fear of COVID-19 are identified as predominant new-onset psychological problems in children during the COVID-19 pandemic (Panda et al., 2021). However, the study did not examine how children used the information parents shared about COVID-19 to make sense of the pandemic. Critical health literacy is discussed as influencing an individual’s ability to reflect on complex health issues and critically assess the information available to promote, enhance, and encourage appropriate behaviours during a crisis such as the current COVID-19 pandemic (Abel and McQueen, 2020). However, the literature does not examine whether COVID-19 health literacy impacts children’s anxiety and ability to cope with changes to their lives due to the pandemic.

While many parents chose to share COVID-19 information with their children, several parents reported that they avoided discussing various aspects of the pandemic with their children such as the mortality related to COVID-19 and political issues linked to the management of the pandemic. Sharing information regarding mortality rates was also reported as limited across the other countries participating in the international study (Bray et al., 2021 a). In Brazil, the reported cumulative mortality from COVID-19 at the time of the survey (1 June 2020) was 29,937, and 353,137 on 13 April 2021 (WHO, 2021b). If the survey was re-run in Brazil in 2021 and based on the gravity of COVID-19 in Brazil, parents’ decisions about not talking about mortality and mortality rates might be different.

*Limitations to the Study*

Some limitations should be noted concerning this research. The data collection was online, which restricted participants to only those with access to resources (computer, phone, Wi-Fi) and the skills to engage in reading and responding to the survey. Thus, there was a selection bias arising from the circulation of the survey using personal social media connections. The study relied on a convenience sample generated during a short period. The survey was not pre-tested in Brazil; it was developed specifically for this study in the United Kingdom with a translation to Portuguese for Brazil.

*Implications for Practice*

These findings reflect that parent were an important source of information for their children in the early stages of the pandemic, and it is important that parents have access to accurate information. Targeting child-centred information towards parents is a useful strategy. Health literacy provides a valuable lens to examine information exchange from parents to their children during a pandemic COVID-19.

**Conclusion**

This study highlights the importance of parents with regards to children’s access to information during the COVID-19 pandemic. Parents reported accessing COVID-19 information from various sources, mainly from the Ministry of Health website, TV, and the internet. They considered themselves their children’s primary information source during the early months of the COVID‑19 pandemic. Many parents reported adopting an honest and open approach to sharing information with their children and attempted to source reliable and trusted information. In contrast, some parents chose to minimise their children’s access to COVID-19 information, especially negative aspects such as the mortality rate.

Considering that Brazil is one of the countries with the highest number of COVID-19 cases and deaths, further research is needed to examine how access to reliable information influences behaviours and actions.

**References**

Abel T and McQueen D (2020) Critical health literacy and the COVID-19 crisis. *Health promotion international* 35(6). NLM (Medline): 1612–1613. DOI: 10.1093/heapro/daaa040.

Abuhammad S. (2021) Parents’ knowledge and attitude towards COVID-19 in children: A Jordanian Study. *The International Journal of Clinical Practice*. 75:e13671. DOI:https://doi.org/10.1111/ijcp.13671

Aquino EML, Silveira IH, Pescarini JM, et al. (2020) Social distancing measures to control the COVID-19 pandemic: Potential impacts and challenges in Brazil. *Ciencia e Saude Coletiva* 25. Associacao Brasileira de Pos - Graduacao em Saude Coletiva: 2423–2446. DOI: 10.1590/1413-81232020256.1.10502020.

Berasategi Sancho N, Idoiaga Mondragon N, Dosil Santamaria M, et al. (2021) The Well-being of children in lock-down: Physical, emotional, social and academic impact. *Children and Youth Services Review* 127: 106085. DOI: 10.1016/j.childyouth.2021.106085.

Bhutani S and Cooper JA (2020) COVID-19–Related Home Confinement in Adults: Weight Gain Risks and Opportunities. *Obesity* 28(9): 1576–1577. DOI: 10.1002/oby.22904.

Bray L, Carter B, Blake L, et al. (2021a) ‘People play it down and tell me it can’t kill people, but I know people are dying each day’. Children’s health literacy relating to a global pandemic ( COVID-19 ); an international cross-sectional study. 1–17. DOI: 10.1371/journal.pone.0246405.

Bray L, Blake L, Protheroe J, et al. (2021b) ‘Children’s pictures of COVID-19 and measures to mitigate its spread: An international qualitative study’, Health Education Journal. DOI: 10.1177/00178969211019459.

Bobo E, Lin L, Acquaviva E, et al. (2020) How do children and adolescents with Attention Deficit Hyperactivity Disorder (ADHD) experience lockdown during the COVID-19 outbreak? *Encephale* 46(3). Elsevier Masson SAS: S85–S92. DOI: 10.1016/j.encep.2020.05.011.

Bröder J, Okan O, Bauer U, et al. (2017) Health literacy in childhood and youth: a systematic review of definitions and models. *BMC Public Health* 17(1): 361. DOI: 10.1186/s12889-017-4267-y.

Bubadué R de M, Santos CCT Dos and Ferreira I (2020) Health education workshops with children in the context of COVID-19 pandemic. *Revista brasileira de enfermagem* 73(Suppl 2): e20200593. DOI: 10.1590/0034-7167-2020-0593.

Croda J, Oliveira WK de, Frutuoso RL, et al. (2020) Covid-19 in Brazil: Advantages of a socialized unified health system and preparation to contain cases. *Revista da Sociedade Brasileira de Medicina Tropical* 53. Sociedade Brasileira de Medicina Tropical. DOI: 10.1590/0037-8682-0167-2020.

Daumas RP, Azevedo e Silva G, Tasca R, et al. (2020) The role of primary care in the Brazilian healthcare system: Limits and possibilities for fighting COVID-19. *Cadernos de Saude Publica* 36(6). Fundacao Oswaldo Cruz. DOI: 10.1590/0102-311X00104120.

de Sá C dos SC, Pombo A, Luz C, et al. (2020) Covid-19 social isolation in Brazil: Effects on the physical activity routine of families with children. *Revista Paulista de Pediatria* 39. Sao Paulo Pediatric Society. DOI: 10.1590/1984-0462/2021/39/2020159.

Fry-Bowers EK (2020) Children are at Risk from COVID-19. *Journal of Pediatric Nursing*. 53: A10-A12. DOI:10.1016/j.pedn.2020.04.026

Garcia de Avila M, Hamamoto Filho P, Jacob F, et al. (2020) Children’s Anxiety and Factors Related to the COVID-19 Pandemic: An Exploratory Study Using the Children’s Anxiety Questionnaire and the Numerical Rating Scale. *International Journal of Environmental Research and Public Health* 17(16). Multidisciplinary Digital Publishing Institute: 5757. DOI: 10.3390/ijerph17165757.

Garcia LP and Duarte E (2020) Infodemia: excesso de quantidade em detrimento da qualidade das informações sobre a COVID-19. *Epidemiologia e servicos de saude : revista do Sistema Unico de Saude do Brasil* 29(4): e2020186. DOI: 10.1590/S1679-49742020000400019.

Gondim SMG and Bendassolli PF (2014) The use of the qualitative content analysis in psychology: A critical review. *Psicologia em Estudo* 19(2): 191–199. DOI: 10.1590/1413-737220530002.

Hillesheim D, Tomasi YT, Figueiró TH, et al. (2020) Síndrome respiratória aguda grave por COVID-19 em crianças e adolescentes no Brasil: perfil dos óbitos e letalidade hospitalar até a 38a Semana Epidemiológica de 2020. *Epidemiologia e servicos de saude : revista do Sistema Unico de Saude do Brasil* 29(5). NLM (Medline): e2020644. DOI: 10.1590/S1679-49742020000500021.

IBGE (2019). Educação | Educa | Jovens Conheça o Brasil - População. Retrieved January 21, 2021, from https://educa.ibge.gov.br/jovens/conheca-o-brasil/populacao/18317-educacao.html

IBGE (2020 a). Educação | Educa | Jovens Conheça o Brasil - População. Available at: https://educa.ibge.gov.br/jovens/conheca-o-brasil/populacao/18317-educacao.html (accessed 21 January 2021).

IBGE (2020 b). Educação | Educa | Jovens Conheça o Brasil - Uso de Internet, televisão e celular no Brasil. Available at: https://educa.ibge.gov.br/criancas/brasil/2697-ie-ibge-educa/jovens/materias-especiais/20787-uso-de-internet-televisao-e-celular-no-brasil.html (accessed 21 January 2021).

Ludvigsson JF (2020) Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults. *Acta Paediatrica, International Journal of Paediatrics* (March): 1088–1095. DOI: 10.1111/apa.15270.

Malta DC, Szwarcwald CL, Barros MB de A, et al. (2020) A pandemia da COVID-19 e as mudanças no estilo de vida dos brasileiros adultos: um estudo transversal, 2020. *Epidemiologia e servicos de saude : revista do Sistema Unico de Saude do Brasil* 29(4). NLM (Medline): e2020407. DOI: 10.1590/S1679-49742020000400026.

Nutbeam D, McGill B, and Premkumar P. (2018) Improving health literacy in community populations: a review of progress. *Health Promotion International.* 33:901–911. https://doi.org/10.1093/heapro/dax015

Ornell F, Schuch JB, Sordi AO, et al. (2020) ‘“Pandemic fear”’ and COVID-19: Mental health burden and strategies. *Brazilian Journal of Psychiatry* 42(3): 232–235. DOI: 10.1590/1516-4446-2020-0008.

Panda PK, Gupta J, Chowdhury SR, et al. (2021) Psychological and Behavioral Impact of Lockdown and Quarantine Measures for COVID-19 Pandemic on Children, Adolescents and Caregivers: A Systematic Review and Meta-Analysis. *Journal of Tropical Pediatrics*. Oxford University Press. DOI: 10.1093/tropej/fmaa122.

Pennycook G, McPhetres J, Zhang Y, et al. (2020) Fighting COVID-19 Misinformation on Social Media: Experimental Evidence for a Scalable Accuracy-Nudge Intervention. *Psychological Science* 31(7). SAGE Publications Inc.: 770–780. DOI: 10.1177/0956797620939054.

Platt VB, Guedert JM and Coelho EBS (2020) Violence against children and adolescents: Notification and alert in times of pandemic. *Revista Paulista de Pediatria* 39. Sao Paulo Pediatric Society. DOI: 10.1590/1984-0462/2021/39/2020267.

Rabha AC, Oliveira FI De, Oliveira TA De, et al. (2021) CLINICAL MANIFESTATIONS of CHILDREN and ADOLESCENTS with COVID-19: REPORT of the FIRST 115 CASES from SABARÁ HOSPITAL INFANTIL. *Revista Paulista de Pediatria* 39. Sao Paulo Pediatric Society. DOI: 10.1590/1984-0462/2021/39/2020305.

Radhakrishnan VS, Sukumaran Nair RK, Goel G, et al. (2020) COVID-19 and haematology services in a cancer centre from a middle-income country: Adapting service delivery, balancing the known and unknown during the pandemic. *ecancermedicalscience* (14). DOI: 10.3332/ECANCER.2020.1110.

Ravens-Sieberer U, Kaman A, Erhart M, et al. (2021). Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *European child & adolescent psychiatry*, 25:1-11. DOI: 10.1007/s00787-021-01726-5.

Sentell T, Vamos S and Okan O (2020) Interdisciplinary perspectives on health literacy research around the world: More important than ever in a time of covid-19. *International Journal of Environmental Research and Public Health* 17(9): 1–13. DOI: 10.3390/ijerph17093010.

Skarpa P El and Garoufallou E (2021) Information seeking behavior and COVID-19 pandemic: A snapshot of young, middle aged and senior individuals in Greece. *International Journal of Medical Informatics* 150. Elsevier Ireland Ltd. DOI: 10.1016/j.ijmedinf.2021.104465.

Song IH, Kim S-A. and Park W-S. (2013) ‘Family factors associated with children’s handwashing hygiene behavior’, *Journal of Child Health Care*, 17(2): 164–173. DOI: 10.1177/1367493512456106.

Thampi N, Longtin Y, Peters A, et al. (2020) It’s in our hands: a rapid, international initiative to translate a hand hygiene song during the COVID-19 pandemic. *Journal of Hospital Infection* 105(3): 574–576. DOI: 10.1016/j.jhin.2020.05.003.

UNICEF (2020) How to Talk to Your Child about Coronavirus Disease 2019 (COVID-19). Available at: https://www.unicef.org/coronavirus/how-talk-your-child-about-coronavirus-covid-19.

World Health Organization (2021a) Brazil—the current COVID-19 situation. Available at: https://www.who.int/countries/bra/ (accessed 11 February 2021).

World Health Organization (2021b) WHO coronavirus (COVID-19) dashboard: situation by country, territory or area. Available at: https://covid19.who.int/.