**Preliminary Report**

**Knowledge Synthesis: COVID-19 in Mental Health and Substance Use**

N.B.: This report is preliminary and will be updated monthly until November 2020. It is based on the literature available at the time that the report was written.

**Synthesis Title:**
Supporting children and adolescents' mental health in the context of pandemic and confinement: A scoping review of interventions and ethical challenges

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**Target/priority population in synthesis:**
Children and adolescents

## 1. Introduction

In December 2019, the outbreak of a novel coronavirus, COVID-19 (SARS- CoV-2), occurred in Wuhan, China, subsequently spreading worldwide, leading governments to enforce physical distancing practices. This unprecedented situation of widespread quarantine and confinement has substantially disrupted people's way of life. Notably, widespread quarantine and confinement are known to have adverse psychological effects (Douglas, Douglas, Harrigan, & Douglas, 2009; Galea, Merchant, & Lurie, 2020; Hawryluck et al., 2004; Holmes et al., 2020; Sprang & Silman, 2013). Studies on disaster mental health and on the SARS-CoV-1 outbreak of 2003 found increased incidences of post-traumatic stress disorder, depressive disorders, and anxiety disorders in the population (Douglas et al., 2009; Hawryluck et al., 2004; Sprang & Silman, 2013). Symptoms also tend to increase with a greater severity of the crisis and a longer confinement period (Douglas et al., 2009; Hawryluck et al., 2004). However, while research has previously been conducted on the psychological impact of SARS on patients and healthcare workers (Brooks et al., 2020), little is known about its effects on the mental health of children and adolescents (Lee, 2020).

Children and adolescents represent a vulnerable population group and their mental health may be particularly affected by pandemics and confinement measures (Chung, Baum, & Nyquist, 2020; Stevenson et al., 2009). For instance, of the families who were confined during the SARS-CoV-1 pandemic in Toronto, 33.4% of parents reported that their child "began using mental health services, either during or after the pandemic, related to their experience" (Sprang & Silman, 2013). Moreover, such measures may also lead certain children and adolescents to exhibit an array of issues related to their mental well-being, such as nightmares, withdrawn behaviour, and sleep disturbances (Douglas et al., 2009). In the case of children and adolescents who already had mental health issues prior to the pandemic, these adverse effects can be exacerbated. For example, confinement and physical distancing measures can aggravate mental health issues for children and adolescents with suicidal ideas or self-harming behaviours, as well as those with psychotic disorders – for whom distancing measures can be difficult to accept – or for children and adolescents with eating disorders who can face difficulties related to feeding and in their relationship with food in times of pandemic (Chevance et al., 2020). Yet, the extent to which children and adolescents' mental health is being affected during the current COVID-19 pandemic remains to be examined further.

Thus, families are faced with many new challenges, including ethical ones. For instance, parents must try to support their children while their daily routines are significantly perturbed with school closures; balance competing demands related to work and child care; manage outbursts and crisis situations; and for both parents and children, they must manage rising anxiety levels in relation to the pandemic while adapting to a new reality. Synthesized and broadly shared evidence-informed approaches and interventions to support families in this context would surely be beneficial.

In the case of families where there are children and adolescents who already had mental health issues prior to the pandemic, their daily life is likely compounded by additional ethical challenges. Indeed, they may have to compromise confinement or physical distancing measures to better support their child's mental health needs and re-imagine what is the "norm" in this new context, particularly in terms of how to receive mental health services. Currently, due to physical distancing measures, remote means such as telehealth are used by certain organisations to support these families. However, not all families have access to the technology required by remote means. Telehealth also raises important ethical concerns in relation to their use with minors, for example issues around consent/assent, privacy and confidentiality (Pollard, Karimi, & Ficcaglia, 2017). It has also been deemed as less efficient to provide mental health care to children with a diagnosis of attention-deficit-hyperactivity disorder, obsessive-compulsive disorder or oppositional defiant disorder, among others (Chevance et al., 2020). More information regarding telehealth as well as other available evidence-informed interventions that are adapted to physical distancing practices is urgently needed.

To date, no review has synthesized the effects of a pandemic on children and adolescents' mental health, nor the interventions to support them during these times. The main objective of this review is therefore to build and synthesize the evidence base in relation to the mental health response of children and adolescents to the COVID-19 pandemic, identify relevant interventions and services that have been found to better support families who have a child or adolescent with mental health issues during the COVID-19 pandemic, and provide guidance on how to tackle the ethical challenges that may arise in this context. Not addressing these immediate mental health needs during the pandemic could contribute to a greater exacerbation of children and adolescents' mental health conditions on the long term (Chevance et al., 2020).

### 1.1 Review Objective and Questions

Building and synthesizing the evidence base in relation to child and adolescent mental health response to COVID-19 and identify relevant interventions and ethical challenges, including how to address those challenges. The review will be guided by the following questions: (1) How does a pandemic/confinement/physical distancing affect children and adolescents' mental health? (2) What interventions could better support children and adolescents' mental health needs during and after the pandemic (including children and adolescents with prior mental health disorders and children and adolescents who developed mental health issues during the pandemic)? and (3) What ethical challenges arise in relation to children and adolescents' with mental health issues in the context of a pandemic, and what could be done to address these ethical challenges during the COVID-19 pandemic? We will target children and adolescents and their parents/family.

## 2. Review Methodology

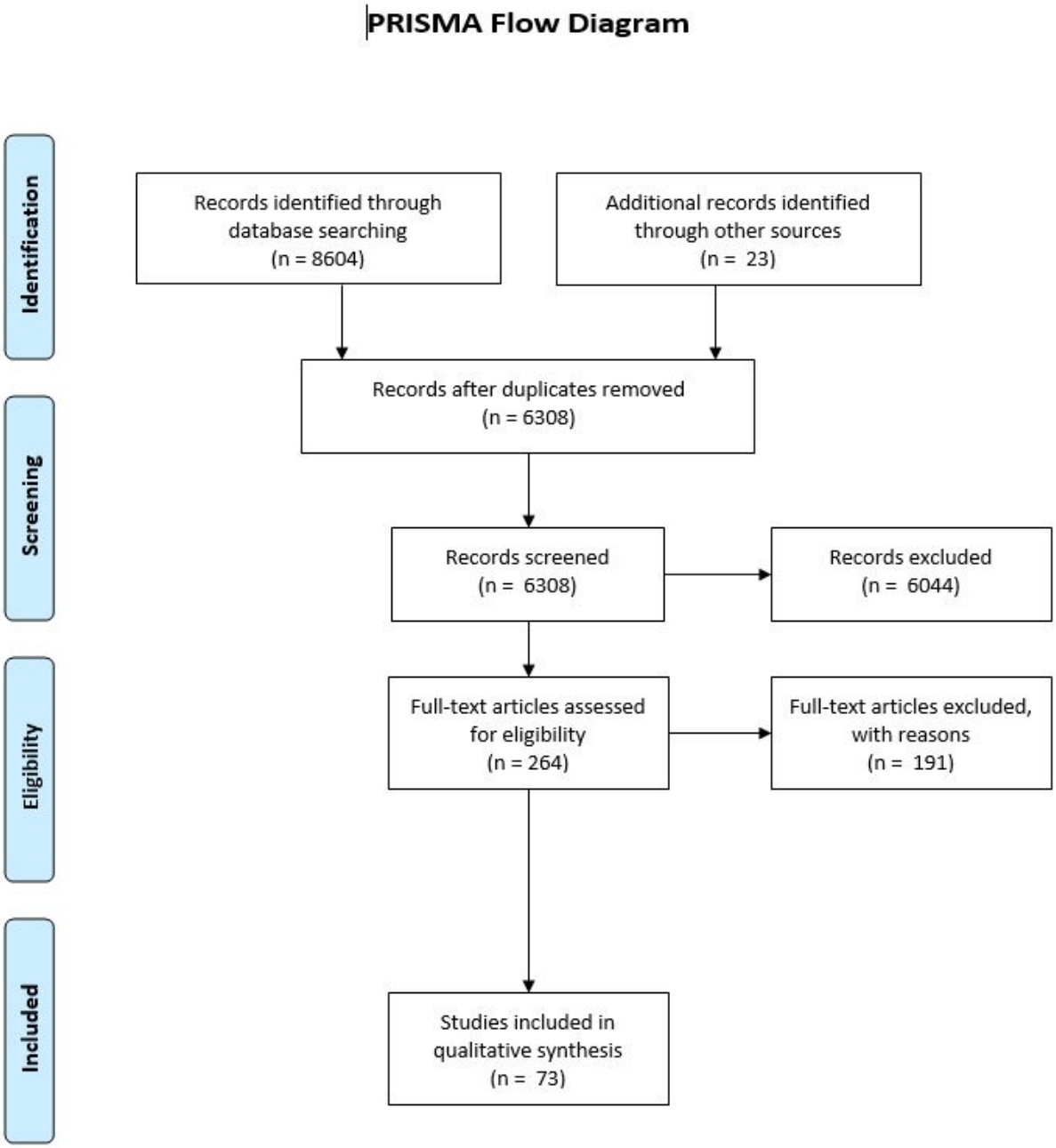
A rapid scoping review methodology was used to build, map and synthesize the available literature to address the review questions (Peters et al., 2020). This type of review allowed for

the research team to synthesize the results from qualitative, quantitative and mixed methods studies, as well as review conceptual/theoretical texts, editorials and the grey literature. Including texts from various approaches offers a more thorough view of the available literature on the topic (Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010; Tricco et al., 2018). We reviewed how pandemics/confinement/physical distancing affect children and adolescents' mental health, identified and critically assessed specific interventions that could support children and adolescents' mental health needs in times of pandemics, examined their applicability to the Canadian context of COVID-19, as well as identified ethical challenges that may arise and ways to address them. By ethical challenges, we refer to: (a) issues families could face that raise conflicting values or morally difficult decisions to make; and (b) challenges specifically related to the interventions to support children and adolescents' mental health during the pandemic (such as the ones related to telehealth).

We drew from the literature related to COVID-19 or other disease outbreaks (SARS-CoV-1 and influenza). We are working with key knowledge users to assess the applicability of the interventions to children and adolescents' mental health specifically. To ensure a rapid response and enhance the feasibility to provide the results of the knowledge synthesis within one month, the guidelines described in the Joanna Briggs Institute Reviewer's Manual on scoping reviews (Peters et al., 2020) were adjusted in line with the Rapid Review Guidebook (Dobbins, 2017). Differences to the Joanna Briggs guidelines include the following: searches were performed in only three databases (Medline; CINAHL; PsycInfo); and we did not do a peer review of search strategies. We used a targeted iterative searching technique, in that the research team kept track of new keywords during the screening process and the librarian analyzed the subject headings in their indexing using EndNote analyzer (Morris, Boruff, & Gore, 2016). We will also consult knowledge users for additional sources and perform ancestry and offspring searches of included articles (which will be included in an updated version of the report).
**Inclusion criteria**: Documents were included in this review based on 5 criteria: (1) addressing mental health or mental well-being; (2) related to SARS-CoV-2, SARS-CoV-1 or influenza disease outbreaks, pandemics, epidemics or confinement/isolation/quarantine/ physical distancing; (3) applicable to children and adolescents' mental health; (4) published between 1990-2020; and (5) in English or French. Documents were screened by two to three people for inclusion using Rayyan, a web-based app for systematic reviews (Ouzzani, Hammady, Fedorowicz, & Elmagarmid, 2016). Document selection involved an iterative process in which all titles and abstracts were screened for inclusion/exclusion (see PRISMA flow chart). Included texts were then read in full to ensure they fit the criteria.

**Extraction/Analysis:** Data related to our review questions were extracted to an Excel table. Data were collated and summarized using numerical summaries and interpretive analyses. Data extraction and analysis were oriented by our review questions. We will follow a pragmatic approach with rounds of comments from knowledge users for subsequent versions of the report (E. Racine, Cascio, Montreuil, & Bogossian, 2019). As such, for this updated version (August 2020), further emphasis was put on the quality of the screened articles pertaining to the data that

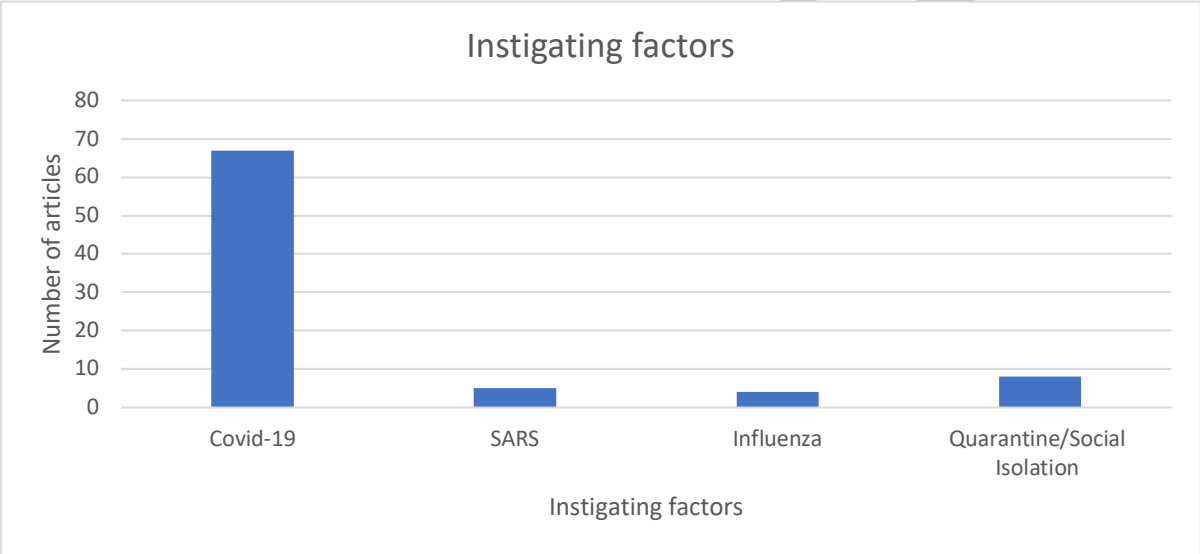
they presented (evidence vs opinion) as well as a greater distinction between instigating factors (other pandemics/quarantine vs COVID-19). Original articles, reviews (including grey literature reviews) or guidelines (from specific reputable associations, such as 'Ordre des psychoéducateurs et psychoéducatrices du Québec [OPPQ]') were included for analysis. Criteria such as age of the children, sex/gender, context and type of mental health issues were considered.



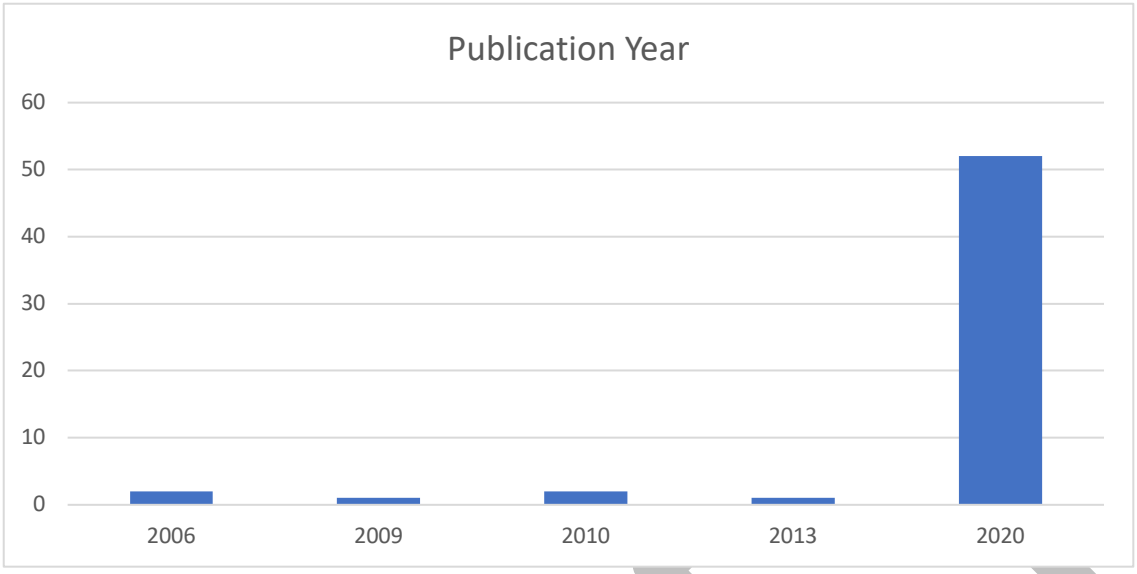
## 3. Results

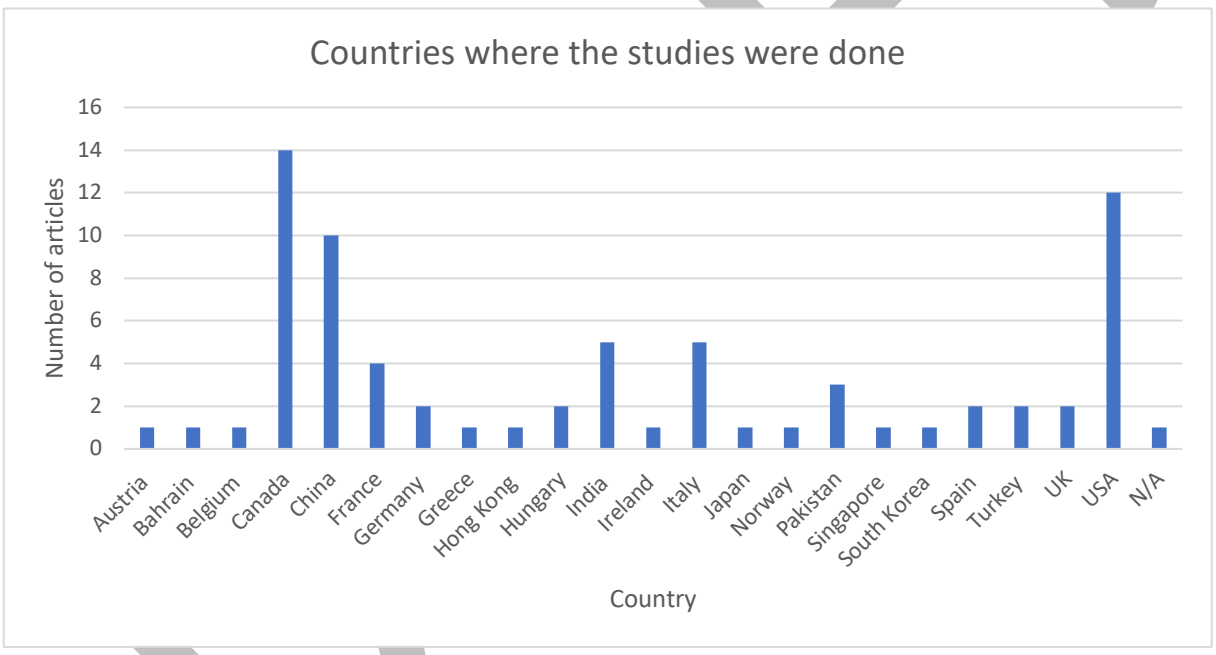
### 3.1 Descriptive Overview

A total of 74 articles were included in this review. Of these articles, the majority, 91%, had COVID-19 as the instigating factor for their research. A small portion of the articles also mentioned SARS-CoV-1 (7%) and Influenza (5%) as their instigating factors. Other articles also specified that quarantine (11%) was the instigating factor on top of the disease that was mentioned. It should be noted that some articles had more than one instigating factor and were thus counted twice.




Out of the 74 articles included in this study, the majority (91%) were published in 2020. There are also articles from 2013 (1%), 2011 (1%), 2010 (3%), 2009 (1%) and 2006 (3%). However, these articles represent a minority of the publication years of the articles included in the study. First authors of selected articles represented 22 different countries. Canada is the country with the most first authors (19%), with the United States of America (16%), and China (14%) closely behind it. One of the articles did not include the author's name nor country of origin as it was a report produced by the Organisation for Economic Co-operation and Development. The remaining countries of origin are shown in the graph below.


Publication Year
60
50
40
30
20
10
0
2006
2009
2010
2013
2020


Countries where the studies were done
Number of articles
16
14
12
10
8
6
4
2
0
Austria
Bahrain
Belgium
Canada
China
France
Germany
Greece
Hong Kong
Hungary
India
Ireland
Italy
Japan
Norway
Pakistan
Singapore
South Korea
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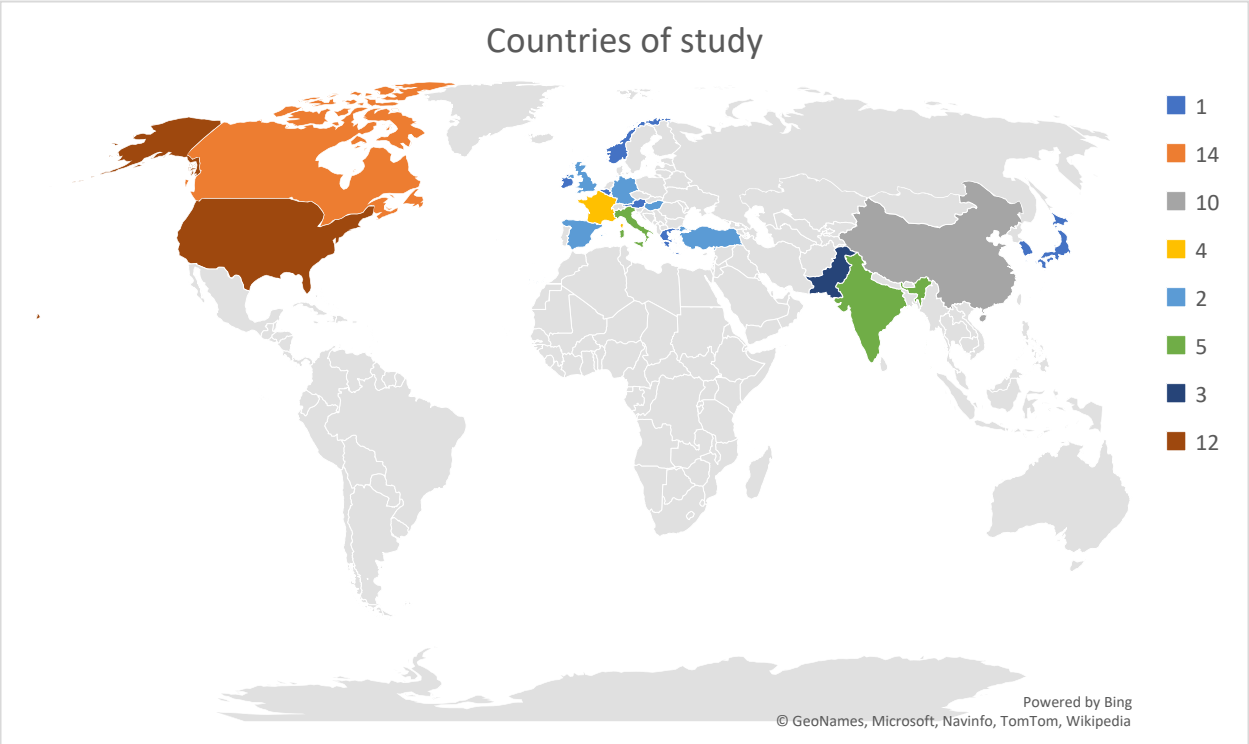


## 3.2 Effects of the pandemic/confinement on child and adolescent mental health (Question 1)

### 3.2.1 General Psychological Distress

Overall, detrimental mental health effects were found across age groups, contexts, and instigating factors. Globally and in more general terms, psychological distress in children and adolescents was found to occur as a result of pandemics and confinement.

#### *3.2.1.1 General Psychological Distress in Both Children and Adolescents*

In studies examining both children and adolescents simultaneously, pandemics and confinement measures are found to be associated to psychological distress. Interviews conducted with Canadian youths aged 5 to 19 years who were hospitalised during SARS as well as Indian children and adolescents aged 9 to 18 years quarantined during the COVID-19 pandemic indicate that psychological distress resulting from their confinement is evident (D. Koller, Nicholas, Gearing, & Kalfa, 2010; Saurabh & Ranjan, 2020). Similarly, parent reports of Italian children and adolescents aged 2 to 14 years on the Strengths and Difficulties Questionnaire (SDQ) indicate that they are exhibiting more emotional and behavioral problems during the COVID-19 pandemic than before (Spinelli, Lionetti, Pastore, & Fasolo, 2020), while Hungarian children and adolescents report a general decrease in their wellbeing during these times on the WHO Wellbeing Scale (WBI-5)(Gabor, Törő, Rózsa, et al., 2020) . Findings from literature reviews

support the association between the experience of confinement measures during the COVID-19 pandemic and children and adolescents' psychological distress, particularly due to school closures and the limitation of contacts with one's peers (Gritti, Salvati, Russo, & Catone, 2020; Imran, Aamer, Sharif, Bodla, & Naveed, 2020; Loades et al., 2020; O.E.C.D., 2020; Oliver, 2020). Notably, based on findings from literature reviews, these experiences can lead to adjustment problems, PTSD, depression, anxiety and even suicide (Fegert, Vitiello, Plener, & Clemens, 2020; N. Racine et al., 2020).

#### *3.2.1.2 General Psychological Distress in Children Specifically*

Convergent findings are reported in studies examining children specifically. Based on parent reports, Sprang and Silman (2013) found that during the H1N1 and SARS pandemics in the US, Canada, and Mexico, there was an increase in the use of pediatric mental health services, with 20% of children receiving mental health services because of the pandemic context being diagnosed with adjustment disorder (Sprang & Silman, 2013). Original findings in the context of the COVID-19 pandemic paint a similar picture. For instance, parents of Indian children aged 9 to 11 who were interviewed by phone indicate that their children exhibited "psychological distress symptoms" (Tiwari et al., 2020, p. 1), while parent-reports to the SDQ for Chinese children from grades 1 to 9 indicate that 17.6% "were suspected to have emotional or behavioral problems" (Zhao et al., 2020, p. 7), which is higher than previously reported in China (Zhao et al., 2020). Interestingly, they also found that the younger children were considered more vulnerable than older children (Zhao et al., 2020). However, a Japanese study, also using the SDQ, but this time administered directly to Japanese children from grades 3 to 6, coupled with a questionnaire about their anxiety, found that their psychological problems have not worsened during the COVID-19 pandemic (Ishimoto, Yamane, Matsumoto, & Kobayashi, 2020). Yet, when the sample is divided into three groups according to baseline scores of psychological problems recorded prior to the implementation of confinement measures, a worsening of psychological problems is found in the middle group, indicating that the impact of confinement and COVID-19 on children's mental health may be worse for children who had a certain level of prior psychological distress but not if this distress was already elevated (Ishimoto et al., 2020). A case of dermatitis artefacta, which is a factitious disorder where skin lesions are self-inflicted to cope with psychological distress, is also reported to have occurred due to the COVID-19 pandemic in a 9-year-old boy, representing an extreme case of the psychological distress that can result during a pandemic. The original findings that pandemics and confinement measures can lead to increased psychological distress in children is echoed in literature reviews (Bahn, 2020; Dubey et al., 2020; Gautam, Thakrar, Akinyemi, & Mahr, 2020; Ghosh, Dubey, Chatterjee, & Dubey, 2020; Griffith, 2020; Murray, 2010; Walker & Tolentino, 2020).

#### *3.2.1.3 General Psychological Distress in Adolescents Specifically*

Adolescents are also found to exhibit greater psychological distress in the context of pandemics and confinement measures, according to original findings from studies conducted during the COVID-19 pandemic. Based on the self-report of German adolescents and young

adults aged 16 to 25 on the Kessler-10 (K10) questionnaire, it is found that around 56% of them "experienced psychological distress during the COVID-19 pandemic" (Rauschenberg et al., 2020, p. 8), while the proportion of Norwegian students aged 12 to 16 years reporting high life satisfaction, which is negatively correlated with mental health problems, has declined, from 92% and 81% in boys and girls respectively in 2019 before the COVID-19 restrictions to 71% and 62% during the period of restrictions (von Soest, Bakken, Pedersen, & Sletten, 2020). Moreover, the examination of responses by adolescents and young adults aged 14 to 28 years, at a Canadian Centre for Mental Health and in a community sample, to the GAIN-SS questionnaire (which notably examines internalizing and externalizing disorders), indicate that both groups show a significant deterioration of their mental health, the greatest mental health concerns of these participants including depression, anxiety, and suicidal thoughts (Hawke et al., 2020).

#### *3.2.1.4 General Psychological Distress in Children and Adolescents with Prior Mental Health Difficulties*

Overall psychological distress is also found to be aggravated in children and adolescents with prior mental health difficulties, although Hawke and colleagues (2020) found that the mental health of adolescents and young adults aged 14 to 28 in a community sample deteriorated to a greater extent than that of the participants in their clinical sample during the COVID-19 pandemic. Results from other original studies indicate that the mental health of children and adolescents with prior psychological difficulties is particularly at-risk during pandemics. Interviews of adolescent psychiatric outpatients aged 12 to 18 years during the COVID-19 pandemic indicate that "overall, [their] level of psychosocial functioning […] decreased" (Huscsava, Scharinger, Plener, & Kothgassner, 2020, p. 7). These findings are supported by results presented in literature reviews (Dubey et al., 2020; Fegert et al., 2020; Guessoum et al., 2020; Imran, Aamer, et al., 2020).

Certain groups of children and adolescents with pre-existing mental health problems may be particularly vulnerable during pandemics and their associated confinement measures. For instance, an elevated number of parents of children and adolescents with autism spectrum disorder (ASD), who are more vulnerable to routine disruption, report having "difficulties in managing their children's daily activities" (Colizzi, Sironi, et al., 2020, p. 11), which is echoed by findings from Gessoum and colleagues' (2020), a narrative literature review. Children and adolescents with ADHD may also be particularly vulnerable to the detrimental mental health effects of pandemics and confinement, as 34.71% of parents of French children and adolescents with ADHD with a mean age of 10.5 years report a worsening of their child's behavior during the COVID-19 pandemic (Bobo et al., 2020). However, 30.96% of them report a global improvement, which is found to be associated to a reduction in school-related anxiety due to the closure of schools, yet it is contingent on these children's parents being supportive and available as well as having an adapted environment, such as a backyard (Bobo et al., 2020). Nevertheless, a systematic review also indicates that one of the major health concerns amongst the pediatric population during the SARS-CoV-2 pandemic is the worsening of existing health conditions

such as ADHD (Sajid et al., 2020). Furthermore, adolescents at clinical high-risk for psychosis are also particularly vulnerable during the COVID-19 pandemic, as observations conducted by mental health personnel reveal that patients have "experienced an exacerbation of some symptoms" (DeLuca et al., 2020, p. 319) and that they "may be experiencing more distress than others during the COVID-19 outbreak" (DeLuca et al., 2020, p. 323). Moreover, a thematic analysis of records belonging to patients receiving mental health services indicates that "children and those with neurotic/somatoform disorders [are] most concerned about swine flu" (Page et al., 2011, p. 67). Additionally, children and adolescents with prior obsessive-compulsive disorder (OCD) may be particularly vulnerable during the COVID-19 pandemic, as interviews with adolescents aged 12 to 18 who have been diagnosed with OCD indicate that 80% of them characterized their obsessive-compulsive behaviours and thoughts as constant during the COVID-19 pandemic (Huscsava et al., 2020). This worsening of OCD symptoms is echoed in findings in a literature review (Imran, Aamer, et al., 2020). Another literature review reveals findings highlighting other vulnerable groups during the COVID-19 pandemic, such as adolescents who have suicidal thoughts or who self-mutilate, young patients suffering from schizophrenia, or even of those who have serious eating disorders (Chevance et al., 2020).

#### *3.2.1.5 Long-term General Psychological Distress Across Age Groups*

Findings from literature reviews indicate that the detrimental mental health outcomes in children and adolescents are likely to outlast the acute phase of the COVID-19 pandemic and associated confinement measures (Fegert et al., 2020), as negative repercussions are predicted for years to follow (Imran, Zeshan, & Pervaiz, 2020; Oliver, 2020; Schwartz, Yung, Barican, Gray-Grant, & Waddell, 2020), and that the effects are likely to be more durable for youths than adults (INESSS, 2020c).

### 3.2.2 Specific Detrimental Effects on Children and Adolescents' Mental Health

Beyond general psychological distress, the review of the literature revealed more specific detrimental effects of pandemics and confinement on children and adolescents' mental health.

#### *3.2.2.1 Fear, Anxiety, and Stress*

The most pervasive detrimental mental health effect of pandemics and confinement on children and adolescents seems to be that of increased fear, anxiety, and stress, from relatively benign symptoms to the diagnostics associated with these symptoms.

***Fear, Anxiety, and Stress in Children and Adolescents.*** In original studies examining children and adolescents simultaneously, pandemics and confinement measures are found to be associated to various outcomes associated to fear, anxiety, and stress. Children and adolescents aged 7 to 18 years who completed the Chinese Version of the Spence Child Anxiety Scale (SCAS) online present overall scores on five dimensions of anxiety that are higher than before the outbreak, with adolescents indicating significantly higher levels of anxiety than children (Duan et al., 2020). Similarly, among Hungarian children and adolescents aged 11 to 17 years, adolescents are found to mention fear more frequently than children under 14 years of age during

the COVID-19 pandemic, while their parents report less fear overall (Gabor, Törő, Mokos, et al., 2020). Yet, based on self-reports of Hungarian children and adolescents, with a mean age of 14 years, and of their parents on the Perceived Stress Scale (PSS), both groups show levels of stress that are "significantly higher than it might be expected based on previous research" (Gabor, Törő, Rózsa, et al., 2020, p. 4). Likewise, the assessment of children and adolescents' anxiety aged 9 to 18 years on the State and Trait Anxiety Inventory (STAI) via teleconference indicates that they show elevated anxiety scores during the COVID-19 pandemic (Senkalfa et al., 2020). Literature reviews further support the findings that pandemics and confinement can lead to increased symptoms of fear, anxiety and stress (Fegert et al., 2020; INESSS, 2020c; Murray, 2010; N. Racine et al., 2020; Sajid et al., 2020) in children and adolescents, namely due to the "closure of schools and separation from friends" (Imran, Zeshan, et al., 2020, p. S68).

***Fear, Anxiety, and Stress in Children Specifically.*** In terms of the outcome of increased fear, anxiety, and stress in children more specifically during pandemics, focus groups conducted with North American parents who were affected by SARS-CoV-1 or H1N1 revealed that they considered that their children were scared and that "the kids' anxiety was the hardest thing to deal with" (Sprang & Silman, 2013, p. 108). In the context of the more wide-ranging COVID-19 pandemic, two European online preliminary studies based on parent reports showed that around one third of children aged 4 to 10 years "were nervous about the pandemic" (Pisano, Galimi, & Cernigila, 2020, p. 8), while of those aged 3 to 18 years, 38% exhibited more nervousness and 30% exhibited more worries during the quarantine (Orgilés, Morales, Delveccio, Mazzeschi, & Espada, 2020). Similarly, Indian mothers of 9- to 11-year-old children indicate that the major distress symptoms of their children during the COVID-19 pandemic include anxiety and fear of the disease (Tiwari et al., 2020). These findings are supported by results from unpublished studies presented in commentaries related to the COVID-19 pandemic, as Chinese parents are found to report fear in their children (Jiao et al., 2020), while hospital staff providing mental health services to children in Wuhan find that 45% of them report anxiety (Cui, Li, Zheng, & Chinese Society of Child Adolescent, 2020) and 21% of surveyed parents in Beijing report anxiety in their children in relation to the pandemic (Cui et al., 2020). Moreover, results from literature reviews also support the findings reported in original studies (Bahn, 2020; Camden et al., 2020; Imran, Aamer, et al., 2020), outlining that the COVID-19 pandemic and its associated confinement measures are "caus[ing] increased anxiety for many children, including some whose anxiety will be severe enough to require treatment" (Schwartz et al., 2020, p. 13).

***Fear, Anxiety, and Stress in Adolescents Specifically.*** In adolescents more specifically, the COVID-19 pandemic is also found to be associated to anxiety in Chinese teens aged 12 to 18, "the proportion of all of the students with mild-to-severe anxiety symptoms [being] 37.4%" (Zhou et al., 2020, p. 3), as well as in Chinese senior high school students, 54.5% of which presented symptoms of anxiety based on the Chinese version of the Generalized Anxiety Disorder Scale (GAD-7). Moreover, 53.6% and 5.2% of adolescents and young adults aged 10 to 25 years who completed the Perceived Stress Scale (PSS) reported moderate and severe stress, respectively, during the COVID-19 pandemic (Agarwal et al., 2020), while 79.8% and 23% of

German adolescents and young adults aged 16 to 25 reported intrusive thoughts about the pandemic and COVID-19-related anxieties, respectively (Rauschenberg et al., 2020). However, in these studies involving adolescents, the authors do not include baseline comparisons of their participants' anxiety levels, thus it is not possible to determine that these anxiety levels developed as a result of the pandemic itself, although it is assumed to have occurred. Yet, a literature review also finds that adolescents are at-risk of having anxiety symptoms during the COVID-19 pandemic (Guessoum et al., 2020).

***Exhibition of Fear, Anxiety, and Stress in the Form of Regressive Behaviours in Younger Children.*** Symptoms of anxiety and fear seem to present differently in younger children, who may exhibit them in the form of regressive behaviours during pandemics. In press studies indicate that 26% of Italian and British parents of children aged 4 to 10 who completed an online survey indicated that their children "showed the regressive symptom of the demand for physical proximity to their parents during the night" (Pisano et al., 2020, p. 9), which was mostly shown by children aged 4, while Chinese parents reported that one of their children's most common psychological and behavioral problems as a result of the COVID-19 pandemic was clinginess, which was more likely to be shown in children aged 3 to 6 (Jiao et al., 2020). Literature reviews echo these findings (Chevance et al., 2020; Imran, Aamer, et al., 2020; Imran, Zeshan, et al., 2020; Murray, 2010), noting other regressive symptoms such as thumb sucking, bedwetting, and speech difficulties (Douglas et al., 2009; INESSS, 2020c).

***Fear, Anxiety, and Stress are Worsened by the Separation from Loved Ones Associated to Confinement and Quarantine Measures.*** The effects of being separated from one's loved ones seems to be particularly detrimental in the context of a pandemic. Interviews with Canadian children and adolescents aged 6 to 18 who were hospitalized during SARS-CoV-1 and who were unable to see their parents during this period indicate that the experience of quarantine led to increased anxiety, fear, and worry (D. F. Koller, Nicholas, Goldie, Gearing, & Selkirk, 2006). During the COVID-19 pandemic, quarantined Indian children and adolescents aged 9 to 18 years old exhibited more worry (69% vs 52%), fear (61% vs 33%), and nervousness (60% vs 31%) than those who were not required to be quarantined and separated from their loved ones (Saurabh & Ranjan, 2020). Literature reviews echo these original findings, as children who are quarantined are found to be at-risk of developing lasting psychiatric consequences including anxiety disorders (Ghosh et al., 2020; Imran, Zeshan, et al., 2020).

***Groups with Prior Mental Health Difficulties Who Are More Vulnerable to Fear, Anxiety, and Stress.*** Children and adolescents with pre-existing psychiatric disorders, namely OCD, anxiety, eating disorders, clinical high risk for psychosis, as well as pre-existing intellectual disabilities, may be especially vulnerable to developing symptoms of fear, anxiety, and stress during pandemics. Findings from semi-structured interviews with adolescent psychiatric outpatients aged 12 to 18 years indicate that "more patients reported that [their] anxiety symptoms got worse (43.3%) rather than improved (10%)" (Huscsava et al., 2020, p. 6) during the COVID-19 pandemic. Observations of adolescent girls aged 11 to 13 who suffer from

obsessive-compulsive disorder (OCD) conducted by mental health personnel at an outpatient psychiatry facility further indicate that these girls faced greater anxiety due to behaviors around cleaning and avoidance becoming socially mandated during the COVID-19 pandemic (Conrad, Bousleiman, Isberg, Hauptman, & Cardeli, 2020). Furthermore, observations of patients aged 9 to 16 years with pre-existing anxiety and diagnoses of eating disorders by health care providers in Singapore during COVID-19 indicates that their health-related fears and phobias have worsened (Davis et al., 2020). Moreover, narrative reviews of the literature find that children with intellectual disabilities also represent a group vulnerable to increased anxiety and agitation during COVID-19, as it can be hard for them "to understand the situation and the need for the current restrictions" (Fegert et al., 2020; Gautam et al., 2020). Youth at clinical high risk for psychosis are also vulnerable to increased anxiety during pandemics due to the way they disrupt daily life, according to a literature review (DeLuca et al., 2020).

#### *3.2.2.2 Depressive Symptoms*

***General Depressive Symptoms.*** A variety of depressive symptoms are found to develop and increase in children and adolescents as a result of pandemics and confinement. Some authors point towards more vague symptoms of depression in general. Twenty-two percent of Chinese children and adolescents aged 13 to 18 years are found to report scores above the threshold for clinical depressive symptoms on the Child Depression Inventory (CDI) during the COVID-19 pandemic, which is greater than the generally estimated 13.2% in China (Duan et al., 2020). The increase in prevalence of depressive symptoms due to pandemics and confinement is also found to occur un children and adolescents based on findings from literature reviews (Racine et al., 2020; Sajid et al., 2020). In children more specifically, telephone interviews with mothers of Indian children aged 9 to 11 years reveal that they report their children to be experiencing depressive symptoms during the COVID-19 pandemic (Tiwari et al., 2020). Cui and colleagues (2020) also highlight the symptoms of depression that can occur as a result of the COVID-19 pandemic in children, as is found in the studies under peer review they summarize.

In adolescents more specifically, many studies point towards an increase in depressive symptoms in adolescents more specifically during the COVID-19 pandemic. Based on the responses to the Patient Health Questionnaire (PHQ-9) during the COVID-19 pandemic, 43.7% of Chinese adolescents aged 12 to 18 years report mid-to-severe depressive symptoms (Zhou et al., 2020), while 71.5% of Chinese senior high school students present symptoms of depression (Hou, Mao, Dong, Cai, & Deng, 2020). Importantly, these proportions are found to be greater than those in a pre-COVID-19 meta-analysis, where "the general prevalence of depressive symptoms among Chinese children and adolescents was 15.4%" (Zhou et al., 2020, p. 6). Moreover, 68.4% and 39.9% of adolescents and young adults aged 14 to 28 years in a clinical and a community sample respectively indicate having a high likelihood of a diagnosis in the internalizing disorder domain on the GAIN-SS questionnaire (Hawke et al., 2020). Depressive symptoms are also evidenced in a sample of psychiatric outpatients aged 12 to 18 years, where

73.3% reported a decline in mood (Huscsava et al., 2020). These original findings indicating that depressive symptoms occur and worsen as a result of pandemics and confinement are supported by literature reviews related to influenza pandemics (Douglas et al., 2009) as well as the COVID-19 pandemic (Guessoum et al., 2020). Furthermore, based on a case study of a 14-year-old boy admitted to a psychiatric unit during COVID-19 with a diagnosis of an early-onset manic episode, Marchini and colleagues (2020) found that the context of the pandemic "played a crucial role in triggering the […] episode" (p.35), highlighting the potential for extreme cases of affective disorders in adolescents during pandemics.

Some original findings in studies involving adolescents also offer insights into the mechanisms explaining the onset of depressive symptoms during the COVID-19 pandemic in this age group. COVID-19 stress is found to be a significant predictor of depression in Canadian adolescents with a mean age of 16.68 years who completed the Brief Symptom Inventory as well as questionnaires linked to their COVID-19 stress levels and social media use, especially in the case of those who reported the highest social media use after the pandemic (Ellis, Dumas, & Forbes, 2020)l. The association between fear linked to the COVID-19 outbreak and depressive symptoms in adolescents is further found to be mediated by the occurrence of negative emotional reactivity, based on the self-reports of Turkish adolescents aged 14 to 18 years to the Emotional Reactivity Scale and Depression and Anxiety Scale for Children (Seçer & Ulaş, 2020).

***Specific Depressive Symptoms Across Age Groups.*** With regards to more specific symptoms of depression, our review of the literature highlights an important variety.

Sadness. Findings from original studies indicate that children and adolescents may exhibit increased sadness during a pandemic. During SARS-CoV-1, children and adolescents who were hospitalized are found to have experienced sadness, which was especially "attributed to feeling alone and missing and/or worrying about family members" (D. F. Koller et al., 2006, p. 53). During the COVID-19 pandemic, findings indicate that sadness is also experienced by Spanish, Italian, and Indian children and adolescents who are not hospitalized or separated from their parents although they are still practicing confinement measures (Orgilés et al., 2020; Saurabh & Ranjan, 2020). Literature reviews also echo these findings (INESSS, 2020c; Schwartz et al., 2020).

Listlessness. Another symptom of depression that is found to increase during times of pandemics is listlessness. An original yet presently unpublished study indicates that parents in their sample reported that "one in two [of their 4- to 10-year-old children] seemed more listless to the activities they were used to perform before the [COVID-19] pandemic including playing, studying, and gaming" (Pisano et al., 2020, p.9). These findings are echoed by literature reviews (INESSS, 2020c; Murray, 2010)

Withdrawal. Mothers of Indian children aged 9 to 11 years report in telephone interviews that their children are showing "poor social and emotional responsivity, decreased interest in studies and other creative activities [as] consequences of COVID-19" (Tiwari et al., 2020, p. 1). Moreover, symptoms of withdrawal in children and adolescents as a result of pandemics are

found in literature reviews (Chevance et al., 2020; Douglas et al., 2009; Guessoum et al., 2020; Imran, Aamer, et al., 2020; INESSS, 2020c; Murray, 2010).

Mood Changes. An original study that is not yet published reveals that 21.17% of parents reported that their children were showing increased mood changes during the COVID-19 pandemic (Pisano et al., 2020), a finding that is echoed by Murray (2010), who finds in his literature review that increased mood swings can occur, especially in adolescents, during an influenza pandemic.

Risk for Suicide. Finally, 17.5% of Canadian adolescents are found to respond to the questionnaire item "thoughts about ending your life" either with "moderately," "quite a bit," or "extremely" during the COVID-19 pandemic, in comparison to only 5.8% of Canadian youth aged 15 to 24 having reported suicidal thoughts during the past year (Ellis et al., 2020), indicating a rise in suicide risk during the pandemic. Similarly, 31.3% and 7.5% of Chinese senior high school students report suicidal ideation and attempts, respectively, on the PHQ-9 during the COVID-19 pandemic, while a narrative review also finds that an increased suicide risk in children and adolescents as a consequence of the COVID-19 pandemic is hypothesized to occur (Fegert et al., 2020).

#### *3.2.2.3 Externalizing Behaviours*

A variety of externalizing behaviours is also noted to arise in the context of pandemics and confinement across all age groups and at different extents. Interestingly, the original studies from previous pandemics that were reviewed here did not present an outcome of externalizing behaviours, while the proportions are quite high in these COVID-19-related studies.

***Externalizing Behaviours in Children and Adolescents.*** An European parent-report study indicates that, due to COVID-19, 39% of children and adolescents aged 3 to 18 years show increased irritability and restlessness (Orgilés et al., 2020). Furthermore, findings from literature reviews indicate that pandemics can increase anger, acting out, aggression, irritability, agitation, whining, conflicts with one's family members, and disobedience (Douglas et al., 2009; INESSS, 2020c; Murray, 2010; Sajid et al., 2020) in both children and adolescents. It also seems that the experience of quarantine itself, above living through a pandemic, exacerbates externalizing behaviours, such as annoyance, which is found to be greater in groups of quarantined Indian children and adolescents than those who are not during the COVID-19 pandemic (Saurabh & Ranjan, 2020).

***Externalizing Behaviours in Children and Adolescents with Prior Mental Health Difficulties.*** Moreover, children and adolescents with pre-existing mental health difficulties may be more vulnerable to exhibiting increased externalizing behaviours during pandemics and their associated confinement measures. Notably, "compared to before the [COVID-19] outbreak, behavior problems were reported being more intense (35.5%) and more frequent (41.5%) in a substantial proportion of ASD [autism spectrum disorder] individuals" (Colizzi, Sironi, et al., 2020, p. 5), according to the responses of parents of children with ASD with a mean age of 13

years to an online questionnaire. Importantly, they found that "ASD individuals with behavior problems predating the COVID-19 outbreak are twice as likely to experience more intense and more frequent behavior problems since the beginning of the emergency" (p.11) than those without pre-existing behaviour problems. These findings are also highlighted by Imran and colleagues (2020), who found in their literature review that children and adolescents with ASD are "more likely to show problematic behaviors such as irritability [and] aggression" (p.S69) during the COVID-19 pandemic (Imran, Zeshan, et al., 2020). Moreover, Chevance and colleagues (2020) found, in their literature review, that children and adolescents with pre-existing mental health issues are generally more at-risk of developing irritability and aggression during the COVID-19 pandemic.

***Externalizing Behaviours in Children Specifically.*** Parent-reports indicate that intolerance to rules, whims, and excessive demands are evident in 54% of children aged 4 to 10 years (Pisano et al., 2020), while interviews with mothers of children aged 9 to 11 years indicate that children are showing more "resistance, anger, irritation, stubborn[ness], [and] frustration" (Tiwari et al., 2020, p. 7) since the beginning of the COVID-19 pandemic. Similarly, in a summary of a study under review, parents report their children to be showing greater irritability and agitation during the COVID-19 pandemic (Jiao et al., 2020). Moreover, although 30 to 40% of Spanish children aged 3 to 12 years are found to display more behavioral disturbances (i.e., conduct problems, emotional problems, hyperactivity) as compared to the pre-confinement situation according to their parents' reports on the SDQ, more than 55% of them did not show a relevant change in problematic behaviors, indicating that it is not the majority of children who display externalizing behaviours in the context of pandemics and confinement (Romero et al., 2020). Nevertheless, findings from literature reviews indicate that externalizing behaviours still occur in such a context, namely behaviours such as impatience, annoyance, hostility, frustration, anger, whining, and restlessness (Dubey et al., 2020; Imran, Aamer, et al., 2020; Imran, Zeshan, et al., 2020; Schwartz et al., 2020). In younger children more specifically, findings from a literature review also highlight that increased temper tantrums may be observed during an influenza pandemic (Murray, 2010).

***Problematic Externalizing Behaviours in Adolescents and Young Adults Specifically: Risk-Taking Behaviours.*** Adolescents may be particularly vulnerable to engaging in externalizing behaviours that reflect poor coping mechanisms, beyond the aforementioned examples (which are also found to be present in adolescents, namely greater irritability and conflicts with family and friends, according to a literature review (Buheji et al., 2020). A Canadian literature review and report has found that adolescents are anticipated to engage in increased risk-taking behaviours such as drug and alcohol abuse during the COVID-19 pandemic (INESSS, 2020c), which is also mentioned in literature reviews (Guessoum et al., 2020; Murray, 2010). Adolescents at clinical high-risk for psychosis may be especially vulnerable to "turn to substances to cope" (DeLuca et al., 2020, p.316) with COVID-19 pandemic stressors, according to another literature review. However, Hawke and colleagues (2020) found that in both a clinical and community sample of adolescents and young adults aged 14 to 28 years, substance use

declined during the COVID-19 pandemic according to self-reports, although they also found that "a subset of youth reported using substances to cope" (p.7) during the pandemic, highlighting that some may be more vulnerable to engaging in this externalizing behaviour.

#### *3.2.2.4 Posttraumatic Symptoms and Disorders*

As a result of pandemics and confinement, children and adolescents may also develop posttraumatic symptoms and disorders (PTSD), as indicated by findings from an original study conducted after the SARS-CoV-1 and H1N1 outbreaks in the US, Canada, and Mexico, in which parents completed the University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index for their children, indicating that children who experienced isolation or quarantine were 4 times more likely to meet the clinical cut-off score for PTSD than those who had not been in isolation or quarantine (Sprang & Silman, 2013). During the COVID-19 pandemic, results from original studies also indicate that pandemics and confinement measures can lead to the development of posttraumatic symptoms. Based on observations of children and adolescents aged 7 to 18 years, it is found that "there is the potential for increase in PTSD and other stress-related disorders" (Stewart et al., 2020, p. 10), while 85.5% of high school students who completed the Impact of Events Scale (IES-R) present symptoms of PTSD (Hou et al., 2020). These original findings are supported by those from literature reviews, across age groups (Buheji et al., 2020; Dubey et al., 2020; Fegert et al., 2020; Guessoum et al., 2020). Findings from other literature reviews indicate that adolescents at clinical high risk for psychosis may be particularly vulnerable to the development of PTSD symptoms during the COVID-19 pandemic (DeLuca et al., 2020), while certain parent behaviours, such as over protectiveness, family conflict, and infantilization following the traumatic event of the pandemic, are found to be predictive of the level of children's PTSD symptoms (Douglas et al., 2009).

#### *3.2.2.5 Somatic Symptoms*

Somatic symptoms and complaints are also evidenced as resulting in children and adolescents in the context of pandemics and confinement, as reported by parents in a study under review (Cui et al., 2020). It is also reported by mental health professionals in a youth neuropsychiatric unit, who present "a case of symptom exacerbation of a Severe and Persistent Somatic Symptom Disorder (SSD), triggered by the fear of having COVID-19" (Colizzi, Bortoletto, et al., 2020) in a 16-year-old adolescent, which is indicative of the extent to which somatic symptoms resulting from pandemics and confinement measures may develop. Furthermore, a literature review in the context of influenza pandemics also highlights that children may present "headaches, stomach aches, and trouble breathing" (Murray, 2010, p.138).

#### *3.2.2.6 Inattention and Distractibility*

The rise of inattention and distractibility is also found to occur during pandemics. Parent reports indicate that 76.6% of children and adolescents aged 3 to 18 years show increased difficulty concentrating during the COVID-19 pandemic, according to a study under review (Orgilés et al., 2020). A summary of another study under review as well as a review of the

literature echo these findings, indicating that children may exhibit difficulty concentrating during a pandemic (Douglas et al., 2009; Jiao et al., 2020).

#### *3.2.2.7 Alterations in Sleep Habits*

Alterations in sleep habits seem to be a widespread consequence of pandemics and confinement for children and adolescents. More specifically in terms of symptoms, 20% of parents in an online survey study are found to report that their children aged 4 to 10 years are having "sleep problems including difficulty falling asleep, agitation, and frequent waking up" (Pisano et al., 2020, p.9) during the COVID-19 pandemic, parents of children and adolescents aged 5 to 17 years report that their children are "sle[eping] more during the initial COVID-19 virus outbreak compared with before the restrictions" (Moore et al., 2020, p.6). Moreover, Indian children and adolescents who were interviewed reported having insomnia, especially those who were quarantined (Saurabh & Ranjan, 2020), while preliminary results indicate that parents of children and adolescents aged 3 to 18 report their children to be exhibiting more nightmares, fatigue, and sleeping disorders (Jiao et al., 2020). Findings from literature reviews highlight similar findings from original studies, concluding that influenza pandemics and the COVID-19 pandemic can lead to nightmares and other sleep problems in children and adolescents (Buheji et al., 2020; Douglas et al., 2009; Guessoum et al., 2020; INESSS, 2020c; Murray, 2010; Sajid et al., 2020). In younger children more specifically, mothers of children aged 3 to 6 years report "more challenging bedtime routines and [a decrease] of children's sleep quality" (Dellagiulia et al., 2020, p. 4) since the first cases of COVID-19 in Italy and the UK. These findings are also mentioned in Imran and colleagues' (2020) literature review, as sleep problems, such as "multiple awakenings in the middle of the night, frequent nightmares, not being able to take naps during the day, as well as demanding more attention at nap and bedtime," (p.S69) are found to occur in younger children (Imran, Zeshan, et al., 2020). Finally, in children and adolescents with ADHD, sleep habits are also found to be perturbed during COVID-19 confinement measures in France, according to parent reports (Bobo et al., 2020).

### Factors that Increase Vulnerability to Detrimental Mental Health Effects

Several authors also indicate that certain factors increase children and adolescents' vulnerability to detrimental mental health effects during pandemics and confinement. Importantly, many of these factors influence one another, compounding the detrimental effects that occur in terms of children and adolescents' mental health.

#### *3.2.2.8 Parent Distress*

Parents' distress is found to be associated to greater stress and distress in children and adolescents during pandemics. During the H1N1 and SARS-CoV-1 pandemics, of parents who met PTSD cut-off levels on the PTSD Check List – Civilian Version (PCL-C), 85.7% of them had children also meeting clinical cut-off scores for PTSD on the University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (PTSD-RI), based on parent reports, while

only 14.3% of parents not meeting PTSD criteria had children with PTSD symptoms (Sprang & Silman, 2013) indicating that there is a significant relationship between the PTSD symptoms of parents and that of their children. Similar findings have been put forth by a more recent but yet unpublished study in the context of the COVID-19 pandemic, where it is found, with the use of parent reports, that when parents feel that the situation surrounding the pandemic is more serious, they tend to report more emotional problems in their children (Orgilés et al., 2020). Yet, the direction of this association cannot be established, as the authors highlight that children's behavioural problems resulting from the pandemic can also "negatively affect the family climate" (p.11) and thus make the situation surrounding the pandemic seem even worse to their parents. Moreover, other original studies using parent-report data also find that the psychological well-being of Spanish children aged 3 to 12 years as well as Italian children and adolescents aged 2 to 14 years is "impacted, at least in part, via the impact on parents" (Romero, López-Romero, Domínguez-Álvarez, Villar, & Gómez-Fraguela, 2020, p. 29) and that it is especially "the parents' individual perception of the situation [during the COVID-19 quarantine] that is significantly associated with […] children's psychological problems" (Spinelli et al., 2020, p. 5), as rated with the SDQ. Similarly, based on researchers' assessment of 9- to 12-year old children and their mothers' trait anxiety with the State and Trait Anxiety Inventory (STAI), a moderate, positive correlation between the trait anxiety scores of the children and their mothers is found (Senkalfa et al., 2020), while self-reports of parents and their children aged 11 to 17 years on the Perceived Stress Scale (PSS) indicate that "the stress level of parents displays a negative impact on the wellbeing of their children" (Gabor, Törő, Mokos, et al., 2020, p. 6). Stress contagion in families during pandemics is also highlighted in literature reviews, namely that parents' mood, coping, fear, distress, and anxiety overall affect their children's distress during the COVID-19 pandemic (Camden et al., 2020; Guessoum et al., 2020; Imran, Zeshan, et al., 2020; Prime, Wade, & Browne, 2020; N. Racine et al., 2020) and influenza pandemics (Douglas et al., 2009).

#### *3.2.2.9 Family's Economic Hardships*

***Family Economic Impact.*** Living in a family that is affected economically by the onset of a pandemic and its associated confinement measures increases children and adolescents' vulnerability in terms of their psychological distress. Interviews with Indian children and adolescents aged 9 to 18 years, reveal that their "high levels of psychological problems […] were mainly associated with [the] loss of [their] father's job, [the] financial losses of [their] family and [the] unavailability of basic life needs" (Saurabh & Ranjan, 2020, p.2). Financial strain brought on by COVID-19 is also found to predict higher anxiety and depressive symptoms in children and adolescents based on a literature review (Racine et al., 2020).

***Pre-existing Low Socioeconomic Status.*** Being a part of a family that was already faced with economic hardships prior to a pandemic is also a risk factor for increased psychological distress and children and adolescents. Social risk indicators are found to be associated with psychological distress in young individuals aged 16-25 during the COVID-19 pandemic, based on participants responses to questionnaires (Rauschenberg et al., 2020). Parents of children and

adolescents with ADHD also indicate that having access to better infrastructure, such as having a large house with a yard, is ideal for their children's well-being during the COVID-19 pandemic (Bobo et al., 2020). Findings from literature reviews also highlight the association between low socioeconomic status and greater psychological distress in children and adolescents during the COVID-19 pandemic (Bahn, 2020; Buheji et al., 2020; Fegert et al., 2020; Gautam et al., 2020; Guessoum et al., 2020; O.E.C.D., 2020; Prime et al., 2020).

#### *3.2.2.10 Rises in Cases of Child Maltreatment and Intrafamilial Violence*

An increase in the likelihood that child maltreatment and intrafamilial violence is anticipated during the COVID-19 pandemic, as previous crises have shown that these phenomena soar during economic recessions like the one resulting from the COVID-19 pandemic, due to increased parental stress, according to literature reviews (Buheji et al., 2020; Gautam et al., 2020; Ghosh et al., 2020; Griffith, 2020; O.E.C.D., 2020; Oliver, 2020). In the context of confinement measures, the stress of having to live in isolation may also increase intrafamilial violence (Fegert et al., 2020; Guessoum et al., 2020; Gritti et al., 2020), while it may decrease the opportunities for children and adolescents to flee or speak out about the abuse, as they are confined with their perpetrators and child protective agencies are working under strained circumstances (Gautam et al., 2020). Importantly, the "sequelae of pandemic-associated increase of maltreatment of children and adolescents may last for a lifetime, [including] increased risk for numerous mental and physical disorders" (Fegert et al., 2020, p.4).

#### *3.2.2.11 Social Isolation*

Feeling lonely and being socially isolated during pandemics are also found to render children and adolescents more vulnerable to psychological distress, especially in the case of adolescents. Indeed, for young individuals aged 16 to 25 years, "social isolation [and] lack of company [are found to be] associated with psychological distress during the COVID-19 pandemic" (Rauschenberg et al., 2020, p.2), based on their answers to the revised UCLA Loneliness Scale and the Kessler-10 questionnaire. A literature review supports these original findings, as they uncover that there is "a clear association between loneliness and mental health problems in children and adolescents" (Loades et al., 2020, p. 9), which is problematic since the COVID-19 pandemic is assumed to be linked to increased loneliness due to the confinement measures that are implemented. Interestingly, it is found that loneliness is associated with stress about COVID-19, based on adolescents' reports to the Brief Symptom Inventory (BSI) and the revised UCLA Loneliness Scale (Ellis et al., 2020). Moreover, in a sample of adolescent outpatients at a psychiatric clinic, "patients with a decrease in their level of functioning communicated a lower level of perceived social support from their families, and especially their friends" (Huscsava et al., 2020, p.7) in semi-structured interviews, while a literature review indicates that the "increased social isolation during current COVID-19 physical distancing efforts may indirectly put [adolescents at clinical high risk for psychosis] at an elevated risk for suicide" (DeLuca et al., 2020, p.314).

#### *3.2.2.12 Overexposure to Media Content About Pandemics*

Being exposed to a great amount of media content about pandemics leads to increased stress in children and adolescents. Two original studies that were reviewed indicate that for children and adolescents, watching news reports related to pandemics can "exacerbate their fears" (D. Koller et al., 2010, p. 374) and make them more nervous (Pisano et al., 2020). Regarding adolescents, they report that their COVID-19 news consumption is related to higher stress, while greater time spent on social media, where COVID-19-related content is omnipresent, is related to more depressive symptoms (Ellis et al., 2020). These original findings are echoed in those from literature reviews (Bahn, 2020; Imran, Zeshan, et al., 2020).

### 3.2.3 Other Notable Factors Increasing Vulnerability to the Detrimental Mental Health Effects of Pandemics and Confinement

Other factors can also render children and adolescents more vulnerable to adverse mental health effects during pandemics and confinement measures. Namely, having a parent who is at elevated risk for exposure to the COVID-19 pandemic, such as a health care worker, may lead to increases in adjustment difficulties and stress-related disorders in children and adolescents (Stewart et al., 2020), especially if their parent needs to be quarantined (Dubey et al., 2020). Moreover, in a literature review, two studies are found confirming that "mental illness symptoms [are] higher in children residing in highly infected areas" (Racine et al., 2020, p.1). However, Spinelli and colleagues (2020) find that "living in a more at-risk contagion zone […] [does] not relevantly affect […] children's well-being" (p.4), thus the effect of this factor remains debated. Furthermore, self-reports of Chinese children and adolescents aged 7 to 18 years on the Chinese version of the Spence Child Anxiety Scale (SCAS) indicate that the illness and death of family members and friends during the COVID-19 pandemic is associated to worsened detrimental mental health effects (Duan et al., 2020), which is echoed in a literature review regarding influenza pandemics (Murray, 2010). Finally, not having the possibility to engage in one's usual coping mechanisms such as "freely mov[ing] outside [one's] house" (Marchini et al., 2020, p.35) or "taking personal space, visiting with family/friends, [or] going to [a] mall or movie theatre" (Imran, Zeshan, et al., 2020, p. S68) due to confinement measures may exacerbate children and adolescents' psychological distress during the COVID-19 pandemic.

### 3.2.4 Positive Mental Health Effects

Still, some authors report positive mental health effects during pandemics. Italian and Spanish parents report that "almost one in three (31.38%) [of children] seemed calmed and one in two (49.57%) seemed wiser and more thoughtful" (Pisano et al., 2020, p.9) during the COVID-19 pandemic. Similarly, Spanish parents of children aged 3 to 12 years report that while confined, their children "developed a positive pattern of adaptation, increasing prosocial behaviors, [had] better routines of activities and self-care, and develop[ed] more mature conceptions about society and health" (Romero et al., 2020, p.32).

## 3.3 Interventions and recommendations to support children and adolescents' mental health during and after the pandemic (Question 2)

Regarding COVID-19 health-care planning, the Mental Health Commission of Canada highlights the importance to address potential quality risk for ethical decision making in vulnerable populations, such as those experiencing mental health problems and illnesses (Ungar & Knaak, 2020). Vulnerable populations should be a key target group in equity-based frameworks and other protective strategies (Ungar & Knaak, 2020, p. 4). Therefore, articles included in this review were screened according to whether they included interventions that were put in place prior to – or as a result of – the instigating factor or recommended interventions or practices to be put into place as a result of the instigating factor. The term "intervention" here is defined as a program or a process that has been implemented to assist the mental health and well-being of children and adolescents. Furthermore, two associations, notably the « Ordre des psychologues du Québec » and the « Ordre des psychoéducateurs et psychoéducatrices du Québec », have developed two telepractice guides for the assessment of children as a result of the COVID-19 pandemic. These two guides will be discussed below.

### 3.3.1 Interventions

In total, 20 articles mentioned an intervention and one presented more than 4 interventions. Detailed below is a summarised description of the most prevalent types of interventions proposed in these articles and their outcomes. The interventions are described in more detail, according to each article and their outcomes, in Table 1 in Appendix.

#### *3.3.1.1 Telehealth*

The most common intervention proposed in the identified articles is the use of telehealth, present in 11 articles. All of the articles that stated telehealth as an intervention refer to providing care to patients or those in need of healthcare service remotely (teleconferencing, online, smartphone application, etc.). The terms used to name the intervention vary and some interventions are self-directed while others are delivered by a practitioner. However, in some articles, there is a lack of information regarding the actual procedure or use of this intervention. Also, there is inadequate information on the actual platforms being used. Further research is needed to determine if there are standardized procedures and the effectiveness of this intervention to support the mental health of children and adolescents.

Overall, even though there are studies in which patients' mental health deteriorated, it appears that there are more benefits than disadvantages in using telehealth. Adolescents and young adults were generally familiar with the use of electronic communication platforms and appreciated the convenience of meeting with providers remotely (Barney, Buckelew, Mesheriakova, & Raymond-Flesch, 2020). As for the medical management of mood disorders and maintenance of attention deficit hyperactivity medications, providers found that they were easily managed via telehealth. Almost all parents who had to use teleconsultation also described it as a positive

experience (Bobo et al., 2020). The parents were reassured by the active listening and the availability of the various professionals in this very particular context. Some parents even planned to continue this modality of care beyond confinement (Bobo et al., 2020). Schwartz et al. (2020) also reviewed the use of CBT with a focus on trauma (TF-CBT) and the preliminary results provided evidence that TF-CBT delivered via telepsychotherapy technology reduced the symptoms. In fact, 96.8% of the patients who completed treatment no longer met diagnostic criteria for a trauma-related disorder at posttreatment (Stewart et al., 2020). Furthermore, Davis et al. (2020) mentioned that telehealth has previously been used successfully for family-based therapy in the United States (Davis et al., 2020). Huscsava et al.'s (2020) asked patients to rate teletherapy versus face-to-face treatment. They found conflicted results from patients, however, more patients rated it positively (36.6%) than negatively (26.6%). The remaining patients (36.7%) rated the treatment as neutral. A high responsiveness to teletherapy was significantly correlated with general symptom improvement and increased positive mood. Patients valued the frequent continuation of treatment. The patients who rated teletherapy negatively also showed a deterioration in their level of functioning. The authors associated this notable difference to their perceived level of social support. To optimise treatment, Huscsava et al. (2020) suggested that screening patients before offering teletherapy could prove beneficial. Continuing face-to-face contacts for patients with low levels of social support could be a helpful strategy. For the other patients, the results indicated that teletherapy can serve as an alternative treatment approach. In most cases, current data shows that telehealth is an appropriate intervention from which patients can benefit.

#### *3.3.1.2 School class/changes*

Certain articles from the United Kingdom and Singapore report that schools adapted and/or increased their precautionary measures in order for classes to continue. On the other hand, another article indicated that schools closed, but that schoolwork and activities continued remotely by adapting online resources or by using the phone. While some advocate for schools to stay open, some advocate for their closure. Both sides, however, claim that for school to continue is good for the mental health of students. For example, Davis et al.'s (2020) study in Singapore found that continuing classes has been beneficial for patients. Classes provided structure and the continued academic support to students helped decrease their anxieties.

#### *3.3.1.3 Pharmacological treatment*

Two articles mentioned the use of medication to treat patients due to the pandemic. Schwartz et al. (2020) mentioned the use of Fluoxetine (a selective serotonin reuptake inhibitor) to treat severe anxiety due or increased by the COVID-19 pandemic, while Marchini et al. (2020) mentioned having used a pharmacological treatment (without specifying further) in an inpatient treatment (case report). In these two articles, the pharmacological treatment has been found to be useful at improving patients' symptoms rapidly. Inpatient care including pharmacological treatment helped reduce the patient's symptoms (Marchini et al., 2020) while fluoxetine was particularly successful for childhood anxiety as it reduces anxiety symptoms and has fewer troublesome side effects than

other similar medications (Schwartz et al., 2020). Pharmacological treatment was used in exceptional cases only.

#### *3.3.1.4 Online Parenting Pro-Tips (OPPT)*

OPPT are combined web-based educational modules addressing child development and positive parenting with live coaching (via videoconferencing link) of parenting skills. The pre-post study was conducted by Riegler et al. (2020) and was also mentioned in Camden et al.'s (2020) review. The participants in this study were veterans with children. Veterans in this study reported significant improvements in their child's behaviours following the intervention (Riegler et al., 2020). Post study there were fewer difficult behaviours which suggest that delivering parental skills training remotely is feasible and effective. The article mentions that this type of intervention could support at-risk families by promoting positive parent-child interactions. Therefore, OPPT may support the mental health and functioning of families at heightened risk.

There are a few other interventions that are mentioned in the articles present in this review, notably the SMART intervention – The Strength-focused and Meaning-oriented Approach to Resilience and Transformation (SMART) – a crisis intervention approach (Chan, Chan, & Ng, 2006); group therapy, used for those who suffer from OCD (Conrad et al., 2020); in-patient school changes (Davis et al., 2020); directive and non-directive treatment interventions (Griffith, 2020); and remote diagnostic assessment to diagnose autism spectrum disorder (ASD) in children (INESSS, 2020a). These interventions are discussed in detail in Table 1.

### 3.3.2 Tele-practice Guides

In the context of the COVID-19 pandemic, seven guides on tele-practice in healthcare were found in the grey literature. Many organisations refer to tele-practice guides that were developed prior to (Collège des médecins du Québec [CMQ], 2015; College of Nurses of Ontario [CNO], 2020; Conseil interprofessionnel du Québec [CIQ], 2016; Ordre des travailleurs sociaux et des thérapeutes conjugaux et familiaux du Québec [OTSTCFQ], 2017) and/or during the pandemic (CMQ, 2020; Ordre des psychoéducateurs et psychoéducatrices du Québec [OPPQ], 2020a; Ordre des psychologues du Québec [OPQ], 2020a). These guides address ethical challenges regarding confidentiality, consent, and privacy in tele-practice. For example, the platform chosen should be safe (e.g. encrypted data) to ensure confidentiality. All the guides point out the importance of technological literacy. While all guides insist on the technological literacy of professionals, only three guides consider the technological literacy of patients (CIQ, 2016; OPQ, 2020a; OPPQ, 2020a). In addition, while choosing a videoconferencing platform, the communication tool should be adapted to the person's needs and capacities, to their context and to their ease of access to the tool (OPQ, 2020a, OPPQ, 2020a). Although these guides may be

relevant for tele-practice with adults, they do not provide specific tele-practice guidance for children and adolescents.

#### 3.3.2.1 Tele-practice guides for children and adolescents

Adapted to the context of COVID-19, two tele-practice guides for children and adolescents were found in the grey literature. These guides were developed to provide mental health guidance for tele-practice in a pandemic and confinement context. The 'Ordre des psychologues du Québec' proposes a guide for children and adolescents (OPQ, 2020b), while the 'Ordre des psychoéducateurs et psychoéducatrices du Québec' offers guidance on psychoeducative assessment in early childhood (OPPQ, 2020b). Both guides highlight helpful guidance for tele-practice with children regarding preparation of a session, therapeutic relationship, engagement, ethical challenges, and the use of different tools such as assessment tools.

1. **Preparation**

In early childhood, before the remote assessment of a child, an assessment scenario should be determined with the collaboration of the family to clarify the process of a remote assessment, the choice of an appropriate online platform, the level of engagement of the parents during the remote assessment with the child, the best time for the child to participate, the material required (e.g. toys, any other material to create games), and the time of discussion with the parents (e.g. in the presence of the child or not) (OPPQ, 2020b). Children and adolescents should also be involved before a tele-practice session, by explaining the reason of the use of technology, and the challenges and solutions related to privacy (OPQ, 2020b). Explanations should be adapted to the age of the child or the adolescent (OPQ, 2020b). For example, the professional could discuss confidentiality using information about encrypted data with adolescents (OPQ, 2020b). In addition, before the tele-practice session, the family, the child, and/or the adolescent should be able to ask questions about the functionality of the tele-practice platform (OPQ, 2020b). Technology literacy should also be assessed by the professional to verify the feasibility and relevance of a tele-practice session (OPQ, 2020b).

2. **Therapeutic relationship**

The use of technology can lead to challenges in the development of the therapeutic relationship (OPQ, 2020b). In tele-practice, the importance of the development of this relationship can be influenced by many elements, such as the collaboration of the family, and attitudes/behaviors of the professional. A therapeutic alliance should be developed with the child and their family. In early childhood and childhood, the collaboration of the family is important to build trust (OPQ, 2020b; OPPQ, 2020b). In childhood, it is suggested that parents should be present in front of the camera with the child to foster a psychotherapeutic relationship (e.g. side to side; child in front of the parent) (OPQ, 2020b). However, in adolescence, the presence of the parent may not be necessary to build a relationship base on trust, since adolescents could feel freer to talk if their privacy is respected (OPQ, 2020b).

During a tele-practice session, the professional can foster trust by his attitudes and behaviours. At the beginning of the session, the professional can propose a virtual visit of his office to show the child or the adolescent that there is no one else in his room (OPQ, 2020b). He can also use a software that allows only one person to talk, thus giving more control on the conversation to the child or the adolescent (OPQ, 2020b). He can also use emoticons, exaggerate facial expressions, and maintain eye contact with the camera (OPQ, 2020b). To show that he listens to what the child or the adolescent says, he can use reflection and paraphrasing (OPQ, 2020b). He could also highlight the strength of the child or the adolescent (OPQ, 2020b). He should also focus on the activities rather than to document data during the tele-practice session (OPQ, 2020b).

### 3. Engagement

Maintaining the interest of children and adolescents in the session may be a challenge in telepractice (OPQ, 2020b). In early childhood, games can keep the child engaged. In a tele-practice session, this requires creativity from the professional (OPQ, 2020b, OPPQ, 2020b). Toys should be in the room where the session will take place, but noisy toys should be avoided to keep a good audio quality (OPQ, 2020b). Along with toys, the use of technological functionality, such as screen sharing, can be used (OPQ, 2020b). In addition, the length of the sessions and breaks should be adapted to maintain engagement (OPPQ, 2020b).

### 4. Ethical challenges

Along with social equality issues regarding access to technology and to the internet, the use of technology in healthcare practice raises challenges regarding the principles of beneficence and non-maleficence (OPQ, 2020b). These principles should be respected regarding confidentiality, consent, and privacy (OPQ, 2020b; OPPQ, 2020b). In addition to his code of deontology, the professional should respect the Civil Code of Quebec, the Charter of Rights and Freedoms, the *Loi sur les services de santé et les services sociaux*, Privacy laws, the *Loi sur l'accès aux documents des organismes publics*, and the *Loi concernant le cadre juridique des technologies de l'information* (OPPQ, 2020c).

Before the tele-practice session, it is suggested to discuss the risk of using technology on confidentiality and privacy, and how it is protected (OPQ, 2020b). If the professional wants to record a session, he should obtain informed consent. In addition, the professional should consider possible contraindications to tele-practice with children and adolescents, thus involving clinical judgment of the professional (OPQ, 2020b). Some children and adolescents living with developmental or psychotic problems may not feel comfortable to use a phone, a tablet, or a computer (OPQ, 2020b).

### 5. Tools

Professionals should ensure that the tools (e.g. assessment tools) that are usually used in person are properly adapted for a remote session (OPQ, 2020b; OPPQ, 2020b). Research comparing the validity of online and in-person tests remains sparse (OPQ, 2020b). Therefore, a critical reflection is necessary if tools are modified and/or changed for another tool because of the use of

technology (OPPQ, 2020b). When a tool is modified, the consent of the authors should be obtained (OPPQ, 2020b). It is also important to reflect on the quality of the data obtained remotely to not conclude a false result (e.g. biased data may not represent the capacity of the child or the adolescent) (OPQ, 2020b). For clinical decisions, confidence interval of tests performed remotely should be widen (OPQ, 2020b; OPPQ, 2020b).

### 3.3.3 Recommendations

In total, 42 articles out of the 73 included recommendations. The more prevalent recommendations are discussed here. A complete list of recommendations and their details are presented in Table 2 of the Appendix.

#### *3.3.3.1 Technology use*

The use of any technological device or platform to facilitate learning and/or communication is the most common recommendation to support child and adolescent mental health and it was found in 20 articles. Different terminologies were used such as teleconferences and videoconferences. The use of technology serves various purposes according to these different articles: online learning, remote counselling, keeping in touch with families/friends, or to get help. Recipients of these recommendations vary: children, parents, families, and students. Of the outcomes mentioned, a growing body of evidence demonstrates the effectiveness of new technologies for intervention and assessment of children and adolescents with mental health problems. The data currently available seem to confirm that this mean produces results equivalent to face-to-face therapy. However, most authors agree that more studies are needed to confirm this conclusion.

#### *3.3.3.2 Daily routine and stress/conflict management*

Maintaining a daily routine or a lifestyle that is as close to normal as possible was suggested in 17 different articles and it is the second most common recommendation. Parents are usually the providers and they are encouraged to set up a routine including activities for their children. It is also important that they promote a healthy lifestyle (sleep cycle, physical exercise). Some authors also mentioned that while it is important for children to have a schedule, parents can benefit from having one as well (Imran, Zeshan, et al., 2020). Of the outcomes mentioned, it is noted that repeated behaviours, such as routines and rituals, aid in ensuring that the primary needs of young children are met (Murray, 2010) as they have been identified as a key element of family resilience in the face of stress (Prime et al., 2020). Therefore, continuity and structure of daily life can help support the children.

#### *3.3.3.3 Listening to the needs of children and comforting them*

Listening to the needs of children and comforting them was suggested by 15 different articles. Adults (caregivers/teachers/healthcare professionals/psychologists) ahould pay attention to the needs of children by listening to them, providing age-appropriate information when the children

ask questions, and acknowledging/validating the children's emotions. Many authors agreed that communication between children and parents is crucial as it helps decrease the fears and anxieties related to the pandemic (Bahn, 2020; Ghosh et al., 2020; Tang et al., 2020). By interacting with their children and answering their questions, parents can reassure them that the pandemic is not their fault and lessen misconceptions (Murray, 2010).

#### *3.3.3.4 Mental health services (therapy)*

Therapy or mental health services should be made available to individuals in need as it can help minimize the psychological impacts of the pandemic. Therapies can be offered in-person and/or online. Recipients are usually the children or parents and children together. It was recommended in 15 articles. Overall, authors agree that therapy and mental health services can help children cope with the stress and anxieties induced by the pandemic. DeLuca et al. (2020) mentioned that exploring therapy as a family might be beneficial as it can help improve communication and support the youth's developmental progress. Prime et al. (2020) also suggested that it may lead to positive family transformations as the family will have shared experiences of struggling and coping with the pandemic and it may result in posttraumatic growth. Therefore, therapy has good outcomes. Telepsychiatry, however, as of today, is still relatively new and needs to be evaluated and compared to regular face-to-face therapy in a real-life clinical outpatient setting. Current knowledge on its efficacy is limited to controlled intervention studies (Fegert et al., 2020).

#### *3.3.3.5 Caregivers/teachers support (training)*

It is mentioned that caregivers need to take care of themselves in order to provide better care : “If [the parents/caregivers] are confident and free of stress, they may be able to guide, educate and protect their children more effectively and efficiently” (Imran, Zeshan, et al., 2020, p. S71). Cui et al. (2020) also mentioned that both children and parents should receive psychological aid. Moreover, "Correct information and guidelines have to be given to adults about how this stressful situation may affect their personal and children’s wellbeing. Public health should provide parents with knowledge about, for instance, how children at different ages express distress and the importance of sharing and talking about fears and negative emotions” (Spinelli et al., 2020, p. 6) . As for teachers, ”when conducting online teaching, teachers should also pay attention to the assessment of students’ anxiety and depressive symptoms, communicating with their parents in a timely manner so as to implement effective intervention”(Zhou et al., 2020, p.7). Fourteen articles issued similar recommendations. By supplying information and guidelines to adults, it can foster positive outcomes as it prepares the adults to react and cope in an effective manner (Murray, 2010). Furthermore, it may help parents to understand and support their children (Spinelli et al., 2020). As for teachers, these interventions could help children have better focus in school and minimize the effects of the pandemic on their mental health (Zhao et al., 2020).

#### *3.3.3.6 Stimulating activities/distraction*

Promoting activities or distraction from the current situation to children was recommended by 11 articles. Different activities are mentioned: media entertainment, physical activity, reading a book,

cooking together, etc. Most articles were referring to activities parents can do with their children at home. However, McGrath (2020) also used distraction in the context of a clinical session with younger patients:

> for younger children a room with some toys and activities may increase interest in the session and facilitate engagement with the parent and clinician. Engagement with adolescents may be increased through exploration of relevant and appropriate material on YouTube or other sites. Younger children may enjoy using online drawing apps and can be encouraged to tell stories while drawing. (McGrath, 2020, p. 15)

Of the outcomes mentioned, it was noted that many families used media entertainment during the pandemic as a way to relieve their children's distress. This activity was favoured over reading and physical exercise (Jiao et al., 2020). Increased physical activity, however, has been associated with decreased depressive symptoms in children and youth (Moore et al., 2020) as physical activity helps release hormones that improve one's mood (Sajid et al., 2020). Therefore, parents should encourage their children to do more physical activity as it can increase children's and adolescents' mental health.

Many other recommendations were mentioned in the different articles included in this study. Notably, 9 articles mentioned communication management, such as to reduce or control children’s exposure to COVID-19 television and social media; 9 articles mentioned the need for parents to ensure that children understand what is COVID-19 and teach their children the appropriate ways to act during a pandemic; five articles mentioned how a safe environment can help alleviate stress by remaining calm; there was mention of health education programs, the need to use different tools to screen for possible traumas, the need for social and community support, as well as the need for school-based interventions for students (e.g. rent support, student loan and tuition relief, government financial supports). These are all detailed in Table 2 in Appendix.

## 3.4 Ethical challenges related to children and adolescents' mental health in the context of a pandemic (Question 3)

After careful analysis of the articles included in the screening, some patterns start to emerge regarding the ethical challenges faced by children and adolescents as well as their families due to pandemics, isolation, and/or quarantine restrictions. In response to these instigating factors, many rules and restrictions have been implemented. While interventions are designed as means to protect people, these interventions are not without their own set of ethical challenges. These restrictions greatly affect the mental health of children and adolescents as well as their families. They also disproportionality affect certain groups of people. However, there have also been interventions put in place to mitigate these issues, but they come with their own set of ethical challenges. These ethical challenges are discussed in further detail below.

### 3.4.1 Ethical challenges related to the mental health of children and adolescents

#### *3.4.1.1 Quarantine restrictions and school closures*

The Covid-19 pandemic has forced many countries to implement quarantine restrictions to protect the general population. However, these restrictions have had a great impact on the mental health of children and adolescents. In fact, "[t]he negative psychological impacts of any pandemic are well known and children are known to be more vulnerable when compared to adults" (Tang & Azmi, 2020, p.2). This is an ethical issue since "children were considered to be less affected by the virus than adults" (Zhao et al., 2020, p.2). Thus, by implementing these measures, children and adolescents are exposed to a greater deal of psychological stress even though they are the ones that are the least affected by the physical consequences of the virus. It is even stated that "[t]he effects of COVID-19 may be assumed to exert more negative life outcomes (depression, anxiety, domestic violence and loneliness) for children as it was more severe, unknown and fatal" (Tiwari et al., 2020, p.3). The effect of restrictions such as quarantine also led to school closures which "deprives children of school-based peer interactions and their daily routine. That is, in addition to being psychologically and physically vulnerable during the pandemic, the children will also experience disruptions in their development or delays in their educational progress" (Bahn, 2020, p.77-78). This shows that depriving this group of their social interactions negatively affects their mental health and can even delay their development. It is an important issue to consider when putting in place restrictive measures as they can have long lasting effects on children and adolescents if no support is provided.

#### *3.4.1.2 Children and Adolescents with Pre-existing Health Conditions*

Another important factor to consider is how this pandemic has affected the mental health of children and adolescents with pre-existing health conditions. In fact, it is said that "Those with chronic illnesses, like type 1 diabetes are more vulnerable to psychological stress" and that "[i]ncreased stress leads to worsening of glycemic control" (Agarwal, Harikar, Shukla, & Bajpai, 2020, p. 8). For those with pre-existing mental health conditions, it is stated that "confinement

can also aggravate psychic troubles in adolescents who have suicidal ideas or who severely auto-mutilate themselves, in young patients that suffer from schizophrenia that makes it difficult for them to accept confinement measures, or in those that have severe eating disorders that are confronted by them in times of pandemics" (Chevance et al., 2020, p.S6). This pandemic also affects young people suffering from other mental health conditions such as obsessive-compulsive disorder (OCD) and autism spectrum disorders (ASD):

- "The 2019 coronavirus disease (COVID-19) outbreak could result in higher levels of psychological distress, especially among people suffering from pre-existing mental health conditions. Young individuals with autism spectrum disorders (ASD) are particularly at risk due to their vulnerability to unpredictable and complex changes." (Colizzi et al., 2020, p.1)
- "[T]he guidelines from infectious disease specialists and authorities stating that the simplest way to protect oneself from the virus is adherence to cleanliness and social distancing can have more serious implications for those who already have intense concerns about cleanliness and hygiene or who have been diagnosed with OCD (Banerjee 2020), and this aspect is significantly neglected due to the severity of the pandemic and the urgency of the measures." (Seçer & Ulaş, 2020, p. 3).

All these factors show that although the restrictions put in place by governments are designed to protect their citizens, they disproportionality affect groups of people such as children and adolescents, especially those with pre-existing health conditions. This is an ethical issue since this group faces a disproportionate negative effect on their mental health due to the implementation of these restrictions. These factors need to be taken into consideration to ensure that adequate support is provided to those more vulnerable groups.

#### *3.4.1.3 Socioeconomic backgrounds*

Another ethical challenge that arises is how children and adolescent's socioeconomic background affects their mental health. In fact, "One study showed that financial strain predicted higher anxiety and depressive symptoms" (Racine et al., 2020, p.2). It is also stated that "Those with inferior social position, for instance, have been found to have increased disease fatality and hospital admission rates as well as more severe psychosocial and economic consequences" (Rauschenberg et al., 2020, p.4). The pandemic's effect on parents' employment also influences children's mental health: "Economic recession affects adult unemployment, adult mental health, and subsequently, children may be maltreated. So, it is important to address mental health problems in children early to avoid negative health and social outcomes (Buheji et al., 2020, p.4). There have also been concerns as to how school closures affect children from lower socio-economic backgrounds:

- "[The] learning gap will be widened between children from lower and higher-income families during this institute closure" (Ghosh et al., 2020, p.228).

- "Facilities for home- schooling which need audio-visual systems and good internet connection are not available for children from low-income households" (Ghosh et al., 2020, p.228).

The issues mentioned relate to the development of mental health issues, but when it comes to life satisfaction, the opposite is seen: “The social inequality in life satisfaction declined considerably during the restrictions. The results indicate that young people in families with a high level of resources were more negatively affected. This may be because they normally participate more frequently in organised sports and other stimulating leisure activities” (von Soest et al., 2020, p.9). One final challenge that has been seen is how certain groups of people such as indigenous communities are affected by the pandemic: “COVID-19 has the potential to exacerbate existing socioeconomic disparities, which already affect many Indigenous communities in BC.” (Schwartz et al., 2020, p.12). This group is already at a social disadvantage and the pandemic has only widened the inequalities that this group faces. All these factors show that although quarantine restrictions affect children and adolescents in general, they seem to affect certain subgroups more than others. This creates a divide in how these groups perceive and react to the pandemic since they do not have the same experience. This shows that attention needs to be paid to these issues in order not to exacerbate these inequalities.

### 3.4.2 Ethical challenges related to interventions put in place to help children and adolescents’ mental health

In response to the mental health effects caused by the pandemic, several interventions have been implemented. Most of the interventions relate to the use of telemedicine and telepsychiatry to help children and adolescents with new or pre-existing mental health conditions cope with the newfound stress of the pandemic.

#### *3.4.2.1 Ethical imperatives for the use of mental health interventions*

One of the ethical imperatives given for the use of telehealth is that it “offers many potential benefits, including time-efficiency and possible advantages for attendance, and youth at CHR who have grown up with technology may be particularly interested in digital and telepsychotherapy approaches" (DeLuca et al., 2020, p.323). Another reason why these interventions are implemented is to “minimize immediate impacts and prevent long-term repercussions" (Hawke et al., 2020, p.7) on mental health. It is also stated that "Telepsychotherapy interventions such as OPPT [online parenting pro-tips] may increase access to much-needed services during shelter in place restrictions and beyond." (Riegler et al., 2020, p.300). Finally, it is stated that “if used purposefully, these tools may help to provide low-threshold, timely, and personalized public mental health care quickly and can be tailored to the individual needs and social contexts of individuals’ everyday life (Rauschenberg et al., 2020, p.4-5). All of these ethical imperatives explain why these services were implemented during the

pandemic. They allowed clinicians to reach vulnerable populations and provide them with the care that they needed.

#### *3.4.2.2 Ethical challenges related to these mental health interventions*

Although the mental health interventions mentioned above have been useful during the pandemic, they also come with their set of ethical challenges. First, it should be noted that while using teleheealth "patients experienced technical problems and expressed further negative aspects of teletherapy" (Huscsava et al., 2020, p.7). This can affect how the therapy is delivered and it is stated that "there needs to be some mechanism to monitor the quality of telehealth services, ensuring that ethical standards are maintained" (Imran et al., 2020, p.1113). Another issue with these services is that not everyone is able to access them. This in turn causes inequality between patients since not all of them receive the care that they need. In fact,

> "Many families, however, do not have access to the internet and internet-enabled devices [53, 70], or they need help to navigate the online world [8, 34]. This has already been framed as a matter of social justice [53], and has certainly become a child welfare issue. It raises the question of whether a component of every child safety plan moving forward should be to ensure that the child and their caregiver has access to the internet and the tools and knowledge to use it." (Oliver, 2020, p.7).

This is also a problem since it is stated that on top of being inaccessible to some populations "there is emerging evidence that technology-assisted interventions are not effective in socially disadvantaged populations without a direct contact component (e.g., in-person, video, or phone calls)"(Prime, Wade, & Brownee, 2020, p.10). Other concerns regarding these interventions include "privacy, security of technology platforms management of crises including suicidality, and disclosure of information in the case of emergency." (Sharma et al., 2020, p.2). This issue is seen particularly with "children of low-income families who may not have the resources to use telepsychiatry or to use it in a safe and confidential environment." (Fegert et al., 2020, p. 5). There is also the issue of safety when it comes to dealing with children. It is stated that "the therapist needed be able to view the child at all times via the web camera for safety reasons" (Stewart et al., 2020, p.4). There is also the issue of disparities between different groups. In fact , it is stated that "Digital divides and potential disparities between groups with respect to access to technology as well as private space also loom as potential issues to be addressed in the equitable roll out of telehealth options." (DeLuca et al., 2020, p.319).

Other challenges that were mentioned include the following:

> "potential challenges moving forward include (a) the sustainability of telepsychotherapy to maintain engagement between therapists and clients/families over time without in-person provider contact [...], (b) client/family access to tele/ videoconferencing (including proper equipment, WiFi, etc.), (c) how the cultural background of clients influences their comfort with technology and relates to their interpersonal communication [...], (d) how psychosis-like symptoms (e.g., paranoia, delusions) might interfere with tele or digital

> technology approaches, (e) the ability to conduct risk assessments and effectively triage [...], and (f) how to effectively manage clients who develop psychosis and may require face-to-face treatment and monitoring (e.g., for long-acting injectable medication and physical health check-ups)" (DeLuca et al., 2020, p.319).

It is also important to note that it is suggested that "tailoring telehealth services to families who are socially disadvantaged, including addressing issues of access to technology, is essential to ensure that pre-existing inequities in access to care are not exacerbated" (Prime, Wade, & Brownee, 2020, p.10).

### 3.4.3 Other ethical challenges

The pandemic and the restrictions that have been put in place to contain it also have effects that go beyond the mental health of children and adolescents. One of the results of school closures is that “[c]hildren from low-income families can be further harmed by nutritional deficits during school leaving” (Buheji et al., 2020, p.3). Another challenge that arises is that “[t]he economic fallout secondary to the pandemic is expected to significantly increase the number of children living in extreme poverty, which is postulated to reverse progress made over the past few years to decrease infant mortality rates” (Gautam et al., 2020, p.3). Some problems also arise with the increased use of electronic devices with less supervision: “[c]ovid-19 has opened up avenues for more cybercrimes and criminals are taking advantage of suppressed cyber-security at this hour, “child-abuse materials” seeking activity is on the rise as children are expected to be more vulnerable, less supervised, having more online exposure and are thus easy targets” (Ghosh et al., 2020, p.229).

One factor that should also be mentioned is how the parents react to this pandemic and quarantine restrictions. In fact, “[m]any parents isolated at home are also under lots of stress.” (Imran, Aamer, et al., 2020, p. 1113). It is also said that “institution closings are a more serious and urgent issue for parents of toddlers and kindergarteners […] Kids attending such programs are too young to help themselves, and, therefore, one of the parents has to work less or even has to quit his or her job when the institution closes, which will most likely result in the family experiencing economic difficulties” (Bahn, 2020, p.76). They also mention that "for low-income households or for families in which the parents’ marriage is unstable, long school closure durations can lead to more difficulty in learning for the child” (Bahn, 2020, p.76). It is also stated that “[s]ome families will be more vulnerable to the sequelae of the pandemic than others, based on pre-existing vulnerabilities, such as families with low income" (Prime, Wade, & Browne, 2020, p.4). This shows that the ethical issues related to this pandemic extend far beyond what was initially expected. Although everyone is dealing with this pandemic, certain groups are affected more than others and face more immediate damage to their overall wellbeing. It is important to address these issues for these groups to not be left behind amidst the chaos of the pandemic.

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## Annexe

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| ***Telehealth*** | | | | | | |
| *Barney, A., Buckelew, S., Mesheriakova, V., Raymond-Flesch, M. (2020)*<br><br>*The COVID-19 pandemic and rapid implementation of adolescent and young adult telemedicine: Challenges and opportunities for innovation*<br><br>*Protocol/clinical observation*<br><br>*USA* | • "Uptake of telemedicine has been one response used by providers to continue caring for patients while minimizing risk of exposure or transmission of COVID-19" (p. 1)<br>• "Some precedents do exist for remote provision of key components of adolescent medicine including online platforms for reproductive health services and mental health telemedicine for the treatment of eating disorders. Telemedicine for medical monitoring in eating disorders care is emerging out of necessity during the COVID-19 pandemic" (p. 2)<br>• "This study reports on our clinic's rapid transition to audiovisual telemedicine without peripheral devices to decrease the number of in-person clinic visits in response to COVID-19 and describes novel observations, challenges, and opportunities for innovation." (p. 2)<br>• "The number of telemedicine visits in our practice increased from zero to 80 per week as of March 30, 2020. While the percentage of provider telemedicine visits increased from 0% to 97%, the number of overall clinic visits did not decline when compared with that one year before (337 visits in March 2019 vs. 332 visits in March 2020" (p. 3)<br>• "The rapid implementation of telemedicine for mental health services was critical as we saw an influx of college-aged youth returning home abruptly from campuses and requiring mental health support and medication refills because of loss of college-based providers or new onset of acute stress responses secondary to the pandemic." (p. 4)<br>• "Our rapid transformation to a primarily telemedicine practice was facilitated by multiple factors including institutional support for telemedicine as well as access to the necessary technology and training for providers and clerical staff in their adjusted roles" (p. 6) | • Needed to rapidly implement telemedicine: "This required coordination between providers, clinical support staff, and clerical staff. All providers were trained to use Zoom (…) for telemedicine purposes within one week of [our] initial faculty meeting on COVID-19" (p. 2)<br>• "Nursing and administrative staff created new protocols for remote triage, scheduling, and patient check-in. Because virtual visits required patients to have access to the electronic medical record (EMR) patient portal, clerical staff had to develop new workflows to be able to enroll minors and their proxies remotely while still maintaining confidentiality and obtaining appropriate written permissions. A member of the clinical faculty met with support staff daily throughout telemedicine implementation to identify challenges and facilitate communication between providers and staff. The first two weeks of the intervention focused on addressing logistical challenges to EMR patient portal enrollment, patient scheduling, utilization of the telemedicine platform, and streamlining communication between providers, clinical support staff, and clerical support staff. By week two, providers began identifying challenges and lessons learned in practicing telemedicine for general adolescent health care, reproductive health, eating disorders, and addiction treatment" (p. 2-3)<br>• "We used built- in EMR questionnaires, including the Patient Health Questionnaire 9 and the Generalized Anxiety Disorder 7, which patients could complete before their appointments to screen for and monitor mood or anxiety disorders." (p. 4)<br>• "The medical monitoring of eating disorders includes regular assessment of weight, vital signs, dietary history, electrolyte monitoring, and coordination with the patient's psychotherapist. Given the need for regular anthropomorphic measurements for these patients, providers expressed particular concern about transitioning these patients to telemedicine. As such, we collaborated with our psychiatry colleagues to refine a protocol for family members to calibrate home scales and take blind weights before telemedicine visits. In other cases, therapists or primary care providers measured weights and vital signs and forwarded these data to our team. Finally, when a patient was clearly engaged in concerning behaviors (e.g., increased restricting, purging, over exercising) or the provider, therapist, patient, or family member had a high index of suspicion for medical deterioration, the patient was asked to come in for one of the clinic's limited in-person sessions for measurement of weight, orthostatic vital signs, and any indicated blood work (e.g., electrolyte monitoring). When | 12-26-year-old | • Providers : Clinical support staff, Clerical staff<br>• Mode : Online, ZOOM<br>• Remote setting | • "Overall, providers noted that telemedicine seemed acceptable to adolescents and young adults (AYAs) who generally had competence with electronic communications platforms and welcomed the convenience of meeting with providers remotely" (p. 3)<br>• "Many aspects of AYA care [...] were possible to implement via telemedicine including screening for depression, substance use, psycho-social development, and general anticipatory guidance" (p. 4)<br>• "Providers reported only two visits that were not completed because of technical issues. When needed, providers were able to integrate certified medical interpreters directly into telemedicine visits. Generally, patients arrived on time, and the structure of telemedicine encounters combined with our initial problem-focused visits led to timely clinic sessions which were well received by providers and patients." (p. 3)<br>• "Providers identified that medical management of mood disorders and maintenance of attention deficit hyperactivity medications were all easily managed via telemedicine." (p. 4)<br>• "Providers noted that our eating disorder patients particularly benefitted from the convenience of telemedicine as they are referred to our clinic from a much wider geographic range than our primary care patients. By working with our hospital's satellite clinics, local primary care providers, and therapists, we were able to spare these patients and their families the financial and time burdens of travel to our clinic, in addition to minimizing potential transmission of COVID-19 between communities" (p. 6)<br>• "Telemedicine created flexibility for some families, allowing increased parental participation in medical visits (e.g., among parents with separate households or for working parents)" (p. 6) | COVID-19 |

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| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| | | admission was required due to vital sign instability, it could be coordinated from that visit." (p. 6)<br>• "To ensure that new patients completed federally required intake interviews, our program support staff began conducting these via Zoom! before each patient's first physician telemedicine visit. We asked that, whenever possible, youth and their parents log in to visits from different devices or have access to separate private spaces to facilitate separate but co-occurring confidential meetings with clinicians and social workers. For youth in need of psychiatric assessments for comorbid disorders, our providers also transitioned to telepsychiatry. As most components of the clinical opiate withdrawal scale can be assessed via video connection, we plan to conduct buprenorphine inductions using telemedicine for youth who can enlist a loved one to provide support. We will offer in-clinic inductions to youth who do not have access to a support person" (p. 6) | | | • Challenges identified during implementation and their solutions:<br>o "Privacy and confidentiality were challenges given the provider's inability to establish a quiet and private environment for the patient as they would in an office visit" (p. 3)<br>▪ Solutions:<br>▪ "Use of ZOOM chat feature<br>▪ Patient use of earphones with provider use of yes/no questions" (p. 5)<br>o "Limited provider comfort with clinical decision-making in the absence of a complete physical examination or laboratory data" (p. 4)<br>▪ Solution:<br>▪ "Patients can upload relevant photographs via EMR patient portals" (p. 5)<br>o "Discomfort with asking patients to provide on-camera views of certain body parts as part of their physical examination because of limitations in patient privacy as well as provider-perceived impropriety" (p. 4)<br>▪ Solution:<br>▪ "Point-of-care testing can be collected in local laboratories or with nursing visits<br>▪ Providers can share evidence-based guidelines of clinical scoring modalities possible with telemedicine examinations" (p. 5)<br>o "Inability to access recommended anthropomorphic data for annual preventative visits" (p. 5)<br>o "Clinical encounters no longer collocated with interdisciplinary colleagues: solutions" (p. 5)<br>▪ Solutions:<br>▪ "Fully train social workers and registered dieticians to use telemedicine software<br>▪ Establish internal referrals to social work and dietitian staff with scheduling assisted by clinic staff" (p. 5)<br>o "Need for ongoing screening and assessment of mood symptoms"<br>▪ Solution: | |

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| | | | | | ▪ "EMR-based administration of PHQ -9 and GAV-7 before telemedicine visit" (p. 5)<br>o "Limited provider comfort with sensitive examinations on telemedicine"<br>▪ Solution:<br>▪ "Patient can take still photos of visible lesions and submit them via the EMR patient portal"<br>o "Need for in-person encounters for long-acting reversible contraception, pap smears, and acute pelvis complaints"<br>▪ Solution:<br>▪ "Hybrid model is needed with telemedicine visits to triage acute symptoms and in person visits for diagnosis and treatment" (p. 5)<br>o "Inability to ability to assess recommended anthropomorphic data for eating disorder visits"<br>▪ Solutions:<br>▪ "Train family members to collect weights at home<br>▪ Use hospital satellite clinics to collect vital signs<br>▪ Partner with local primary care providers to collect weight and vital signs<br>▪ When possible, partner with therapists to treat weight from therapy visits" (p. 5)<br>o "Inability to assure parent privacy while disclosing patient weight or dietary recommendations"<br>▪ Solution:<br>▪ "Have parents and patient call in from separate devices so that one can be "removed" from the visit to facilitate confidential discussions" (p.5)<br>• Anticipated barriers:<br>o "Patient might not have an appropriate device to engage in telemedicine<br>o Technology literacy gap within a family may lead to decreased engagement with caregiver (e.g. an adolescent may be comfortable with telemedicine, but the parent is not) | |

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| | | | | | ○ Patients may reject telemedicine because of lack of connection with providers or limits of care<br>○ Reimbursements may be low or unavailable for telemedicine" (p. 5) | |
| *Bobo, E., Lin, L., Acquaviva, E., Caci, H., Franc, N., Gamon, L., ... & Purper-Ouakil, D. (2020).*<br><br>*Comment les enfants et adolescents avec le trouble déficit d'attention/hyperactivité (TDAH) vivent-ils le confinement durant la pandémie COVID-19?. L'encephale.*<br><br>*Protocol (Original Study)*<br><br>*France* | • Telehealth | • Not mentioned | Children (not specified further) | • Provider : Health professionals<br>• Mode : Telehealth<br>• Remote setting | • "La quasi-totalité des parents ayant fait l'expérience d'une télé- consultation, en décrivent un vécu positif. Les parents se disent avoir été rassurés par l'écoute et la disponibilité des différents professionnels dans ce contexte si particulier." (p.S89)<br>• "des thérapies cognitivo-comportementales ont pu être poursuivies ou même initiées durant le confinement avec une grande satisfaction du parent et de l'enfant" (p.S89)<br>• "Certains parents envisagent même de poursuivre cette moda- lité de soin au-delà du confinement" (p.S90) | COVID-19 |
| *Cui, Y., Li, Y., & Zheng, Y. (2020)*<br><br>*Mental health services for children in China during the COVID-19 pandemic: results of an expert-based national survey among child and adolescent psychiatric hospitals*<br><br>*Editorial*<br><br>*China* | • "To date, several types of online mental health services have been implemented widely for those in need during the outbreak in China" (p. 3)<br>• Beijing Children's Hospital "has initiated online medical services including the mental health services by an app in smartphones. Importantly, the staff of a hospital in Wuhan has provided online mental health counseling services for 2144 affected children in Wuhan from February 20 to March 5." (p. 3)<br>• "It should be noted that online services for child and adolescent mental disorders had existed to a minimum extent only prior to the COVID-19 outbreak. However, based on our survey, over 15% of the 33 hospitals newly opened the online services for children and adolescents with mental disorders" (p. 3) | Information not mentioned | Children and Adolescents | • Providers : Health care professionals<br>• Mode : Online application<br>• Remote setting | *Information not mentioned* | COVID-19 |
| *Davis, C., Ng, K. C., Oh, J. Y., Baeg, A., Rajasegaran, K., & Chew, C. S. E. (2020)*<br><br>*Caring for children and adolescents with eating disorders in the current* | • Their "outpatient clinics, both adolescent medicine as well as psychology sessions, have been reduced by approximately 50% because of shifts in manpower and clinical space required to support the response to COVID-19 and to minimize non-urgent visits to the hospital." (p. 2) | • "Considerations for the use of telemedicine in patients with eating disorder in the outpatient setting:<br>○ Patient/family:<br>▪ Willing to use telemedicine<br>▪ Weight stable or good consistent progress[1]<br>▪ Parent willing to weigh patient[1]<br>▪ No safety concerns[1] | 9-16 years old | • Providers : Psychologists, Physician, Nutritionist, Specialty nurse, School counsellors, Community social workers<br>• Mode : Telephone, Online<br>• Remote setting | "Literature has described the use of telehealth to provide mental health support in the setting of the COVID-19 outbreak in China and has previously been used successfully for family-based therapy in the U.S." (p.2) | COVID-19 |

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| *Coronavirus 19 pandemic: A Singapore perspective*<br><br>*Clinical observation*<br><br>*Singapore* | • "Psychologists have been providing increased support and ongoing engagement to patients and families via telephone consult." (p. 2)<br>• "Telehealth has been instituted for physicians and psychologists to manage carefully selected cases" (p. 2) | ▪ No concerns of medical stability such as bradycardia or hypotension<br>o Health care provider<br>▪ Develop patient eligibility criteria for telemedicine[1]<br>▪ Undergo training in telemedicine<br>o Institution<br>▪ Confidential and secure telemedicine platform[1]<br>▪ Clarify financial charges for telemedicine[1]<br>▪ Develop patient consent form for telemedicine[1]<br>▪ Ensure technology requirements met for telemedicine (i.e., camera, microphones, monitors, high-speed Internet, adequate antivirus)<br>▪ Provide a private space for telemedicine" (p. 3) | | | | |
| *Goldschmidt, K. (2020)*<br><br>*The COVID-19 pandemic: Technology use to support the wellbeing of children*<br><br>*Review*<br><br>*USA* | • Telehealth limitations:<br>o "Pediatric health care providers are unable to provide telehealth for all children due to differences in licensing laws by state and gaps in insurance policy coverage" (p. 1)<br>o "Throughout the COVID-19 pandemic, physician groups have lobbied Federal and State Governments to relax the rules on telehealth to provide care to more children across state lines and in rural areas of the country. The American Academy of Pediatrics is working at the Federal level with the Medicaid/Children's Health Insurance Programs (CHIP) and with other third-party insurers to reduce barriers and increase access to telehealth care." (p. 1-2) | Information not mentioned | *Information not mentioned* | *Information not mentioned* | *Information not mentioned* | COVID-19 |
| *Huscsava, M. M., Scharinger, C., Plener, P. L., & Kothgassner, O. D. (2020).*<br><br>*"Bridge over troubled water": A first look at adolescent psychiatric outpatients transited from regular care to teletherapy during the COVID-19 outbreak using quantitative and qualitative analyses.*<br><br>*Original Research*<br><br>*Austria* | • Teletherapy | *Not mentioned* | 12-18 year-old | • Providers : Residents in Child and Adolescent Psychiatry (5 -year)<br>• Mode : Phone or videocall<br>• Setting : Out-patient | "We found that 36.6% of the patients rated the teletherapy as better than face-to-face treatment during the crisis. However, 26.6% rated teletherapy as worse than the face-to-face therapy regarding the effect on personal well-being and symptom improvement. 36.7% of the patients rated the treatment neutral. As shown in table 2, a high responsiveness to teletherapy is signi ficantly correlated with general symptom improvement (r = 0.54) and increased positive mood (r = 0.39). " (p.7)<br><br>"the benefit of seamless frequent continuation of treatment was valued by most of them" (p.7)<br><br>"Only a subgroup of patients, those who showed a deterioration in their level of functioning, rated teletherapy negatively. When we explored those patients in more | COVID-19 |

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| | | | | | detail, the notable difference was their perceived level of social support." (p.7)<br><br>"we present first results indicating that teletherapy can serve as an alternative treatment approach for adolescents with a psychiatric disorder in times of quarantine" (p.8)<br><br>"results hint towards the notion that screening patients before offering teletherapy and, if possible, continue face-to- face contacts if patients express low levels of social support might be a helpful strategy to optimise individualised treatment. " (p.8) | |
| *Institut national d'excellence en santé et en services sociaux (INESSS) (2020a)*<br><br>*COVID-19 et évaluation diagnostique du TSA à distance*<br><br>*Grey literature*<br><br>*Canada* | • « Quatre études ont utilisé la vidéoconférence mettant en relation un évaluateur à une salle d'évaluation munie d'une caméra dans un milieu clinique ou universitaire. Dans certains cas, l'évaluateur à distance pouvait contrôler la caméra située dans la salle d'évaluation. [1]<br>• Deux études ont utilisé la technologie d'imagerie NODA (Naturalistic Observation Diagnostic Assessment). Il s'agit d'un système d'enregistrement sur un téléphone intelligent permettant aux parents de capturer à la maison des vidéos du comportement de l'enfant et de les partager avec le clinicien. [1]<br>• Aucune étude n'a utilisé la vidéoconférence à la maison lors de l'évaluation (ex. Skype, Facetime, Zoom, etc.) » (p.4) | *Information non mentionnée* | 0 à 12 ans | • Providers : Cliniciens<br>• *Mode : Information non mentionnée*<br>• *Setting :* Virtuel | • Avantages:<br>o « Une économie du temps de déplacement qui favoriserait la régulation du comportement chez certains enfants<br>o Une diminution des coûts de déplacement, susceptible de réduire le fardeau financier des familles<br>o La diminution des problèmes d'accès au service, accélérant l'accès à la consultation et permettant ainsi de diagnostiquer en temps opportun les enfants de familles en régions éloignées et de débuter l'intervention de façon précoce » (p. 7)<br>• Défis rencontrés :<br>o « L'accès du parent et du professionnel à la technologie requise en raison de sa disponibilité, de ses coûts<br>o La fiabilité du réseau Internet<br>o Le niveau de familiarité du parent et du professionnel avec la technologie, tout comme leurs attitudes personnelles et leur niveau de confiance à l'égard de leur compétence<br>o Le soutien de l'organisation : une étude rapporte que 95 % des cliniciens considèrent que leur organisation pourrait être disposée à utiliser et offrir le service d'évaluation à distance, mais ne savent pas si elle offrirait la formation requise pour soutenir son implantation » (p. 7) | COVID-19 |

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| *Institut national d'excellence en santé et en services sociaux (INESSS) (2020c)*<br><br>*COVID-19 et Services de réadaptation essentiels pour les enfants âgés de 0 à 18 ans ayant une DP, une DI ou un TSA.*<br><br>*Grey literature*<br><br>*Canada* | • « Dans plusieurs états américains, les services directs ABA (centered-base) ne s'offrent désormais qu'en télésanté à la maison lorsque les ressources le permettent » (p. 6) | *Information non mentionnée* | 0 à 18 ans | *Information not mentioned* | *Information non mentionnée* | COVID-19 |
| *Rauschenberg, C., Schick, A., Goetzl, C., Roehr, S., Riedel-Heller, S. G., Koppe, G., ... & Reininghaus, U. (2020).*<br><br>*Social isolation, mental health and use of digital interventions in youth during the COVID-19 pandemic: a nationally representative survey.*<br><br>*Research*<br><br>*Germany* | • "Thus, mHealth apps are apps that help you in everyday life to deal better with stress or worries, to be more physically active, or to improve or work on certain habits / behaviours [e.g. sleep quality, exercise]')" (p.7) | *Not mentioned* | 16-25 year-old | • *Provider : Not mentioned*<br>• *Mode :* Smartphone<br>• *Remote setting* | Information and communication technologies may be particularly important in alleviating COVID-19-related psychosocial consequences 19. For instance, smartphone applications (apps) may help individuals to remotely interact with others (e.g. by using video conferencing software, VoIP). Further, digital interventions, which do not require face-to-face contact (e.g. internet-based interventions [eHealth] and mobile health applications [mHealth apps]), may help to increase public physical and mental health 19. Previous studies have shown that digital tools, especially mHealth apps, are already frequently being used although most developers of mHealth apps do not provide information on the evidence base (p.4) | COVID-19 |
| *Schwartz, C., Yung, D., Barican, J., Gray-Grant, D., & Waddell, C. (2020).*<br><br>*Supporting Children—By Supporting Practitioners and Families During COVID-19 and Beyond.*<br><br>*Review*<br><br>*Canada* | • VIRTUAL DELIVERY:<br>• Confident Parents, Thriving Kids Program: CBT program for BC parents/ caregivers to support children aged three to 12 years who are experiencing mild-to-moderate anxiety (p.11)<br>• Everyday Anxiety Strategies for Educators (EASE): a collection of CBT strategies for addressing anxiety with students from kindergarten to grade 7. While initially designed as classroom resources, EASE prevention resources have been adapted for families to use online at home in response to the COVID-19 pandemic. (p.11) "Based on this rapid research review, cognitive-behavioural therapy (CBT) is the most effective psychosocial | Not mentioned | Children, families | • Provider : Practitioners/self-directed<br>• Mode : Online, videos, workbooks, telephone, videoconferencing<br>• *Remote setting* | "A recent systematic review and meta-analysis found that CBT produced statistically-significant benefits and made a clinically-meaningful difference in children's daily lives. (The former was indicated by p values of less than .05; the latter was shown by CBT producing a substantial effect size with log odds ratio=0.95). Notably, CBT was also effective from the preschool through the late teen years, meaning that it can be applied across important developmental stages." (p.7)<br><br>MoodGYM: The RCT evaluating this prevention program found that it significantly reduced anxiety symptoms six months after program completion. (p.10)<br><br>Turnaround: The RCT evaluating this treatment found that it significantly reduced | COVID-19 |

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| | intervention for both preventing and treating childhood anxiety disorders. CBT can (and should) be adapted to individual needs and circumstances, but four core components are typically included:<br>1. Educating children and families/caregivers about anxiety;<br>2. Managing physical symptoms of anxiety;<br>3. Challenging unrealistic and unhelpful anxious thinking; and<br>4. Facing feared situations.23" (p.7)<br>• SELF-DIRECTED FORMS OF CBT:<br>• MoodGYM for preventing childhood anxiety (an online program, was designed to prevent and reduce anxiety symptoms for children aged 12 to 17 years. It consists of five internet-based modules teaching youth to use CBT techniques to change unhelpful thinking and improve self-esteem and relationships.) (p.10)<br>• Turnaround (an online program, was designed to treat anxiety for children aged five to 11 years. It consists of 10 CBT audio lessons for children and families. Parent/caregiver materials also provide guidance on using praise and problem-solving to help reduce children's anxiety. To reinforce learning, children complete daily journal exercises as well) (p.11)<br>• Helping Your Anxious Child for treating childhood anxiety (book designed to treat anxiety for children aged six to 12 years — mainly by teaching parents/caregivers to use CBT. As well as detailing core CBT strategies, the book reviews ways to help build children's social skills.) (p.11) | | | | anxiety diagnoses and symptoms, and improved child functioning by program completion. (p.11)<br><br>Helping Your Anxious Child: The RCT evaluating this treatment found that it significantly reduced anxiety diagnoses and symptom severity by study completion. (p.11) | |
| *Sharma, A., Sasser, T., Schoenfelder Gonzalez, E., Vander Stoep, A., & Myers, K. (2020).*<br><br>*Implementation of Home-Based Telemental Health in a Large Child Psychiatry* | • "We developed a protocol to convert established patients from in- clinic to HB-TMH sessions with their same clinician. The protocol included scripts for clinicians or support staff to explain the HB-TMH service and to conduct a form, the HB-TMH Pre-Screening Guide- lines, focused on assessing the ability to conduct TMH | "Hospital's existing privileging protocol for telemedicine consisted of five steps: (1) complete training with the Audio-Visual Department to learn use of the legacy videoconferencing endpoint system and the online program used for clinic-to-clinic and at home services, (2) complete didactic self-administered modules and post-test on the Hospital's Learning Center, (3) read a selected article that for the Department of Psychiatry and Behavioral Medicine | Youth | • Provider : The interventions are delivered by clinical psychologists, psychiatrists, neurologists, psychiatric nurse practitioners as well | "Numerous studies have demonstrated that evidence-based mental health treatments can be safely implemented through TMH with high levels of patient and provider satisfaction (Myers et al. 2007, 2008; Glueck 2013). Effectiveness has been established in multiple studies with adults (Mishkind et al. 2018) as well as youth | COVID-19 |

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| *Department During the COVID-19 Crisis. Journal of Child and Adolescent Psychopharmacology.*<br><br>*Research*<br><br>*USA* | sessions safely at home, including phone numbers for local contacts (e.g., police, pastor, relative, or neighbor) should urgent situations occur." (p.4-5) | included a choice between the telepsychiatry guidelines published by the American Academy of Child and Adolescent Psychiatry (American Academy of Child and Adolescent Psychiatry Committee on Telepsychiatry and Committee on Quality Issues 2017) or a book chapter on telepsychiatry practice (Myers and Roth 2017), (4) observe a 30–60-minute clinic-to-clinic TMH session with a designated privileged faculty, and (5) submit attestation of completion of these steps to the Medical Staff Office. The last step took approximately 2 months from completion of training steps to privileging." (p.3) | | as mental health therapist/behavior analysts<br>• *Mode :* Teleconferencing<br>• Remote setting | diagnosed with a range of disorders (Storch et al. 2011; Himle et al. 2012; Reese et al. 2013; Wacker et al. 2013; Myers et al. 2015) and across treatment modalities (Reese et al. 2012; Xie et al. 2013; Myers et al. 2015; Tse et al. 2015).<br>Emerging evidence also indicates that evidence-based TMH therapies are safe and effective when delivered to youth outside of clinic settings such as schools (Stephan et al. 2016) and the home (Comer et al. 2014, 2017; Roth 2020), potentially offering more ecologically valid, as well as family-friendly, interventions." (p.2) --> authors of the article do not assess the outcomes in their study themselves: rather, they assessed the challenges in using telehealth<br><br>"By March 20, 2020, appointment volumes started to stabilize and *67% of all outpatient appointments were conducted at home. Most of these appointments were conducted by phone with some TMH sessions. By March 27, 2020, 90% of all outpatient appointments were done at home, predominantly by phone (59%) but increasingly by HB-TMH (31%). One week later (April 3, 2020), these rates were 48% versus 45%, respectively." (p.6)<br><br>"Despite technological vulnerabilities, however, it is clear that telepsychiatry specifically, and telemedicine broadly, will be one remedy for acutely stalled health care services during the next crisis." (p.7) | |
| *Stewart, R. W., Orengo-Aguayo, R., Young, J., Wallace, M. M., Cohen, J. A., Mannarino, A. P., & de Arellano, M. A. (2020).*<br><br>*Feasibility and effectiveness of a telehealth service delivery model for treating childhood posttraumatic stress: A community-based, open pilot trial of trauma-focused cognitive-behavioral therapy. Journal of Psychotherapy Integration, 30(2), 274.* | • "Trauma-focused cognitive– behavioral therapy. TF-CBT (Cohen et al., 2017) is an evidence-based, manualized treatment protocol used to treat posttraumatic stress symptoms in children and adolescents ages 3–18. | TF-CBT is usually delivered in 12–24 weekly sessions and includes the following components: (a) psychoeducation, (b) parenting skills, (c) relaxation skills, (d) affective modulation skills, (e) cognitive processing skills, (f) trauma narration and processing, (g) in vivo mastery of trauma reminders, (h) conjoint child–parent sessions, and (i) enhancing safety or future development. Efficacy for TF-CBT has been established through numerous randomized controlled trials in a range of populations" (p.5)<br><br>"The hardware demands for rendering services were minimal, consisting on the therapist side of a desktop computer, web-camera, external speakers or a headset, and a microphone. For participants, hardware setups dif- fered depending upon location, but require- ments were similarly minimal. Participants receiving sessions at school connected using a laptop computer and headset device provided by the research team. Those receiving sessions at home had an array of | Children and adolescents (7-18 year-old) | • Provider : "Treatment was provided by one of the following: (a) a licensed clinical psychologist (the first author), (b) a postdoctoral fellow with a doctoral degree in clinical psychology, (c) a clinical psychology intern with a master's degree in clinical psychology, or (d) a licensed master's-level social worker." (p.5). "All study | "At baseline, 51.4% of children (n = 36) scored above the relevant clinical cutoff on the UCLA-PTSD-RI [...]. By the completion of treatment, however, only 4.3% scored above clinical cutoffs (n = 3)." (p.283)<br><br>"baseline child and parent reports on the SMFQ indicated mean levels that were above the established clinical cutoff score. By the completion of treatment, however, these scores had decreased precipitously such that average symptom levels were no longer problematic" (p.283)<br><br>"within-group changes were consistent regardless of the setting in which treatment occurred" (p.283) | COVID-19 |

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| *Research*<br><br>*USA* | | connection options that depended upon their existing resources. When and where families had computers and access to sufficiently high-speed Internet, they could participate in home-based sessions using their own equipment. When families did not have access, however, the program provided them with an iPad (with the capability for cellular data transmission if needed), headset, and white noise machine for use to facilitate treatment." (p.278)<br><br>"Preference for location of subsequent telepsychotherapy services was also discerned at this meeting [assessment meeting], and eligible youths were scheduled to participate either at school or home." (p.279)<br><br>"schools and/or families were given basic guidelines for the physical environment in which treatment should ideally occur, including selection of an isolated, quiet space that would ensure privacy, deactivation of cell phones or other alerts from electronic devices, and minimization of other distraction opportunities (e.g., other people; TV; using the computer/iPad for other purposes during sessions)." (p.279)<br><br>"Once treatment parameters were established, participants presented for approximately weekly telepsychotherapy TF-CBT sessions with academic medical center thera- pists (located between 30 and 150 miles away). Special considerations for the format of treat- ment included ensuring that all individuals pres- ent announced themselves, backup plans were made to conduct sessions by phone in the event of an Internet outage or technical malfunction, and specific procedures to handle potential safety issues remotely (adult present and avail- able at all times in case of an emergency; 911 or police called if child was in imminent risk and could not be deescalated or kept safe)." (p.279)<br><br>"81% of youth (n = 57) had a caregiver who actively participated in treatment on a regular basis (i.e., attended treat- ment sessions weekly or biweekly). During each session, the therapist typically met individ- ually with the child and then met conjointly with the child and caregiver or individually with child and caregiver at separate times for care- givers who were unable to attend sessions at their child's school. For home-based telepsy- chotherapy cases (n= 24), the therapist was able to meet with the caregiver in the home via telehealth at the time of the session with the youth. For school-based telepsychotherapy cases (n = 46), caregivers could be scheduled to meet with the therapist at the school location. Alternatively, if the caregiver was unable to attend telepsychotherapy sessions at the child's school, the child was seen at school via telepsy- chotherapy and the parent component was completed via computer or iPad at some other point (e.g., after the parent returned home from work or during the parent's lunch break). | | personnel received initial TF-CBT training from a licensed clinical psychologist who is a national trainer in TF-CBT, as well as weekly clinical supervision from a licensed clinical psychologist with expertise in TF-CBT." (p.278)<br>• Mode : Videoconferencing<br>• Remote setting | "As outlined above, all participants met criteria at baseline for a trauma- or adjustmentrelated disorder, with 60 of 70 participants having a primary diagnosis of PTSD. By the end of treatment 54 participants (77.1%) were diagnosis- free and another seven (10.0%) retained primary diagnoses that were not related to trauma. Only two cases continued to meet criteria for PTSD by the endpoint assessment, and both evidenced substantial changes in self-reported posttraumatic symptoms on the UCLAPTSD- RI (decrease from 72 to 42 for one participant and 46 to 26 for the other)." (p10)<br><br>"The present open pilot trial of TF-CBT offers one of the first evaluations of the use of telepsychotherapy to remotely deliver TF-CBT in community-based locations, and findings supported the preliminary feasibility and effectiveness of this novel treatment delivery format with trauma-exposed children and adolescents." (p.283)<br><br>"Close to nine out of every 10 youth (88.6%) completed a full course of telehealth delivered TF-CBT, and 96.8% of these treatment completers no longer met diagnostic criteria for a trauma-related disorder at posttreatment. Although 2.9% (or two individuals) did not exhibit full treatment response, both youths showed substantial treatment response in the form of symptom reduction (albeit not to the extent of full diagnostic remission)." (p.283)<br><br>"there was notheless preliminary indication that TF-CBT delivered via telepsychotherapy yielded a favorable clinical response from both youth and caregiver perspectives." (p.283-284)<br><br>"Considering that attrition from office-based TF-CBT treatment remains a significant concern (e.g., approximately 25–50%; Cohen, Mannarino, & Iyengar, 2011; Olfson et al., 2009; Scheeringa, Weems, Cohen, Amaya-Jackson, & Guthrie, 2011), the rate of 11.4% for the current study is encouraging." (p.284) | |

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| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| | | "TF-CBT is structured to make significant use of worksheets and visual aids to facilitate therapy being more interactive and engaging for children and adolescents. To imple- ment these same strategies via telepsychotherapy a variety of techniques were implemented, includ- ing the development of electronic versions or treatment worksheets and handouts and the use of PowerPoint presentations and digital games. For example, worksheets and handouts de- signed for in-person therapeutic engagement were adapted to allow the therapist to use the "screen-share" function of the videoconferenc- ing platform that allows real-time sharing of the therapist's desktop view. We also created a se- ries of interactive computer games that children play in session with their therapist to enhance the child's understanding of treatment concepts." (p.279-280)<br><br>"The majority of activities and games used in our telepsychotherapy program were adap- tations of in-person clinic-based TF-CBT treatment activities, but others were new games created specifically for the purpose of telepsychotherapy sessions." (p.280)<br><br>"Other examples of telepsychotherapy-specific strategies include the use of interactive worksheets, PowerPoint presentations with content tailored to the child's interests, video clips, and electronic versions of children's books." (p.280) | | | "The present pilot study provides preliminary evidence of the ability to successfully deliver TF- CBT via telepsychotherapy technology, resulting in clinically meaningful symptom change post- treatment with low treatment attrition (11.4% dropout) among trauma-exposed children and adolescents ages 7–18. " (p.284) | |
| ***In-patient service changes*** | | | | | | |
| *Davis, C., Ng, K. C., Oh, J. Y., Baeg, A., Rajasegaran, K., & Chew, C. S. E. (2020)*<br><br>*Caring for children and adolescents with eating disorders in the current Coronavirus 19 pandemic: A Singapore perspective*<br><br>*Clinical observation*<br><br>*Singapore* | "increased communication with patients' primary providers who are not rostered for inpatient care through encrypted group texts, emails, and telephone calls. Moreover, the situation has also required significant task shifting within the team, such as nurses and physicians instituting behavioral contracts, which has been traditionally conducted by psychologists. Psychology support has been prioritized for the outpatient settings to provide continuity of care for their existing patients and thus maintain low readmission rates to minimize our hospital bed utilization." (p. 2) | Information not mentioned | 9-16 years old | • Provider : Psychologists, Physician, Nutritionist, Specialty nurse, School counsellors, Community social workers<br>• Mode : Telephone Online<br>• Remote setting | *Information not mentioned* | COVID-19 |
| ***School/class changes*** | | | | | | |
| *Davis, C., Ng, K. C., Oh, J. Y., Baeg, A., Rajasegaran, K., & Chew, C. S. E. (2020)*<br><br>*Caring for children and adolescents with eating disorders in the current* | • "Our Ministry of Education has increased precautionary measures in schools so that classes have continued" (p. 3)<br>• "School counselors and community social workers have been partnering closely with our psychologists to support our patients' physical and mental health, | Information not mentioned | 9-16 years old | • Provider : School counsellors, Community social workers<br>• *Mode : Information not mentioned*<br>• *Setting : Information not mentioned* | "This has been beneficial for our patients. […] classes have provided structure, and the continued academic support to students has helped to allay their anxieties" (p. 3) | COVID-19 |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| *Coronavirus 19 pandemic: A Singapore perspective*<br><br>*Clinical observation*<br><br>*Singapore* | especially for patients that have been unable or unwilling to attend appointments." (p. 3)<br>• "For one patient with relapsed anorexia nervosa, a school counselor stepped up to provide meal supervision, closer weight monitoring, and supportive counseling because of limited outpatient psychology services." (p.3) | | | | | |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020c).*<br><br>*COVID-19 et Services de réadaptation essentiels pour les enfants âgés de 0 à 18 ans ayant une DP, une DI ou un TSA. Québec, Qc : INESSS; 21p.*<br><br>*Grey Literature*<br><br>*Canada* | • "Au Royaume-Uni, un accès aux services scolaires est possible pour les enfants dont les parents occupent un emploi dans les services essentiels et pour les enfants vulnérables ayant un Plan d'intervention de type « EHDAA » si leur sécurité n'est pas assurée dans leur lieu de confinement." (p. 10)" | Not mentioned | Not mentioned | *Information not mentioned* | Not mentioned | COVID-19 |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et la phase de rétablissement à la pandémie pour les personnes qui présentent une déficience intellectuelle ou un trouble du spectre de l'autisme. Québec, Qc : INESSS; 20 p.*<br><br>*Grey Literature*<br><br>*Canada* | • Diverses ressources éducatives en ligne sont utilisées dans différents pays [16], auxquelles peuvent s'ajouter les travaux à réaliser à la maison et les suivis personnalisés par les enseignants, par exemple par téléphone [42]. (p.16)<br>• Certaines des interventions ont déjà été mise en place et d'autres sont suggérées selon la littérature. Les auteurs présentent les mesures selon la sphère de la vie du jeune (à partir de la page 11).<br>• "De nombreuses ressources d'informations sont disponibles pour les familles qui ont accès à Internet et qui peuvent l'utiliser de façon autonome" (p.12)<br>• "Des éléments d'apprentissage social et émotionnel sont également mis de l'avant par quelques organisations internationales [36, 39, 41]. L'apprentissage social et émotionnel vise à outiller les jeunes et leurs parents à la gestion des émotions, en favorisant la conscience de soi, la conscience sociale, l'autogestion, les compétences relationnelles et la prise de décision responsable" (p.16) | Not mentioned | Children | • Provider : Teachers<br>• Mode : *Telephone*<br>• *Remote setting* | Not mentioned | COVID-19 |
| ***Pharmacological treatment*** | | | | | | |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| *Marchini, S., Ode, V. O., & Delhaye, M. (2020).*<br><br>*First manic episode in 14-year-old adolescent during COVID-19 pandemic lockdown measures: A case eport. Ann Psychiatry Treatm, 4(1), 034-036.*<br><br>*Case Report*<br><br>*Belgium* | • Inpatient care: Psychoeducational program; pharmacological treatment | Not mentioned | 14 year-old | • Medical and nursing team<br>*In-person*<br>*Hospital* | "Inpatient care improved the patient's symptoms in an extremely rapid way" (p.35) | COVID-19 |
| *Schwartz, C., Yung, D., Barican, J., Gray-Grant, D., & Waddell, C. (2020).*<br><br>*Supporting Children—By Supporting Practitioners and Families During COVID-19 and Beyond.*<br><br>*Review*<br><br>*Canada* | • "When anxiety is not detected early, such that it becomes more severe, or when CBT has not resulted in sustained improvements in a child's anxiety, medication may be considered." (p.12). The medication in question here is Fluoxetine. | Not mentioned | Children | • Provider : Medication is prescribed the child's practitioner<br>• Mode : *Not specified*<br>• *Setting : Not specified* | "Fluoxetine, a "selective serotonin reuptake inhibitor," has been found to be particularly successful for childhood anxiety. A recent systematic review and meta-analysis based on RCT evidence found that this medication reduced anxiety symptoms and diagnoses, with fewer troublesome side effects than other similar medications." (p.12) | COVID-19 |
| ***Online Parenting Pro-Tips*** | | | | | | |
| *Camden, C., Malboeuf-Hurtubise, C., Roberge, P., Généreux, M., Lane, J., Jasmin, E., ... & Gorter, J. W. RAPPORT PRÉLIMINAIRE.*<br><br>*Preliminary report with scoping review*<br><br>*Canada* | • 1-"L'étude de James Riegler et al. (2020) décrit une intervention de psychothérapie en télésanté visant à soutenir le développement de compétence parentale de parents vétérans, intervention qui pourrait être utilisée dans le contexte de la pandémie de COVID-19." (p.8-9) | Not specified | Parents | • Provider : Not specified<br>• Mode : *Online*<br>• *Community setting* | "Cette intervention a démontré des effets positifs pré-post en termes de diminution de comportements difficiles chez les enfants de ces familles." (p.9)<br><br>"Résultats de l'intervention - Moins de difficultés comportementales des enfants : score total plus bas en postintervention au SDQ" (p.11) | COVID-19 |
| *James Riegler, L., Raj, S. P., Moscato, E. L., Narad, M. E., Kincaid, A., & Wade, S. L. (2020).*<br><br>*Pilot trial of a telepsychotherapy parenting skills intervention for veteran families: Implications for managing parenting stress during COVID-19. Journal of Psychotherapy Integration, 30(2), 290.*<br><br>*Original Research* | • Online Parenting Pro-Tips (OPPT): combined web-based educational modules addressing child development and positive parenting with live coaching (via videoconferencing link) of parenting skills<br>• "All veterans were provided with a Bluetooth earpiece to participate in live coaching of parenting skills via telehealth." (p.293)<br>• "OPPT was adapted from an innovative online parenting skills program for families with children ages 3-9 who has sustained a TBI [traumatic brain injury]" (p.293) | 6 sessions:<br>Session 1: Introduction to online parenting pro-tips (Orientation to the program and technology; Labeled praises, positive opposites; Understanding positive parenting; Strengths and challenges of military or veteran families; Identifying caregiver or family's strengths, challenges, and goals; Strategies for the veteran to stay calm)<br>Session 2: Positive parenting (Learning and practicing positive parenting skills; Tips on handling misbehavior; Setting up family for success regarding daily playtime (e.g., selecting toys, time, location); Discussing family's unique needs)<br>Session 3: Lead your child (Learning and practicing how to lead or direct your child techniques such as staying calm, being consistent and predictable, and following through with consequences; Practicing good commands, Problem-solving consequences for challenging behaviors; Addressing how | Parents | • Provider : Social workers (master's level) and licensed counselors<br>• *Mode : Web-based, smartphone*<br>• *Setting : At home* | "Veterans reported significant improvements in their child's behaviors following treatment. Specifically, they reported lower Total scores on the SDQ (Mpre = 15.29, SD = 6.86; Mpost = 10.48, SD = 6.41), t(19) = 3.33, p = .003, d = .73, and fewer problem behaviors on the Total Problems score on the ECBI (Mpre = 58.92, SD = 12.59; Mpost = 45.93, SD = 13.64), t(19) = 3.58, p = .003, d = .87. Although the decline in the Total Intensity score on the ECBI did not reach our threshold for statistical significance while correcting for multiple comparisons (p = .017), there was a moderate effect size (Mpre = 59.53, SD = 10.90; Mpost = 51.29, | COVID-19 |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| *USA* | • "The OPPT intervention combined web-based educational modules addressing child develop- ment, the unique challenges of military families, and positive parenting skills with live coaching (via telehealth) of parenting skills using real-time, bug-in-the-ear feedback from a trained therapist. Through individual educational lessons and structured telepsychotherapy play sessions with their children, veterans learned skills such as reflective listening, recognizing and responding to children's feelings, appropriate limit setting, and contingent praise." (p.294)<br>• "Each family was provided with a handbook that contained their login information, therapist contact infor- mation, and an overview of each session. Al- though the protocol devised prior to COVID-19 utilized an in-person first visit, we believe that this initial visit could be easily delivered via telehealth, particularly to families who already have a computer or smartphone and access to the Internet." (p.294)<br>• "The six sessions combined training in positive parenting skills with instruction on the appropriate use of commands, a specific time-out procedure, strategies for setting a child up for success using antecedent behavioral management techniques, and the use of house rules for long-term rule implementation. Each web-based educational module took approximately 30 min to complete. In addition to the didactic information, each session also included video clips of parents and children modeling the new techniques, interactive exercises to reinforce the skills, and child- oriented videos incorporating puppets to help orient the child to the intervention. The program was designed with the veteran completing the self-guided web-based educational module before meeting with the therapist for the telehealth coaching session. The veteran completed one module and subsequent telepsychotherapy coaching session every 2 weeks. In addition, the veteran was directed to engage in 5 min of child-directed play with their child each day. | these techniques are similar to or different from current parenting strategies in the home)<br>Session 4: Behavior management (Strategies for increasing good behavior; Learning and practicing strategies to set child up for success, such as building positive momentum and avoiding overstimulation; Problem-solving challenging parenting or child behavior issues in the home)<br>Session 5: Time-out procedure (Learning and practicing the time-out procedure; Creating a reward system within the home; Learning and understanding the importance of factors such as consistency, immediacy, and remaining calm in the context of discipline procedures; Highlighting the benefits of me time for child and parent)<br>Session 6: Positive parenting skills in daily life & house rules (Consistent use of time-out outside the house; Implementing positive parenting outside the home; House rules; Reinforcing learning from the intervention; Problem-solving and preparing for future challenges and transitions) | | | SD=13.08),t(19)=2.38,p=.03,d=.53. Further, the frequency of clinically elevated scores on the ratings of both problem behaviors and intensity of behaviors was significantly lower posttreatment than pretreatment, =2(1, N=20)=5.38,p=.02,and=2(1,N=20)= 4.64, p = .03, respectively." (p.298)<br><br>"The results from this pilot study suggest that delivering parent skills training via telehealth can result in significant and clinically meaning- ful reductions in veteran depression, parenting stress, and family dysfunction as well as con- comitant improvements in child behavior. These findings have potentially important im- plications regarding the feasibility and effec- tiveness of telepsychotherapy to support at-risk families and promote positive parent–child in- teractions during the COVID-19 crisis and be- yond." (p.299-300)<br><br>"telepsychotherapy interventions such as OPPT may be feasible and effective ways to support the mental health and functioning of families at heightened risk, including veteran families, during this unprecedented time." (p.300) | |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| | • Telepsychotherapy sessions between the therapist and veteran lasted approximately 60 min and consisted of three parts. The first part (approximately 25 min) involved a review and discussion of the web-based module content. Therapists received an online notification when a veteran completed a module, and if a veteran failed to complete a module prior to the telepsychotherapy session, the therapist would help problem-solve to encourage future completion. The second part involved the therapist observing, via web camera, the veteran and child playing together for 5 min to evaluate current skills and identify areas for improvement. Finally, the therapist coached the veteran while they played with their child for approximately 30 min to reinforce implementation of positive parenting skills. The live coaching portion was done via the wireless earpiece so that the parent could hear the therapist, whereas the child could not. Once the session was complete, the therapist would make the next module available on the website." (p.294)<br>• "Therapists delivered the intervention with the aid of a treatment manual, which detailed con- tent for each session and included a fidelity checklist. " (p.296) | | | | | |
| ***Other Recommendations*** | | | | | | |
| *Chan, C., Chan, T., & Man Ng, S. (2006)*<br><br>*The Strength-Focused and Meaning-Oriented Approach to Resilience and Transformation (SMART)*<br><br>*Protocol*<br><br>*China* | • "In this article, we introduce a crisis intervention approach called the Strength-focused and Meaning-oriented Approach to Resilience and Transformation (SMART). Through time-limited contacts (ranging from one whole-day training to six weekly meetings) in a group setting, the SMART intervention attempts to foster growth in people undergoing crisis. The intervention process focuses at the re-discovery of self and the development of inner strength. The purpose of the SMART intervention, as stated in its name, is the attainment of resilience and transformation" (p. 3)<br>• "Since the 1990s, the BMS model has been widely used in Hong Kong in | "Participants were taught breathing exercises to strengthen their lungs, and skills to maintain a positive mood. Bitter tea and healthy snacks were served, and physical exercises, songs, fun, and positive experiences of growth through pain were shared. Through discussion and the sharing of personal reflections on the SARS experience, participants were more willing to accept the fact that life is not always within our control. SARS, natural disasters, accidents, crime, war, and trauma are all a part of life. What is more important is the reconstruction of meaning to reflect on what is most important in life. Participants were encouraged to attain a sense of mastery through letting go of control, and by so doing, regain control." (p. 27)<br><br>Add: Structure of the SMART Intervention during the SARS Crisis | Adolescents (244 Grade 8 students) | • Provider : Social workers<br>• Mode : In-person<br>• Setting : School | "In an intervention program for adolescents at junior high school, it was found that the sense of social commitment, mastery of life, and learning and growth among the participants increased significantly after the intervention, and that their sense of social disintegration and loss of security decreased significantly." (p. 27) | SARS |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| | working with patients who are suffering from cancer, stroke, systemic lupus erythematosis, rheumatoid arthritis, diabetes, with people who are bereaved, infertile couples and divorced single mothers (p. 18)<br>• "Based on the BMS framework, the SMART intervention is tailored for people who are undergoing acute crises" (p. 19)<br>• "To remove the adverse effects of SARS, the SMART intervention was applied to 244 Grade Eight students and 24 people with chronic diseases separately in the form of a one-day workshop." (p. 26-27) | | | | | |
| *Conrad, R., Bousleiman, S., Isberg, R., Hauptman, A., & Cardeli, E. (2020).*<br><br>*Uncontrolled experiments: Treatment of contamination OCD during a pandemic. Psychological Trauma: Theory, Research, Practice, and Policy, 12(S1), S67.*<br><br>*Protocol (summary of an original study)*<br><br>*USA* | "group therapy for adolescent females aged 11-13 years who suffer from OCD." (p.S67)<br><br>"The group consisted of five patients and two group leaders." (p.S67)<br><br>Adaptations to pandemic context:<br>"The group leaders modified the curriculum to focus on building resilience and offered interventions to maintain calm, build community, and sustain hope" (p.S68)<br>"The group incorporated activity scheduling, and meeting frequency increased from once a week to twice a week to provide additional support and structure" (p.S68)<br>"As the psy- chotherapeutic frame and boundaries rapidly shifted, authentic self-disclosure from group leaders became a valuable therapeutic intervention" (p.S68) | "The group curriculum consisted of four modules: (a) psychoeducation about OCD (e.g., identifying bodily cues of anxiety); (b) affect identification and affective scaling (e.g., the development of a feelings thermometer to track subjective units of distress); (c) exposure (e.g., each patient developed a graded hierarchy of experiments to form a fear ladder); and (d) coping skills (e.g., techniques to promote emotional regulation). These concepts were initially introduced sequentially and later built upon each other (Kendall et al., 2005). For example, patients first learned to notice their level of distress, next to identify various affective states, and eventually could match a specific coping skill with each affective state and level of distress." (p.S67) --> intervention began before the firt cases of COVID-19 in the region where this intervention was provided | "adolescent females aged 11-13 years" (p.S67) | • Provider : Group leaders<br>• Mode : In-person<br>• Setting : Offered within an outpatient psychiatry service in a large academic medical center (p.S67) | "The patients quickly developed strong rapport and were remarkably supportive of each other, often validating and encouraging each other. Patients shared fears pertaining to vomiting, insects, germs, and hurting others' feelings and consistently expressed a preference to engage in experiments as a group. " (p.S67)<br><br>"During the complicated circumstances of the COVID-19 pan- demic, this group process repeatedly recovered and strengthened in unexpected and unconventional ways. Authentic human connection within the group was important as each member endured the social isolation of the pandemic. The patients' warmth, humor, and creativity were a core strength of the psychotherapeutic process. The group made effective adaptations and built resilience in the face of this shared adversity." (p.S68) | COVID-19 |
| *Davis, C., Ng, K. C., Oh, J. Y., Baeg, A., Rajasegaran, K., & Chew, C. S. E. (2020). Caring for children and adolescents with eating disorders in the current Coronavirus 19 pandemic: A Singapore perspective. Journal of Adolescent Health, 1-4.*<br><br>*Original Research*<br><br>*Singapore* | "routine psychology support for inpatient services has been reduced. Group meal supervision, in a designated room, has also been reverted to individual meal supervision by nurses. During the COVID-19 pandemic, only one parent/caregiver has been allowed to visit the patient" (p.2). | Not mentioned | Children and adolescents aged 9-16 | • Provider : Psychologists, physician, nutritionist, specialty nurse, school counselors, community social workers<br>• Mode : Telehealth, phone, in-person<br>• Setting : Hospital, community, school | Not mentioned | COVID-19 |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| *Griffith, A. K. (2020).*<br><br>*Parental Burnout and Child Maltreatment During the COVID-19 Pandemic. Journal of Family Violence, 1-7.*<br><br>*Literature Review*<br><br>*USA* | Directive treatment interventions (focused on targeting the hypothesized cause of parental burnout, namely the discrepancy between parenting-related demands and available resources)<br><br>Nondirective treatment interventions (focused on active listening, participant sharing, and encouragement of participants feelings of worth and ability) | Not mentioned | Parents | • Provider : Psychologists (experts in parental burnout), Psychologists (training in active listening)<br>• Mode : Not specified<br>• Setting : Not specified | [both] "were equally effective at reducing rates of parental burnout as measured by participant self-reports, reports from their partners, and biological measures (i.e., hair cortisol). What was particularly noteworthy about their find- ings, was that both interventions appeared to be equally effec- tive, even though the nondirective intervention was led by psychologists who were not experts in parental burnout, but who instead had training in active listening." (p.5) | COVID-19 |
| *Institut national d'excellence en santé et en services sociaux (INESSS) (2020a)*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes*<br><br>*Grey literature*<br><br>*Canada* | ○ Remote diagnostic evaluation (videoconference, Naturalistic Observation Diagnostic Assessment) | Information non mentionnée | 0 to 18-year-old | • *Provider : not mentioned*<br>• Mode : En ligne<br>• Setting : Virtuel | *L'exactitude de l'évaluation diagnostique à distance est adéquate, variant entre 85 % et 86 % [1, 2, 6]. L'exactitude de l'évaluation à distance est comparable à celle de l'évaluation en personne [1, 2]. La spécificité de l'évaluation à distance, soit la proportion d'enfants qui ont réellement un TSA parmi les cas qui ont été diagnostiqués positivement à distance [7], est bonne. Celle-ci se situe entre 86 % et 88 % [2, 6] et se compare favorablement à la spécificité d'une évaluation en personne [2]. La sensibilité de l'évaluation à distance, soit la proportion d'enfants qui sont diagnostiqués positivement à distance parmi ceux qui ont réellement un TSA [7], est adéquate. La sensibilité se situe entre 79 % et 85 % [2, 3, 6] et est légèrement inférieure à la sensibilité d'une évaluation en personne qui est de 88 % [2]. On observe que la sensibilité est légèrement inférieure à la spécificité. En d'autres mots, l'évaluation à distance aurait davantage tendance à sous-diagnostiquer le TSA plutôt qu'à le surdiagnostiquer." (p. 4) Résultats avec l'ADOS: "Le taux d'accord moyen entre les observateurs aux différents items est de 72 %, que ce soit en personne ou en vidéoconférence (aucune différence significative)"(p.5) & "Les parents ont réussi à appliquer les consignes de l'évaluateur pour réaliser les tâches de l'outil ADOS-2 (91 % d'application correcte des consignes), tant pour l'évaluation en personne que l'évaluation en vidéoconférence. " (p.5) Résultats avec l'ADI-R: "Le taux d'accord moyen entre les observateurs aux différents items est de 85 % en personne et 89 % en vidéoconférence (aucune différence significative) " (p.5) "Les cliniciens se sentent confiants de leur* | COVID-19 |

**TABLE 1. Summary of interventions**

| Intervention | Description | Implementation | Recipient | Provider; Mode, and Setting | Outcome | Instigating factor |
|---|---|---|---|---|---|---|
| | | | | | *diagnostic lors d'une évaluation à distance dans 75 % à 87 % des cas" (p.6)*<br>*"Globalement, les parents et les cliniciens considèrent les procédures d'évaluation du diagnostic à distance comme acceptables" (p.6)* | |

**TABLE 2. Summary of recommendations**

| Article | Description | Recipient | Provider | Mode | Setting | Instigating factor |
|---|---|---|---|---|---|---|
| **Telehealth** | | | | | | |
| *Bahn, G. H. (2020).*<br><br>*Coronavirus Disease 2019, School Closures, and Children's Mental Health. Journal of the Korean Academy of Child and Adolescent Psychiatry, 31(2), 74-79.*<br><br>*Review*<br><br>*South Korea* | - Children with limited outdoor activities can communicate with friends | Child | Parent | Not specified | Not specified | COVID-19 |
| *DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., ... & Akouri-Shan, L. (2020).*<br><br>*Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. Journal of Psychotherapy Integration, 30(2), 304.*<br><br>*Literature Review*<br><br>*USA* | "to reinforce routine, maintain treatment progress, and stay active in therapy" (p.313) | Youth | Not specified | Videoconferencing, email, phone, text, treatment handouts, audio and/or video content | Online | COVID-19 |
| | - Help clients to develop plans to become more socially connected online | Youth | Clinicians | Virtual support groups, online chatrooms or forum boards, team-based or interactive video games | Online | COVID-19 |
| *Douglas, P. K., Harrigan, D. C., Douglas, D. B., & Douglas, K. M. (2009).*<br><br>*Preparing for pandemic influenza and its aftermath: Mental health issues considered. International Journal of Emergency Mental Health, 11(3).*<br><br>*Literature Review*<br><br>*USA* | - Disseminate information and answer questions | Not specified | Not specified | Internet websites or hotlines | Not specified | Influenza pandemic in the USA in 2009 |

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|---|---|---|---|---|---|---|
| *Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020).*<br><br>*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. Child and Adolescent Psychiatry and Mental Health, 14(20).*<br><br>*Literature Review*<br><br>*Germany* | Telepsychiatry<br>- To offer outpatient treatment | Outpatients | Mental health professionals | Telephone, secure video platforms | Online | COVID-19 |
| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | - To help children communicate with parents | Families | Hospital authorities | Audiovisual devices | Hospital | COVID-19 |
| *Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020).*<br><br>*Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Psychiatry research, 113264.*<br><br>*Narrative Literature Review*<br><br>*France* | Teleconsulting | Patients with eating disorders | Not specified | Teleconsulting | Not specified | COVID-19, epidemics, disasters, SARS |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review*<br><br>*Pakistan* | Help parents cope with family issues and provide counselling/support to children at risk | Both | Psychologists (most likely) | Telehealth | Not specified | Quarantine Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | "Help young children remember and build relationships with family members and other caregivers" (p.S70) | Younger children | Parents | Video chat | Not specified | COVID-19 |
| | To maintain social interactions | Older children | Parents | videoconferencing, telephone, or real-time text-messaging | Not specified | COVID-19 |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).* | Online resources | Families | Not specified | Not specified | Not specified | COVID-19 |

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| *COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.*<br><br>*Grey Literature*<br><br>*Canada* | | | | | | |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020c).*<br><br>*COVID-19 et Services de réadaptation essentiels pour les enfants âgés de 0 à 18 ans ayant une DP, une DI ou un TSA. Québec, Qc : INESSS; 21p.*<br><br>*Grey Literature*<br><br>*Canada* | Online platform for autistic children<br>- To support families and autistic people | Families | Not specified | Not specified | Videoconference, social media, telephone, telehealth, online platforms | COVID-19 |
| *Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006).*<br><br>*When Family-Centered Care Is Challenged by Infectious Disease: Pediatric Health Care Delivery During the SARS Outbreaks. Qualitative Health Research, 16(1)*<br><br>*Original Research*<br><br>*Canada* | - Visual connection<br>- Ease separation anxiety<br>-Enhance family-centered care approaches | Children + parents | Health care workers | Phone, videophones, web-based media | Hospital | SARS |
| *Kontoangelos, K., Economou, M., & Papageorgiou, C. (2020).*<br><br>*Mental health effects of CoViD-19 pandemia: a review of clinical and psychological traits. Psychiatry investigation, 17(6), 491.*<br><br>*Literature Review*<br><br>*Greece* | Online therapy for high-functioning children and weekly online consultations for parents and caregivers | Parents/Caregivers /Children | Not specified | Online therapy Online consultation | Not specified | COVID-19 |
| *Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... & Crawley, E. (2020).*<br><br>*Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. Journal of the American Academy of Child & Adolescent Psychiatry.*<br><br>*Literature Review*<br><br>*UK* | Digital interventions: Computerized Cognitive Behaviour Therapy (CBT) based self-help program, BRAVE-TA, computerized CBT, such as MoodGym, SPARX, and 'Think, Feel, Do' | Young people | Not specified | Digital interventions | Online | Quarantine Social isolation, COVID-19 |
| *McGrath, J. (Accepted manuscript, 2020).*<br><br>*ADHD and Covid-19: Current roadblocks and future opportunities. Irish Journal of Psychological Medicine.* | Telepsychiatry<br>- Provide psychiatric assessment and interventions including pharmacotherapy, behaviour therapy and psychotherapy | Children and parents | Mental health care professionals | Telepsychiatry | Online | COVID-19 |

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| *Review*<br><br>*Ireland* | | | | | | |
| *O. E. C. D. Combatting COVID-19's effect on children. (2020)*<br><br>*Grey Literature*<br><br>*N/A* | "Managing loneliness and isolation, exam stress, and family conflict" (p.23) | Families | Jigsaw Project | Online sessions | Not specified | COVID-19 |
| *Oliver, C. (2020).*<br><br>*Expanding Role and Reach: A Community-Centered Child Welfare Response to COVID-19.*<br><br>*Grey Literature*<br><br>*Canada* | Deliver child welfare information and services | Both | Child welfare workers | Virtual services | Not specified | COVID-19 |
| *Prime, H., Wade, M., & Browne, D. T. (2020).*<br><br>*Risk and resilience in family well-being during the COVID-19 pandemic. American Psychologist. Advance online publication.*<br><br>*Literature Review*<br><br>*Canada* | Online parenting resources<br>Telepsychology services<br>Telehealth<br>- Family-based interventions to support caregiver well-being, parenting behavior, and child mental health | Families (children + parents) | Clinicians | Online parenting resources, Telepsychology services, Telehealth | Family setting | COVID-19 |
| *Sajid, M. I., Tariq, J., Waheed, A. A., Najaf, D., Balouch, S. S., & Abaidullah, S. (2020).*<br><br>*SARS-CoV-2 & Pediatric Mental Health: A Review of Recent Evidence. medRxiv.*<br><br>*Systematic Review*<br><br>*Pakistan* | To allow a virtual get-together | Children | Children themselves or with the help of a parent | Online courses, videocalling | Not specified | COVID-19 |
| *Saurabh, K., & Ranjan, S. (2020).*<br><br>*Compliance and psychological impact of quarantine in children and adolescents due to Covid-19 pandemic. Indian Journal of Pediatrics.*<br><br>*Original Research*<br><br>*India* | Social media<br>- Allow people to update their loved ones about themselves | Families | N/A | Online | Online | COVID-19 |
| *Zhou, J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X. & Chen, J. X. (2020).*<br><br>*Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01541-4*<br><br>*Original Research* | • To provide lectures or other teaching activities<br>• To provide online or smart-phone-based psychological interventions | Students | Teachers/school staff | Online portals and web-based applications | Online | COVID-19 |

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| *China* | | | | | | |
| ***Daily routine and stress/conflict management*** | | | | | | |
| *Bahn, G. H. (2020).*<br><br>*Coronavirus Disease 2019, School Closures, and Children's Mental Health. Journal of the Korean Academy of Child and Adolescent Psychiatry, 31(2), 74-79.*<br><br>*Review*<br><br>*South Korea* | "Parents should help children who have to stay at home to create a daily routine at home" (p.78) | Child | Parent | Not specified | Not specified | Covid-19 |
| *Cohen, D. (2020). Appréhender le COVID-19 au fil de l'eau en tant que psychiatre d'enfant et d'adolescent. Encéphale.*<br><br>*Literature Review*<br><br>*France* | - Set routines<br>- Avoid yelling and conflicts | Children | Parents | In-person | At home | Covid-19, confinement |
| *DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., ... & Akouri-Shan, L. (2020).*<br><br>*Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. Journal of Psychotherapy Integration, 30(2), 304.*<br><br>*Literature Review*<br><br>*USA* | "Clinicians working with individuals at CHR should be sure to talk about the importance of maintaining healthy sleep behavior and physical activity with their clients." (p.315) | Youth | Clinicians | Online | Online | Covid-19 |
| *Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., ... & Lavie, C. J. (2020).*<br><br>*Psychosocial impact of COVID-19. Diabetes & Metabolic Syndrome: Clinical Research & Reviews.*<br><br>*Literature Review*<br><br>*India* | "Maintenance of sleep cycle, physical exercise schedule" (p.785) | Child | Parents | In-person | At home | Covid-19 |
| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | "Parents should try to bestow habits of storytelling, reading and writing, drawing, singing and dancing, indoor- playing, practicing yoga in the mean time and should prudently subdue overindulgence of children to using techs and social platforms." (p.232) | Children | Parents | Not specified | Not specified | Covid-19 |
| *Goldschmidt, K. (2020).*<br><br>*The COVID-19 pandemic: Technology use to support the wellbeing of children. Journal of pediatric nursing. https://doi.org/10.1016/j.pedn.2020.04.013* | Caregivers can help alleviate stress by remaining calm, creating a daily routine | Children | Caregivers | In-person | At home (most likely) | Covid-19 |

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| *Review*<br><br>*USA* | | | | | | |
| *Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020).*<br><br>*Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Psychiatry research, 113264.*<br><br>*Narrative Literature Review*<br><br>*France* | "Promoting balanced life patterns, especially sleep patterns, is also recommended (Guichard et al., 2020)." | Adolescents | Parents | In-person (most likely) | At home | COVID-19, epidemics, disasters, SARS |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review*<br><br>*Pakistan* | Positive parenting: "During this time of change and uncertainty, sticking to routines/ schedule as much as possible helps in reducing the psychological impact of quarantine." (p.1114) | Families | Not specified | In-person<br>Online | Not specified | Quarantine, Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | • Setting up a routine for family. | Younger children | Parents | In-person | At home | COVID-19 |
| | - Set times for a few regular activities each day (e.g., home tutoring, telephone calls, etc.)<br>- Advise adolescents to stick to a consistent sleep and wake time that fits their natural rhythms. | Older children | | | | |
| | "excessive disruptions in daily routines should be avoided by encouraging them to have daily schedule of activities that can be carried out in home environment. Communication should be maintained with their therapists and schools." (p.S71) | Children with special needs | Therapists, schools | | | |
| | "Children in quarantine should be able to contact their parents frequently. They should be guided to maintain daily routine and should have access to disease information. They should be able to contact mental health professionals if need arises." (p.S71) | Children in quarantine | Mental health professionals | | Not specified | |
| | Create some stable consistent routines that nurture the whole family. Mental Health Professionals often emphasize on how bedtime and mealtime routines help children feel safe, organized, and secure. But routines help parents and adults feel that way too! | Families | Parents | | At home | |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.*<br><br>*Grey Literature*<br><br>*Canada* | structurer les journées, flexibilité mentale et autosoins,p.4 les routines et le respect des règles; le sommeil; | Children | Caregivers | In-person | At home | Covid-19 |
| *Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... & Crawley, E. (2020).* | "Helping young people to identify valued alternative activities and build structure and purpose into periods of involuntary social isolation may help to provide a wider range of rewards." (p.12) | Young people | Not specified | Online | Not specified | Quarantine, social |

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| *Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. Journal of the American Academy of Child & Adolescent Psychiatry.*<br><br>*Literature Review*<br><br>*UK* | | | | | | isolation, COVID-19 |
| *Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020).*<br><br>*Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. Internation*<br><br>*Original Research*<br><br>*Canada* | Parents continue to set routines for their children, including supervised time for screens, regular sleep and wake times, and time for quality family time. Limit leisure screen time to 2 h per day and swap screen time for play time wherever possible [3, 4]. | Children | Parents | In-person | At home | Covid-19 |
| *Murray, J. S. (2010).*<br><br>*A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | Efforts to ensure that schedules are predictable and consistent" (p.138) --> "Age-appropriate interventions that promote relaxation at bedtime include providing predictable bedtime routines, use of night-lights, comfort items such as stuffed animals and favorite blankets, music, and storytelling" (p.138) | Toddlers | Parents | In-person | At home | Influenza pandemic in the USA in 2009 |
| *O. E. C. D. Combatting COVID-19's effect on children. (2020)*<br><br>*Grey Literature*<br><br>*N/A* | "Provide support and materials for students experiencing emotional distress due to isolation and disruption during school closures. This can be targeted, from helping students maintain healthy schedules and learning hygiene to specialised support for students who have lost close relatives or suffered domestic violence to a greater extent than before." (p.26) | Students | Governments? | Not specified | Not specified | Covid-19 |
| *Prime, H., Wade, M., & Browne, D. T. (2020).*<br><br>*Risk and resilience in family well-being during the COVID-19 pandemic. American Psychologist. Advance online publication.*<br><br>*Literature Review*<br><br>*Canada* | maintain some semblance of normality, or create a 'new normal' surrounding rituals during the pandemic (p.8) | Children | Parents | Not specified | At home (most likely) | Historical adversities that have threatened societies, such as natural and human-made disasters and recessions; Covid-19 |
| *Sajid, M. I., Tariq, J., Waheed, A. A., Najaf, D., Balouch, S. S., & Abaidullah, S. (2020).*<br><br>*SARS-CoV-2 & Pediatric Mental Health: A Review of Recent Evidence. medRxiv.*<br><br>*Systematic Review*<br><br>*Pakistan* | "A fixed routine with a proper to-do schedule" | Children | They can be done by the children themselves or by the help of their parents | These solutions involve a mix of in-person and web-based activities | At home | Covid-19 |

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| *Zhao, Y., Guo, Y., Xiao, Y., Zhu, R., Sun, W., Huang, W., ... & Wu, J.-L. (2020).*<br><br>*The Effects of Online Homeschooling on Children, Parents, and Teachers of Grades 1–9 During the COVID-19 Pandemic. Medical Science Monitor, 26, e925591.*<br><br>*Research*<br><br>*China* | "There are several ways that parents can set them an example by working hard at home and participating in classes with their children. The going-to-school rhythm can be continued at home by means such as setting up a study room that is similar to the classroom, having the students dressed in school uniforms before classes, and entering the study room as if entering the classroom." (p.9) | Children | The parents | In-person | At home | Covid-19 |
| ***Listen to the needs of children and comfort them*** | Comfort the children, take into account their ages, respect their identity and needs, help develop self-discipline skills, close and open communication | | | | | |
| *Bahn, G. H. (2020).*<br><br>*Coronavirus Disease 2019, School Closures, and Children's Mental Health. Journal of the Korean Academy of Child and Adolescent Psychiatry, 31(2), 74-79.*<br><br>*Review*<br><br>*South Korea* | "Parents can relieve their children's fears and anxieties by explaining COVID-19 to them in terms they can understand" (p.77) | Child | Parent | Not specified | Not specified | Covid-19 |
| *Buheji, M., Hassani, A., Ebrahim, A., da Costa Cunha, K., Jahrami, H., Baloshi, M., & Hubail, S. (2020).*<br><br>*Children and Coping During COVID-19: A Scoping Review of Bio-Psycho-Social Factors. International Journal of Applied, 10(1), 8-15.*<br><br>*Scoping Review*<br><br>*Bahrain* | "Parents should keep their children safe by open trusted communication, using antivirus and checking the privacy settings to minimize data collection, encourage them to use video games that require physical movement and healthy habits, and balance between online and offline activities. Dalton et al. (2020)." (p.11) | Child | Parents | Not specified | Not specified | Covid-19 |
| *Cohen, D. (2020). Appréhender le COVID-19 au fil de l'eau en tant que psychiatre d'enfant et d'adolescent. Encéphale.*<br><br>*Literature Review*<br><br>*France* | Les parents "doivent être clairs, rassurants, informatifs, et à l'écoute" (p.4) | Children | Parents | In-person | At home | COVID-19 |
| *Douglas, P. K., Harrigan, D. C., Douglas, D. B., & Douglas, K. M. (2009).*<br><br>*Preparing for pandemic influenza and its aftermath: Mental health issues considered. International Journal of Emergency Mental Health, 11(3).*<br><br>*Literature Review*<br><br>*USA* | - Help children cope with the aftermath of a disaster | Children | Teachers | In-person | School | Influenza |
| *Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., ... & Lavie, C. J. (2020).*<br><br>*Psychosocial impact of COVID-19. Diabetes & Metabolic Syndrome: Clinical Research & Reviews.* | "Clear, direct, open and detailed information about disease transmission and precautionary measures" (p.785) | Child | Parents | In-person | At home | Covid-19 |

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| *Literature Review*<br><br>*India* | | | | | | |
| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | "Parents need to respect their [children's] identity, free space, special need in addition to monitoring child's performance, behavior and self-discipline skills" (p.231) | Children | Parents | Not specified | Not specified | Covid-19 |
| *Gritti, A., Salvati, T., Russo, K., & Catone, G. (2020).*<br><br>*COVID-19 pandemic: a note for psychiatrists and psychologists. Journal of Psychosocial Systems, 4(1), 63-77.*<br><br>*Literature Review*<br><br>*China* | "Age-suitable information should be provided to children who need to be preserved and from shocking TV images.<br>(p.10) | Children | Child psychiatrist/psychologist | Telephone calls, WA, Skype, telemedicine | Community | Quarantine, Covid-19 |
| *Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020).*<br><br>*Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Psychiatry research, 113264.*<br><br>*Narrative Literature Review*<br><br>*France* | "To promote adolescent well-being and sense of security, it is advisable to promote reassurance, appropriate information, and stress-reducing actions for adolescents. "(p.4) | Adolescents | Parents | In-person (most likely) | At home | COVID-19, epidemics, disasters, SARS |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | • During stressful times, children need a safe, reassuring, and secure relationship with their caregivers whom they can express their feelings and questions.<br>• Use simple, developmentally appropriate language (especially for young children) to explain rationale for social distancing, not being able to visit friend's/ family members/ grandparents, needs to wear facial masks etc. [...] | Families | Parents | In-person | At home | Covid-19 |
| | • If child is sad about not having a birthday party, or missing an important social event, validate his/her feeling of sadness and frustration, acknowledges their losses, listen empathically to their thoughts, feeling and emotions, and collaboratively explore some possible solutions." (p.S70-S71) | Older children | | | | |
| | "Children in quarantine should be able to contact their parents frequently. They should be guided to maintain daily routine and should have access to disease information. They should be able to contact mental health professionals if need arises." (p.S71) | Children in quarantine | Mental health professionals | | Not specified | |
| | • If the child is demanding more attention at nap time and/or bedtime, try to spend more quality time with him/her/them during the day, by possibly taking 10-15 minutes' breaks where parents focus entirely on the child. Enjoy blowing bubbles, listening to music or singing/ dancing at home.<br>• Younger kids may need a bit more hugs and cuddles than older kids. If parents are concerned about transmitting illness, then sitting close, or perhaps sleeping in the same room might be worth trying.<br>• Try to talk about what is happening on the screen while watching programs or playing video games with your children. | Younger children | Parents | | At home | |

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| *Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020).*<br><br>*Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. The Journal of Pediatrics, 221.*<br><br>*Commentary (presents data from an unpublished original study)*<br><br>*China* | - Reduce the worry, fear, and stress that the child may feel" (p.265) | Children | Parents | In-person | At home | COVID-19 |
| *Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006).*<br><br>*When Family-Centered Care Is Challenged by Infectious Disease: Pediatric Health Care Delivery During the SARS Outbreaks. Qualitative Health Research, 16(1)*<br><br>*Original Research*<br><br>*Canada* | Acknowledging the emotional needs of isolated children supports a family-centered care model based on respect and support for all stakeholders | Children | Healthcare professionals | In-person | Hospital | Health education programs |
| *Koller, D., Nicholas, D., Gearing, R., & Kalfa, O. (2010).*<br><br>*Paediatric pandemic planning: children's perspectives and recommendations. Health and Social Care in the Community, 18(4), 369-377.*<br><br>*Original Research*<br><br>*Canada* | - Improve communication with children | Patients/Children | Pediatric hospital staff | In-person | Pediatric hospital | SARS |
| *Kontoangelos, K., Economou, M., & Papageorgiou, C. (2020).*<br><br>*Mental health effects of CoViD-19 pandemia: a review of clinical and psychological traits. Psychiatry investigation, 17(6), 491.*<br><br>*Literature Review*<br><br>*Greece* | "Children are experiencing substantial changes to their daily routine and social infrastructure, because of COVID-19 pandemic and the information provided needs to take into account the child's age and level of understanding. Sensitive and effective communication about life-threatening illness has major benefits for children and their family's long-term psychological wellbeing" (p.494) | Children | Parents | Not specified | Not specified | Covid-19 |
| *Murray, J. S. (2010).*<br><br>*A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | - Reassure children | Children | Parents | In-person | At home | Influenza |
| *Tang, S. P., & Azmi, A. (2020).*<br><br>*Childhood Dermatitis Artefacta and the Covid-19 Pandemic. Malaysian Journal of Psychiatry, 29(2).* | In such times, a caring adult often in the form of parents, is necessary to provide support, honest and sensitive information, and to ease the stress of the pandemic [12, 13]. Parental companionship is indeed vital for the psychological development and wellbeing of any child (p.3) | Child | Parents | In-person | At home | Covid-19 |

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| *Research (Case Report)*<br><br>*China* | | | | | | |
| ***Mental health services (therapy)*** | | | | | | |
| *Bahn, G. H. (2020).*<br><br>*Coronavirus Disease 2019, School Closures, and Children's Mental Health. Journal of the Korean Academy of Child and Adolescent Psychiatry, 31(2), 74-79.*<br><br>*Review*<br><br>*South Korea* | " Depending on the child's situation, counseling or short-term psychotherapy may be helpful" (p.78) | Child | Therapist | Not specified | Not specified | Covid-19 |
| *DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., ... & Akouri-Shan, L. (2020).*<br><br>*Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. Journal of Psychotherapy Integration, 30(2), 304.*<br><br>*Literature Review*<br><br>*USA* | "Although the stress and isolation related to COVID-19 can exacerbate the effects of family stress, the increased frequency of contact between family members may offer positive treatment opportunities." --> online family-focused therapy | Families | Not specified | Online | Online | Covid-19 |
| *Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020).*<br><br>*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. Child and Adolescent Psychiatry and Mental Health, 14(20).*<br><br>*Literature Review*<br><br>*Germany* | A good option to maintain treatment during the pandemic is telepsychiatry. " (p.6) | Children and parents | Doctors | Telepsychiatry | Hospital | Covid-19 |
| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | Government should make operational strategies to provide mental healthcare for the quarantined children. (p.227) | Children | Government | Not specified | Hospital | Covid-19 |
| *Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020).*<br><br>*Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Psychiatry research, 113264.*<br><br>*Narrative Literature Review* | "Psychosocial interventions can help adolescents after traumatic events. A 2017 meta-analysis supported that cognitive-behavioral therapy, eye movement desensitization and reprocessing (EMDR), narrative exposure therapy for children and classroom-based interventions can be equally recommended for adolescents after man-made and natural disasters (Brown et al., 2017)." (p.4) | Adolescents | Psychologists (most likely) | In-person (most likely) | Classroom | COVID-19, epidemics, disasters, SARS |

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| *France* | | | | | | |
| *Hawke, L. D., Barbic, S. P., Voineskos, A., Szatmari, P., Cleverley, K., Hayes, E., ... & Darnay, K. (2020).*<br><br>*Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples. The Canadian Journal*<br><br>*Original Research*<br><br>*Canada* | Mental health supports: "Participants emphasized the need for more MHSU support, through free remote counseling options and online support groups." (p.6) | Youth | Service providers | Online | Community | Covid-19 |
| *Hou, T. Y., Mao, X. F., Dong, W., Cai, W. P., & Deng, G. H. (2020).*<br><br>*Prevalence of and factors associated with mental health problems and suicidality among senior high school students in rural China during the COVID-19 outbreak. Asian Journal of Psychiatry, 54, 102305.*<br><br>*Original Research*<br><br>*China* | Psychological interventions --> "Based on the findings, psychological interventions for depression, anxiety and suicidality should be prioritized" (p.2) | Children | Psychologists (most likely) | Not specified | Not specified | Covid-19 |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review*<br><br>*Pakistan* | Behaviour activation (complemented with sleep hygiene, exercise and healthy eating) --> "Behavior activation (BA) is a component of Cognitive behavior therapy that aims young people to engage more often in enjoyable activities and improve their problem-solving skills alongside addressing excess of avoidance behaviors." (p.1114) | Children | Psychologists (most likely) | Not specified | Not specified | Quarantine, Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | "Children in quarantine should be able to contact their parents frequently. They should be guided to maintain daily routine and should have access to disease information. They should be able to contact mental health professionals if need arises." (p.S71) | Children in quarantine | Mental health professionals/Parents | In-person | At home | Covid-19 |
| *Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020).*<br><br>*Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. The Journal of Pediatrics, 221.*<br><br>*Commentary (presents data from an unpublished original study)*<br><br>*China* | "using music therapy in the form of singing to reduce the worry, fear, and stress that the child may feel" (p.265) | Children | Not specified | In-person | Not specified | Covid-19 |

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| *Murray, J. S. (2010).*<br><br>*A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | Group therapy<br>Use of expressive therapy with various art forms (e.g., drawing, painting, acting, music, etc.) can provide a forum for children in this developmental stage to talk about how they feel during this stressful situation" (p.139)<br>- Get the children to talk about their feelings | Children | School counsellor or child psychologist | Group therapy + expressive therapy with various art forms | School | Influenza |
| *O. E. C. D. Combatting COVID-19's effect on children. (2020)*<br><br>*Grey Literature*<br><br>*N/A* | "Maintain access to services for children and young people living with mental health problems, as well as their families. Support NGOs who provide community-based on-line (peer- to-peer) services for young people and parents with children facing mental health issues." (p.24) | Children and young people | Governments? | Online | Not specified | Covid-19 |
| *Prime, H., Wade, M., & Browne, D. T. (2020).*<br><br>*Risk and resilience in family well-being during the COVID-19 pandemic. American Psychologist. Advance online publication.*<br><br>*Literature Review*<br><br>*Canada* | There are recommendations for telepsychology services to address the loss in child mental health services due to school closures (Golberstein et al., 2020). There is support for the efficacy of family-based interventions via telehealth to support caregiver well-being, parenting behavior, and child mental health, including in high-risk populations (Harris, Andrews, Gonzalez, Prime, & Atkinson, in press; MacDonell & Prinz, 2017). Furthermore, online parenting resources for use during COVID-19 have been provided (Cluver et al., 2020). (p.10) | Children and parents | Not specified | Telehealth + online | Not specified | Historical adversities that have threatened societies, such as natural and human-made disasters and recessions; Covid-19 |
| *Saurabh, K., & Ranjan, S. (2020).*<br><br>*Compliance and psychological impact of quarantine in children and adolescents due to Covid-19 pandemic. Indian Journal of Pediatrics.*<br><br>*Original Research*<br><br>*India* | "To minimise the psychological effects, we should increase children's access to disease information via comic books and videos and timely referral to psychiatrist. Social media could play an important role, allowing people who are quarantined to update their loved ones about themselves. So, having a working mobile phone is now a necessity, not a luxury" (p.5) | Children | Psychiatrist | In-person? | Not specified | Covid-19, quarantine |
| *Zhou, J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X. & Chen, J. X. (2020).*<br><br>*Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01541-4*<br><br>*Original Research*<br><br>*China* | "health authorities can consider providing online or smart-phone-based psychological interventions" (p.7) | Students | Health authorities | Online or smart phone based psychological interventions | Online | COVID-19 |
| ***Caregivers/teachers support (training)*** | | | | | | |
| *Buheji, M., Hassani, A., Ebrahim, A., da Costa Cunha, K., Jahrami, H., Baloshi, M., & Hubail, S. (2020).*<br><br>*Children and Coping During COVID-19: A Scoping Review of Bio-Psycho-Social Factors. International Journal of Applied, 10(1), 8-15.*<br><br>*Scoping Review* | "Parents should be aware of how this pandemic can affect children's physical and psychological well-being." (p.11) | Child | Parents | Not specified | Not specified | Covid-19 |

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| *Bahrain* | | | | | | |
| *Cohen, D. (2020). Appréhender le COVID-19 au fil de l'eau en tant que psychiatre d'enfant et d'adolescent. Encéphale.*<br><br>*Literature Review*<br><br>*France* | "Il est important aussi que les professionnels de l'enfance et les professionnels de santé mentale puissent aider les parents à repérer les signes de stress chez leurs enfants, car c'est souvent les interventions les plus précoces qui sont les plus efficaces [...] Chez les plus petits on peut retenir les peurs, les cauchemars ; certaines manifestations régressives dans le langage, dans la propreté ; la perte ou l'augmentation de l'appétit ; les colères, les attitudes pleurnichardes et exigeantes. Chez les enfants d'âge scolaire, on retiendra également irritabilité, colères, comportements adhésifs, somatisation (en particulier céphalées, maux de ventre), isolement, troubles du sommeil ou de l'appétit, oublis ou compétition pour l'attention des parents lorsqu'il s'agit de familles nombreuses. Et enfin chez l'adolescent on retiendra également les somatisations, une certaine forme d'agitation–impatience, des troubles du sommeil et de l'appétit, l'apathie ou a contrario la provocation et l'ignorance des consignes de sécurité, l'isolement des pairs, un sentiment d'adolescent épidermique aux injustices, et l'évitement du travail scolaire." (p.5) "savoir reconnaître les sentiments négatifs est également utile pour accompagner au mieux les enfants " (p.4) | Parents | Professionnels de l'enfance et professionnels de santé mentale | In-person | At home | Covid-19, confinement |
| *Cui, Y., Li, Y., & Zheng, Y. (2020).*<br><br>*Mental health services for children in China during the COVID-19 pandemic: results of an expert-based national survey among child and adolescent psychiatric hospitals. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01548-x*<br><br>*Editorial (presents more detailed results of 2 recent experimental studies)*<br><br>*China* | The psychological aid should be provided to both parents and the children. Its contents addressed at parents include two aspects: first, management of the children's behaviors including regular sleep, avoidance of unhealthy diets, appropriate exercise, and parental help to finish homework; second, dealing with the anxiety of children, including emotion expression, and family activities. Parents are informed to keep their emotions "stable", especially upon management of their children's behaviors. For anxiety symptoms of children, building a close relationship with the online therapist is the most important step; online video game therapy might be suitable for most quarantined children (p.4) | Families | Mental health care professionals ('**child psychiatrists** can work directly with the young patients and their families' but it doesn't specify for Beijing Children's Hospital who offered the online medical services including the mental health services by an app in smartphone) | Online work model | Online for the Beijing Children's hospital AND online or in-person for the recommended intervention. | Covid-19 |
| *Douglas, P. K., Harrigan, D. C., Douglas, D. B., & Douglas, K. M. (2009).*<br><br>*Preparing for pandemic influenza and its aftermath: Mental health issues considered. International Journal of Emergency Mental Health, 11(3).*<br><br>*Literature Review*<br><br>*USA* | Since children are<br>considered high risk, (Lazarus, Jimerson, & Brock, 2002) teacher training provided by mental health professionals may provide teachers with a framework for helping children cope with the aftermath of a disaster. (p.4-5) | Teachers | Mental health professionals | Not specified | Not specified | Influenza pandemic in the USA in 2009 |
| *Gritti, A., Salvati, T., Russo, K., & Catone, G. (2020).*<br><br>*COVID-19 pandemic: a note for psychiatrists and psychologists. Journal of Psychosocial Systems, 4(1), 63-77.*<br><br>*Literature Review*<br><br>*China* | "To prevent negative psychological outcome of the quarantine, the Italian Society of Child Neuropsychiatry (SINPIA) has created a special online service. The service provides guidelines to operators, families and teachers and discusses the main critical issues produced by the epidemic. One section offers advice on how to talk to children about COVID-19. The Italian Society of Psychoanalysis and the main Child, Adolescent and Family Psychotherapy Societies have made available free online services." (p.10) | Both | SINPIA | Online | Community | Quarantine, Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).* | Lastly the parents and care givers should take care of themselves as well. If they are confident and free of stress, they may be able to guide, educate and protect their children more effectively and efficiently." (p.S71) | Parents | N/A | In-person | | Covid-19 |

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| *Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | | | | | | |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.*<br><br>*Grey Literature*<br><br>*Canada* | créer des opportunités pour le parent ou gardien de prendre soin d'eux-mêmes; | Parents | Not specified | In-person | Not specified | Covid-19 |
| *Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006).*<br><br>*When Family-Centered Care Is Challenged by Infectious Disease: Pediatric Health Care Delivery During the SARS Outbreaks. Qualitative Health Research, 16(1)*<br><br>*Original Research*<br><br>*Canada* | Provide parents with regular information on their child's condition and allow parents to contribute to the decision-making process as much as possible. This approach recognizes the parents' strengths and knowledge and demonstrates respect for their ability as caregivers. | Parents | Healthcare professionals | In-person | Hospital | Health education programs |
| *Liu, S., Liu, Y., & Liu, Y. (2020).*<br><br>*Somatic symptoms and concerns regarding COVID-19 among Chinese college and primary school students: A cross-sectional survey. Psychiatry Research, 289, 1-5. doi: 10.1016/j.psychres.2020.113070*<br><br>*Original Research*<br><br>*China* | "The stress response of a child to a disaster largely depends on the support provided by, and responses of, his or her parents; children respond according to the behaviour of the adults in their lives. When parents respond calmly and confidently in the face of a disaster, they are best able to support their children. The US Centers for Disease Control and Prevention (CDC) noted that children's responses to disasters are influenced by those of their their family and community, as well as by family resources, relationships and communication among family members, and overall community resilience (CDC, 2019). Therefore, in the midst of public health emergencies such as the COVID-19 outbreak, efforts to safeguard the psychological health of children should begin with their parents. Appropriate health education for parents is needed so that they are able to deal with the stress of an outbreak and thus protect their children from psychological distress. Health education for parents should be tailored according to their specific characteristics. Parents with a similar level of education to college students can benefit from interventions aimed at the latter group." | Parents | Government and other relevant agencies | Not specified | Not specified | Covid-19 |
| *Loades, M. E., Chatburn, E., Higson-Sweeney, N., Reynolds, S., Shafran, R., Brigden, A., ... & Crawley, E. (2020).*<br><br>*Rapid Systematic Review: The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19. Journal of the American Academy of Child & Adolescent Psychiatry.*<br><br>*Literature Review* | "Finding ways to give children and adolescents a sense of belonging within the family and to feel that they are part of a wider community should be a priority. Therefore, providing accurate information about the relative risks and benefits of social media and networking to parents who overestimate the dangers of allowing their children too much screen time may help young people access the benefits of virtual social contact." (p.12) | Parents | Not specified | In-person | Not specified | Quarantine, social isolation, COVID-19 |

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| *UK* | | | | | | |
| *Murray, J. S. (2010).*<br><br>*A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | "Providing educational resources on common behavioral changes children may exhibit during an influenza pandemic" (p.137) + "educating parents to be patient and understanding of behavioral changes seen in children" (p.139) "making sure adult figures caring for children have the emotional support needed to care for themselves and, subsequently, the children entrusted to their care. Parents should be persuaded to maintain established social networks for emotional support." (p.137) | Caregivers | Organizations such as the CDC and American Red Cross" (p.137) + "Every effort should be taken by pediatric healthcare professionals to make such resources available in preparation for a pandemic flu outbreak" (p.137) + "Pediatric health care professionals" (p.137) | Not specified (most likely online) | Not specified | Influenza pandemic in the USA in 2009 |
| *Spinelli, M., Lionetti, F., Pastore, M., & Fasolo, M. (2020).*<br><br>*Parents' Stress and Children's Psychological Problems in Families Facing the COVID-19 Outbreak in Italy. Frontiers in Psychology, 11, 1713.*<br><br>*Research*<br><br>*Italy* | "Correct information and guidelines have to be given to adults about how this stressful situation may affect their personal and children's wellbeing. Public health should provide parents with knowledge about, for instance, how children at different ages express distress and the importance of sharing and talking about fears and negative emotions" (p.6) | Parents | Public health authorities | Not specified | Community | Covid-19 |
| *Zhao, Y., Guo, Y., Xiao, Y., Zhu, R., Sun, W., Huang, W., ... & Wu, J.-L. (2020).*<br><br>*The Effects of Online Homeschooling on Children, Parents, and Teachers of Grades 1–9 During the COVID-19 Pandemic. Medical Science Monitor, 26, e925591.*<br><br>*Research*<br><br>*China* | Parents can join their children in online classes and note their children's shortcomings + provide feedback to teacher | Children | The parents | In-person | At home | Covid-19 |
| *Zhou, J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X. & Chen, J. X. (2020).*<br><br>*Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01541-4*<br><br>*Original Research*<br><br>*China* | Teachers should pay attention to the assessment of students' anxiety and depressive symptoms | Students | Teachers/school staff | Online | Online | Covid-19 |
| ***Stimulating activities/distraction*** | | | | | | |
| *Bahn, G. H. (2020).*<br><br>*Coronavirus Disease 2019, School Closures, and Children's Mental Health. Journal of the Korean Academy of Child and Adolescent Psychiatry, 31(2), 74-79.*<br><br>*Review* | "Parents should help children to maintain a regular daily life with activities they can perform indoors." (p.77) | Child | Parent | Not specified | Not specified | Covid-19 |

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| *South Korea* | | | | | | |
| *Cohen, D. (2020). Appréhender le COVID-19 au fil de l'eau en tant que psychiatre d'enfant et d'adolescent. Encéphale.*<br><br>*Literature Review*<br><br>*France* | " alterner les activités scolaires, les jeux de société, les activités motrices, et les activités autour des repas ; limiter les écrans et en particulier éviter les écrans avant 3 ans" (p.4) "de maintenir également les activités physiques et scolaires" (p.5) | Children | Parents | In-person | At home | Covid-19, confinement |
| *Hawke, L. D., Barbic, S. P., Voineskos, A., Szatmari, P., Cleverley, K., Hayes, E., ... & Darnay, K. (2020).*<br><br>*Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples. The Canadian Journal*<br><br>*Original Research*<br><br>*Canada* | Ideas of activities to keep well, engaged, and busy | Youth | Service providers | Not specified | Community | Covid-19 |
| *Hou, T. Y., Mao, X. F., Dong, W., Cai, W. P., & Deng, G. H. (2020).*<br><br>*Prevalence of and factors associated with mental health problems and suicidality among senior high school students in rural China during the COVID-19 outbreak. Asian Journal of Psychiatry, 54, 102305.*<br><br>*Original Research*<br><br>*China* | Encourage exercise | Children | Not specified | Not specified | Not specified | Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | Make sure [younger children] have mix of activities across the day, including story/book time, free play, art activities, some active play like hide & seek, running around, jumping on a trampoline, copying/imitating baby facial or body gestures, building train tracks, or riding a tricycle." (p.S70) | Younger children | Parents | In-person | At home | Covid-19 |
| | Set times for a few regular activities each day such as home tutoring, telephone calls with a friend, or cooking together, family meals; do these activities at the same time each day<br>• Make sure they spend some time outdoors every day, or do some exercise daily. If one can't go outside, try to spend at least two hours by a window, looking into the daylight, and focusing on being calm. | Older children | | | | |
| | Disease containment measures like social isolation have enabled families to spend more time together. Many Parents have reported increased sense of closeness and intimacy with their children.11 Make use of this quality time by reading a book or making drawings with them, engaging them in house hold chores like cleaning and cooking, and occupy them with indoor scavenger hunts, board and card games to reduce the stress and boredom due to home confinement. | Families | Mental health professionals/Parents | | | |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.* | Keep children busy (routine including physical activities) | Children | Parents | In-person | At home | COVID-19 |

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| *Grey Literature*<br><br>*Canada* | | | | | | |
| *Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020).*<br><br>*Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. The Journal of Pediatrics, 221.*<br><br>*Commentary (presents data from an unpublished original study)*<br><br>*China* | Media entertainment<br>- "Media entertainment was largely successfully used by families over reading and physical exercise as a means to relieve their children's distress and address their concerns regarding the negative condition they were experiencing" (p.265) | Children | Parents | Media entertainment | At home | COVID-19 |
| *Koller, D., Nicholas, D., Gearing, R., & Kalfa, O. (2010).*<br><br>*Paediatric pandemic planning: children's perspectives and recommendations. Health and Social Care in the Community, 18(4), 369-377.*<br><br>*Original Research*<br><br>*Canada* | "many participants identified play and distraction as an important component of psychosocial care, particularly during a crisis. By having activities in their rooms, children could be distracted from what was happening around them. Accordingly, engagement in play and other developmentally appropriate activities was viewed as a therapeutic intervention for children isolated during an infectious outbreak" (p.373) | Patients/children | Pediatric hospital staff | In-person | Pediatric hospital | SARS |
| *McGrath, J. (Accepted manuscript, 2020).*<br><br>*ADHD and Covid-19: Current roadblocks and future opportunities. Irish Journal of Psychological Medicine.*<br><br>*Review*<br><br>*Ireland* | for younger children a room with some toys and activities may increase interest in the session and facilitate engagement with the parent and clinician. Engagement with adolescents may be increased through exploration of relevant and appropriate material on YouTube or other sites. Younger children may enjoy using online drawing apps, and can be encouraged to tell stories while drawing." (p.15) | Children and adolescents | Parents and clinicians | Telepsychiatry | Online | Covid-19 |
| *Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020).*<br><br>*Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. Internation*<br><br>*Original Research*<br><br>*Canada* | "Where possible, families should consider substituting sedentary leisure for more active leisure pursuits." (p.8) | Children | Parents | Not specified | At home | Covid-19 |
| *Sajid, M. I., Tariq, J., Waheed, A. A., Najaf, D., Balouch, S. S., & Abaidullah, S. (2020).*<br><br>*SARS-CoV-2 & Pediatric Mental Health: A Review of Recent Evidence. medRxiv.*<br><br>*Systematic Review*<br><br>*Pakistan* | "Physical activity/exercise at home helps release hormones that enlighten ones mood<br>Parents to promote a health home environment ensuring quality family time<br>Getting oneself enrolled in online courses and activities of interest<br>Video calling to allow a virtual get-together<br>A fixed routine with a proper to-do schedule" (p.22) | Children | They can be done by the children themselves or by the help of their parents | These solutions involve a mix of in-person and web-based activities<br><br>Online courses, videocalling | At home | Covid-19 |

| ***Communication management*** | | | | | | |
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| *Cohen, D. (2020). Appréhender le COVID-19 au fil de l'eau en tant que psychiatre d'enfant et d'adolescent. Encéphale.*<br><br>*Literature Review*<br><br>*France* | d'éviter les situations d'informations en flot continu, qu'elles soient télévisuelles ou radiophoniques (p.4) | Children | Parents | Media | At home | Covid-19, confinement |
| *DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., ... & Akouri-Shan, L. (2020).*<br><br>*Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. Journal of Psychotherapy Integration, 30(2), 304.*<br><br>*Literature Review*<br><br>*USA* | "treatment can also focus on reducing over-exposure to media and/or less reliable news sources" (p.313) | Youth | Not specified | Online | Online | Covid-19 |
| *Ellis, W. E., Dumas, T. M., & Forbes, L. M. (2020).*<br><br>*Physically isolated but socially connected: Psychological adjustment and stress among adolescents during the initial COVID-19 crisis. Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 52(3), 177.*<br><br>*Protocol (Original Study)*<br><br>*Canada* | • Monitor usage of social media<br>• Open discussions rather than strict bans and limits<br>• Talk about mindful media consumption | Adolescents | Parents | In-person | At home | Covid-19 |
| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | • Friendly monitor online activities | Children | Parents | Not specified | Not specified | Covid-19 |
| *Goldschmidt, K. (2020).*<br><br>*The COVID-19 pandemic: Technology use to support the wellbeing of children. Journal of pediatric nursing. https://doi.org/10.1016/j.pedn.2020.04.013*<br><br>*Review*<br><br>*USA* | • Reduce children's exposure to COVID-19 television and social media | Children | Caregivers | In-person | At home | Covid-19 |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review* | • Information dissemination (accurate information, limit exposure to news, discussion with children about what they saw and heard) | Children | Parents | In-person | At home | Quarantine, Covid-19 |

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|---|---|---|---|---|---|---|
| *Pakistan* | | | | | | |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | • Turn off the news channels when young children are around.<br>• Refrain from talking about the COVID related situation with other adults or older siblings around them. | Younger children | Parents | In-person | At home | Covid-19 |
| *Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006).*<br><br>*When Family-Centered Care Is Challenged by Infectious Disease: Pediatric Health Care Delivery During the SARS Outbreaks. Qualitative Health Research, 16(1)*<br><br>*Original Research*<br><br>*Canada* | • Enhance patient participation by sharing information regarding the disease and infection control procedures. | Children | Healthcare professionals | In-person | Hospital | Health education programs |
| *Murray, J. S. (2010).*<br><br>*A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | "Means of getting critical information out can be in the form of newspaper and journal articles, news bulletins, radio and television interviews, and blogs on the Internet" (p.141) | Not specified | Not specified | Media and online | Not specified | Influenza pandemic in the USA in 2009 |
| ***Parenting/socialization practices*** | | | | | | |
| *Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., ... & Lavie, C. J. (2020).*<br><br>*Psychosocial impact of COVID-19. Diabetes & Metabolic Syndrome: Clinical Research & Reviews.*<br><br>*Literature Review*<br><br>*India* | • Proper parenting<br>• Online classes, online study material<br>• Clear, direct, open and detailed information about disease transmission and precautionary measures<br>• Maintenance of sleep cycle, physical exercise schedule<br>• Educate about proper hygiene practice | Child | Parents | In-person Online | Not specified | Covid-19 |
| *Griffith, A. K. (2020).*<br><br>*Parental Burnout and Child Maltreatment During the COVID-19 Pandemic. Journal of Family Violence, 1-7.*<br><br>*Literature Review*<br><br>*USA* | • Positive parenting<br>• High level of support | Child | Parents | In-person | Not specified | Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).* | • Explain rationale for social distancing<br>• Not being able to visit friend's/ family members/ grandparents,<br>• Needs to wear facial masks etc. | Children | Parents | In-person | At home | Covid-19 |

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| *Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | | | | | | |
| *Institut national d'excellence en santé et en services sociaux Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.*<br><br>*Grey Literature*<br><br>*Canada* | comprendre que les réactions face à la pandémie peuvent varier d'un jeune à l'autre; • assurer la présence d'un parent ou gardien sensible et réceptif; • distinguer la distance physique de l'isolement social; • fournir de l'information appropriée à l'âge de l'enfant; donner davantage de responsabilités au jeune si possible; La socialisation et la vie en groupe sont des dimensions importantes à considérer dans le développement des jeunes et leur sentiment de réalisation. ; "L'éducation à distance peut inclure des ressources pour l'apprentissage par le jeu pour les enfants d'âge préscolaire qui n'ont plus accès aux services de garde [36] et de l'enseignement des notions sur l'hygiène et la prévention des infections, adaptées au groupe d'âge [42, 46]." (p. 16); L'élargissement du cercle social; • Les activités de bénévolat et d'engagement social; • La participation à des cérémonies religieuses ou le recueillement dans les lieux de culte" (p.13-14) | Children | Caregivers | In-person and online | At home, online | Covid-19 |
| *Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020).*<br><br>*Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. The Journal of Pediatrics, 221.*<br><br>*Commentary (presents data from an unpublished original study)*<br><br>*China* | parents should pay attention to sleep difficulties and nightmares, prevent increased daytime sleep and suggest sleep hygiene and relaxation methods, model a positive psychological attitude to reduce stress, and divert attention to more productive and positive directions (p.266) | Children and adolescents | Parents | Not specified (most likely in-person) | At home | Covid-19 |
| *Koller, D., Nicholas, D., Gearing, R., & Kalfa, O. (2010).*<br><br>*Paediatric pandemic planning: children's perspectives and recommendations. Health and Social Care in the Community, 18(4), 369-377.*<br><br>*Original Research*<br><br>*Canada* | Information shared with patients should comprise the nature of the disease, its origins, the treatment protocol, transmission and infection control guidelines." | Children | Healthcare professionals | In-person | Pediatric hospital | SARS |
| *Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020).*<br><br>*Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. Internation*<br><br>*Original Research*<br><br>*Canada* | RECOMMENDATIONS BASED ON FINDINGS:<br>"1) Parents continue to be creative in their home-based leisure activities and support and encourage their children to play and be active in innovative and safe ways. Suggestions include co-participation in activties, trying new leisure hobbies, using online health and/or physical activity apps, and getting outdoors as much as possible (while following public health requirements). It is recommended that children and youth aim to accumulate 60 min per day of moderate-to-vigorous physical activity and play out- doors regularly [3, 4, 6, 7]. | Children | Parents | In-person/online | At home | Covid-19 |
| *Murray, J. S. (2010).* | "Parents can play a critical role by ensuring children understand what pandemic flu is, how it is spread, and the possible complications that may arise as a result of the illness." (p.137) "Providing reasonable family expectations, a | Children | Parents | In-person | Not specified | Influenza pandemic in |

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| *A collaborative approach to meeting the psychosocial needs of children during an influenza pandemic. Journal for Specialists in Pediatric Nursing, 15(2), 135-143.*<br><br>*Literature Review*<br><br>*USA* | structure that is not demanding, and responsibilities that help school-age children to achieve skills" (p.139) "Helping them to preserve open means of communication with their peers is important. Discussion with significant adults such as mentors, school counselors, coaches, or clergy members should also be encouraged." (p.139)<br>"helping them to understand the impact of the influenza pandemic on their behaviors and their responses" (p.139) | | | | | the USA in 2009 |
| *Prime, H., Wade, M., & Browne, D. T. (2020).*<br><br>*Risk and resilience in family well-being during the COVID-19 pandemic. American Psychologist. Advance online publication.*<br><br>*Literature Review*<br><br>*Canada* | Establishing a coherent narrative about COVID-19 (p.9) within the family --> "This may include, for instance, emotion-focused discussions about ongoing changes within the family and society that allow for sharing and normalization of difficult feelings, as well as reassurance." (p.9) There is support for the efficacy of family-based interventions via telehealth to support caregiver well-being, parenting behavior, and child mental health, including in high-risk populations (Harris, Andrews, Gonzalez, Prime, & Atkinson, in press; MacDonell & Prinz, 2017). Furthermore, online parenting resources for use during COVID-19 have been provided (Cluver et al., 2020)." (p.10) | Children and parents | Not specified | Online and in-person | Online | Historical adversities that have threatened societies, such as natural and human-made disasters and recessions; Covid-19 |
| ***Health agencies recommendations (the WHO, UNICEF, etc.)*** | | | | | | |
| *Buheji, M., Hassani, A., Ebrahim, A., da Costa Cunha, K., Jahrami, H., Baloshi, M., & Hubail, S. (2020).*<br><br>*Children and Coping During COVID-19: A Scoping Review of Bio-Psycho-Social Factors. International Journal of Applied, 10(1), 8-15.*<br><br>*Scoping Review*<br><br>*Bahrain* | "Unicef (2020) recommends open dialogue to resolve any doubts about the coronavirus by children. Among the main measures, Unicef encourages asking questions and listening very carefully to evaluate how to help them cope with the current pandemic. Parents might invite the children to talk about what they know or understands about the subject, discovering what and how much they need to intervene or explain, or to develop strategies using maybe games, drawings, and stories to build proper acceptance and appreciation of the new situation or start a conversation." (p.11)<br><br>"Valuing what the child is feeling and showing himself available to talk is fundamental for him to feel supported and protected, Unicef (2020)." (p.11)<br><br>"Part of the community-based strategies recommended by WHO and collaboration with UNICEF is to try to keep the children in regular routines and schedules, as much as possible." (p.12) | Child | Parents | Not specified | Not specified | Covid-19 |
| *Dellagiulia, A., Lionetti, F., Fasolo, M., Verderame, C., Sperati, A., & Alessandri, G. (2020).*<br><br>*Early impact of COVID-19 lockdown on children's sleep: a four-week longitudinal study. Journal of Clinical Sleep Medicine, jcsm-8648.*<br><br>*Protocol (Original Study)*<br><br>*Italy* | "WHO recommendation for helping children to cope with Covid-19 suggests also to maintain<br>regular routine or create new positive ones." (p.4) | Children | Parents (implied) | In-person (implied) | At home | Covid-19 |
| *Gritti, A., Salvati, T., Russo, K., & Catone, G. (2020).*<br><br>*COVID-19 pandemic: a note for psychiatrists and psychologists. Journal of Psychosocial Systems, 4(1), 63-77.*<br><br>*Literature Review*<br><br>*China* | RECOMMENDATIONS BASED ON A PAPER BY THE WHO:<br>"Minimize watching, reading or listening to news about COVID-19 that causes you to feel anxious or distressed; seek information only from trusted sources and mainly so that you can take practical steps to prepare your plans and protect yourself and loved ones. Seek information updates at specific times during the day, once or twice. The sudden and near-constant stream of news reports about an outbreak can cause anyone to feel worried. Get the facts; not rumours and misinformation. Gather information at regular intervals from the WHO website and local health authority platforms in order to help you distinguish facts from rumours. Facts can help to minimize fears." (p.4) --> not specific to C&A | Both | The WHO/local health authority | Online | Community | Quarantine, Covid-19 |

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| *Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020).*<br><br>*Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. Psychiatry research, 113264.*<br><br>*Narrative Literature Review*<br><br>*France* | RECOMMENDATIONS BY THE WHO (also mentioned in other articles):<br>4- " The World Health Organization has published recommendations addressed to adolescents to help them cope with stress: identify normal emotional reactions, engage in dialog and social exchange, maintain appropriate lifestyles and social contacts, avoid smoking, alcohol and other drugs, seek out health workers help when necessary, seek information from reliable sources, limit exposure to the media, develop strategies for emotional regulation (World Health Organization 2020)." (p.4) | Adolescents | Parents/health workers | Not specified | General | Covid-19 |
| *Imran, N., Zeshan, M., & Pervaiz, Z. (2020b).*<br><br>*Mental health considerations for children & adolescents in COVID-19 Pandemic. Pakistan Journal of Medical Sciences, 36(COVID19-S4).*<br><br>*Literature Review*<br><br>*Pakistan* | RECOMMENDATIONS BASED ON GUIDELINES AND FACTSHEETS BY HEALTH AGENCIES (WHO, UNICEF, AACAP, IACAPAP, etc.):<br>General interventions<br><br>1- "reassuring the children, educating them about the situation in age appropriate ways, and maintaining daily routines. Other guidelines include educating children on maintaining safe distances and practicing personal hygiene, acknowledging their distress and answering all their questions with honesty. Parents should avoid unnecessary separation from children and if separated from parents, children should have alternate care givers available, and they should be able to contact parents regularly. Exposure of children to panic provoking news on media should be avoided and positive use of social media should be encouraged e.g. to form support groups etc. Furthermore, screen time of children should also be monitored." (p.S70) | Children | Parents | In-person | Home | Covid-19 |
| *Romero, E., López-Romero, L., Domínguez-Álvarez, B., Villar, P., & Gómez-Fraguela, J. A. (2020).*<br><br>*Testing the effects of COVID-19 confinement in Spanish children: The role of parents' distress, emotional problems and specific parenting.*<br><br>*Research*<br><br>*Spain* | Guidelines and suggestions provided by different health agencies (e.g., WHO, 2020) and child focused NGO (e.g., UNICEF, 2020): setting home routines and structuring daily activities, talking about the pandemic, keeping openness to the crisis-related emotions, showing affect and involving children in family activities (p.32-33) | Children | Parents | In-person | Home | Disasters, stress and trauma, Covid-19 |
| *Sajid, M. I., Tariq, J., Waheed, A. A., Najaf, D., Balouch, S. S., & Abaidullah, S. (2020).*<br><br>*SARS-CoV-2 & Pediatric Mental Health: A Review of Recent Evidence. medRxiv.*<br><br>*Systematic Review*<br><br>*Pakistan* | WHO and UNICEF: information on the pandemic must be controlled by the parents, without hiding facts, however ensuring that it is communicated in a medium that can be easily understood by children of different age groups (p.21) | Children | Parents | In-person | At home | Covid-19 |
| ***Providing a safe environment (physical/emotional)*** | | | | | | |
| *Douglas, P. K., Harrigan, D. C., Douglas, D. B., & Douglas, K. M. (2009).*<br><br>*Preparing for pandemic influenza and its aftermath: Mental health issues considered. International Journal of Emergency Mental Health, 11(3).*<br><br>*Literature Review*<br><br>*USA* | Training teachers in empathetic listening skills will provide a safe, reassuring environment for children to discuss their experiences. | Children | Teachers | In-person | Not specified | Influenza pandemic in the USA in 2009 |

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| *Goldschmidt, K. (2020).*<br><br>*The COVID-19 pandemic: Technology use to support the wellbeing of children. Journal of pediatric nursing. https://doi.org/10.1016/j.pedn.2020.04.013*<br><br>*Review*<br><br>*USA* | Caregivers can help alleviate stress by remaining calm. Reducing children's exposure to COVID-19 television and social media coverage can also help to provide a relaxed and reassuring environment (AAP, 2020e; CDC, 2020b). | Children | Caregivers | In-person | At home | Covid-19 |
| *Institut national d'excellence en santé et en services sociaux (INESSS)(2020b).*<br><br>*COVID-19 et les moyens ou interventions mis en place pour limiter les conséquences négatives des mesures restrictives sur le développement et le bien-être des jeunes. Québec, Qc : INESSS ; 2020. 41 p.*<br><br>*Grey Literature*<br><br>*Canada* | "offrir un environnment physique et émotionnel sécuritaire, de tenir l'enfant occupé et de mettre de l'avant les forces, l'espoir et la positivité. Il est également suggéré d'aller chercher de l'aide professionnelle si le jeune présente des signes de souffrance qui ne se résolvent pas rapidement." (p. 4) | Children | Parents | In-person | At home | COVID-19 |
| *Koller, D., Nicholas, D., Gearing, R., & Kalfa, O. (2010).*<br><br>*Paediatric pandemic planning: children's perspectives and recommendations. Health and Social Care in the Community, 18(4), 369-377.*<br><br>*Original Research*<br><br>*Canada* | "[participants] believed that staff needed to minimise children's fears by maintaining a sense of normalcy despite their own concerns. Participants recommended that staff keep a balanced perspective and remain calm in order to help children cope with the crisis. Therefore, over-reacting to the situation was viewed as counterproductive. [...] an 11-year-old female indicated, 'staff should help kids forget about it, like think of something else, cause thinking about it is going to make you mad, it's going to make you scared'" (p.373) | Children | Healthcare professionals | In-person | Pediatric hospital | SARS |
| *Tiwari, G. K., Singh, A. K., Parihar, P., Pandey, R., Sharma, D. N., & Rai, P. K. (2020).*<br><br>*Understanding the perceived health outcomes of children during COVID-19 pandemic.*<br><br>*Research*<br><br>*India* | "The interventions involving media, family and community may protect the health and well-being of children and help them to deal effectively with their cognitive, emotional and behavioural issues more effectively. Proper care of sleep, food, leisure and creative activities of children to help them to achieve their full productivity and remain healthy and well-functioning are recommended. A positive outcome of the joint family was surfaced where children may feel more protected and may find an opportunity to remain positively engaged." (p.8) | Children | media, family and community | N/A | N/A | Impacts of lockdown and quarantine, COVID-19 |
| ***Health Education Programs*** | | | | | | |
| *Hawke, L. D., Barbic, S. P., Voineskos, A., Szatmari, P., Cleverley, K., Hayes, E., ... & Darnay, K. (2020).*<br><br>*Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples. The Canadian Journal*<br><br>*Original Research*<br><br>*Canada* | RECOMMENDATIONS BASED ON PARTICIPANTS' RESPONSES:<br><br>"When asked what they were doing to keep well, the most frequently reported strategy was connecting with friends remotely. Also highly endorsed were connecting with a pet, practicing hobbies, and connecting with family remotely." (p.6) --> "Community participants were significantly more likely to be connecting with friends remotely [...] and getting out into nature" (p.6)<br><br>1- Access to reliable information about COVID-19 with positive, encouraging framing, primarily online: "Participants were interested in being able to access high-quality information about COVID-19 and MHSU supports available to help them. They wanted more positive and encouraging media messaging" | Youth | Service providers | Online | Community | Covid-19 |

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| | (p.7) | | | | | |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review*<br><br>*Pakistan* | 2- Education (effective online learning, provision of psychosocial support, healthy lifestyle motivation through educational portals) | Children | Educational institutions | Online | Online | Quarantine, Covid-19 |
| *Romero, E., López-Romero, L., Domínguez-Álvarez, B., Villar, P., & Gómez-Fraguela, J. A. (2020).*<br><br>*Testing the effects of COVID-19 confinement in Spanish children: The role of parents' distress, emotional problems and specific parenting.*<br><br>*Research*<br><br>*Spain* | prevention programs specifically targeted to family needs within the context of a health-related crisis are particularly needed. These programs and overall guidelines to cope with the crisis should be built up on effective strategies for parents to (1) reduce the emotional impact of the confinement and (2) derive more focused and structured parenting. (p.33) | All family members | N/A | N/A | N/A | Disasters, stress and trauma, Covid-19 |
| *Zhou, J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X. & Chen, J. X. (2020).*<br><br>*Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01541-4*<br><br>*Original Research*<br><br>*China* | "health authorities need to identify high-risk groups according to social population information to carry out early psychological intervention" (p.7).<br><br>"the government and health authorities should provide accurate information on the epidemic situation, refute rumors in time, and reduce the impact of rumors on the public emotional state. Strengthening prevention and control measures can not only block the spread of disease but also provide a sense of security, thus bringing potential psychological benefits." (p.7)<br><br>"education authorities have developed online portals and web-based applications to provide lectures or other teaching activities" (p.7)<br><br>"health authorities can consider providing online or smart-phone-based psychological interventions" (p.7) | High-risk groups | Health authorities | In-person | Community | Covid-19 |
| ***Screening tools*** | Identify youth and families in need | | | | | |
| *Cui, Y., Li, Y., & Zheng, Y. (2020).*<br><br>*Mental health services for children in China during the COVID-19 pandemic: results of an expert-based national survey among child and adolescent psychiatric hospitals. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01548-x*<br><br>*Editorial (presents more detailed results of 2 recent experimental studies)*<br><br>*China* | "screening for PTSD may be necessary for some child patients who showed nightmares or unwanted memories of the trauma, avoidance of situations that bring back memories of the trauma, heightened reactions and so on. The content of the mental health regimen should include assessment, building of a therapeutic alliance, ranking infected children by the severity of mental and COVID-19 symptoms, formulating and enacting individual psychological plans, and providing crisis invention and any appropriate medication." (p.4) | Children | Mental health care professionals ('child psychiatrists can work directly with the young patients and their families' but it doesn't specify for Beijing Children's Hospital who offered the online medical services including the mental health services by an app in smartphone) | Online work model | Online for the Beijing Children's hospital AND online or in-person for the recommended intervention. | Covid-19 |
| *DeLuca, J. S., Andorko, N. D., Chibani, D., Jay, S. Y., Rakhshan Rouhakhtar, P. J., Petti, E., ... & Akouri-Shan, L. (2020).* | "CHR symptom monitoring can be regularly used to promote engagement, individualize treatment, and detect symptom worsening or transition to psychosis during the COVID-19 pandemic." (p.310) "Clinicians can utilize commonly used tools, such as the Prime Screen-Revised and the Prodromal Questionnaire-Brief. Use of the more in-depth Structured Interview of | Youth | Clinicians | Telepsychotherapy (videoconferencing, telephone, online social | Online | Covid-19 |

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| *Telepsychotherapy with youth at clinical high risk for psychosis: Clinical issues and best practices during the COVID-19 pandemic. Journal of Psychotherapy Integration, 30(2), 304.*<br><br>*Literature Review*<br><br>*USA* | Psychosis-Risk Syndromes (SIPS) may also be warranted in certain situations via videoconferencing." (p.310) | | | therapies, avatar therapies, and smartphone apps) | | |
| | "Clinicians should [...] assess for suicide risk frequently (e.g., obtaining information from multiple sources including: online assessment, self-report questionnaires, consulting with others in the client's social support network when possible, and documenting these efforts), including asking about the specific emotional impact of the COVID-19 pandemic on suicide risk. Clinicians should also obtain and confirm the address and location of the client at the beginning of each session, obtain at least one emergency contact from the client, review updated safety procedures with the client (to establish empowered collaboration with the client), and create an updated safety plan with the client." (p.314-315) | | | Online assessment | | |
| *Sprang, G. & Silman, M. (2013).*<br><br>*Posttraumatic stress disorder in parents and youth after health-related disasters. Disaster Medicine and Public Health Preparedness, 7(1), 105-110.*<br><br>*Original Research*<br><br>*USA* | "These tools can easily be integrated into the standard public health response to a pandemic: Available screening tools have between 4 and 19 questions, take an average of 30 to 40 seconds to complete, may be administered by a range of professionals and para-professionals, and are free and publicly available (see www.nctsn.org). Further, using a screening tool for traumatic stress enables comparison of symptom profiles at different times for the same client and between individuals and groups of clients based on established national norms. Integration of this trauma screening tool into pediatric health care settings can be accomplished with little impact on service providers or patients" (p. 109) | Families | Healthcare professionals | In-person | Hospital | H1N1 swine flu and SARS |
| ***Social and community support*** | | | | | | |
| *Koller, D. F., Nicholas, D. B., Goldie, R. S., Gearing, R., & Selkirk, E. K. (2006).*<br><br>*When Family-Centered Care Is Challenged by Infectious Disease: Pediatric Health Care Delivery During the SARS Outbreaks. Qualitative Health Research, 16(1)*<br><br>*Original Research*<br><br>*Canada* | opportunities to promote family-to-family support should also be considered. Parents of children facing similar situations can support one another. This form of support can only be initiated once both participants agree to disclosure. Work collaboratively. Health care providers should work collaboratively to over-come challenges associated with implementing family-centered care during infectious outbreaks. Opportunities to meet and discuss issues related to caring for isolated pediatric patients could lead to the development of integrative and adaptive approaches. For example, multidisciplinary health care team members (e.g., child life specialists and social workers in consultation with nurses and/or physicians) can work together to support psychosocial interventions that not only target patient and family needs but also support health care colleagues." (p.57-58) | Children and parents | Healthcare professionals | In-person | Hospital | Health education programs |
| *Koller, D., Nicholas, D., Gearing, R., & Kalfa, O. (2010).*<br><br>*Paediatric pandemic planning: children's perspectives and recommendations. Health and Social Care in the Community, 18(4), 369-377.*<br><br>*Original Research*<br><br>*Canada* | participants identified that the presence and support of family and friends was a priority (p.373) | Children and parents | Healthcare professionals | In-person | Pediatric hospital | SARS |
| *O. E. C. D. Combatting COVID-19's effect on children. (2020)*<br><br>*Grey Literature*<br><br>*N/A* | "schools and teachers should share information and feedback on what parents can do to support learning at home, and maintain contact as much as possible with the children most at risk of being left behind or dropping out of school. Specific targeted material and pedagogical support should also be provided to children whose families do not have the necessary means to access distance learning or to children who usually receive special assistance for their learning (as is the case for example with some children with attention deficit disorders, children with disabilities, migrant children, etc.)." (p.24) | Parents | Schools/teachers | Not specified | At home | Covid-19 |
| ***Other recommendations*** | | | | | | |

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| *Ghosh, R., Dubey, M. J., Chatterjee, S., & Dubey, S. (2020).*<br><br>*Impact of COVID-19 on children: Special focus on psychosocial aspect. education, 31, 34.*<br><br>*Review*<br><br>*India* | Schools authorities should plan re-styling academic calendars and test schedules to enfeeble the effects of school closure. (p.231) | Schools | Government and non-government organizations | Not specified | Schools | Covid-19 |
| *Hawke, L. D., Barbic, S. P., Voineskos, A., Szatmari, P., Cleverley, K., Hayes, E., ... & Darnay, K. (2020).*<br><br>*Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples. The Canadian Journal*<br><br>*Original Research*<br><br>*Canada* | Financial supports | Youth | Service providers | Not specified | Community | Covid-19 |
| *Imran, N., Aamer, I., Sharif, M. I., Bodla, Z. H., & Naveed, S. (2020a).*<br><br>*Psychological burden of quarantine in children and adolescents: A rapid systematic review and proposed solutions. Pakistan Journal of Medical Sciences, 36(5), 1106.*<br><br>*Literature Review*<br><br>*Pakistan* | Overall: "honest and age and developmentally appropriate communication, ensuring routines and minimizing disruption in education, encouraging healthy lifestyle, enhancing positive relationship between families, managing parental stress and incorporation of health promotion activities in school curriculum" (p.1115)<br><br>1- School based intervention (universal intervention to specialized targeted interventions) --> no details given | Children | School | In-person (most likely) | School | Quarantine, Covid-19 |
| *Moore, S. A., Faulkner, G., Rhodes, R. E., Brussoni, M., Chulak-Bozzer, T., Ferguson, L. J., ... & Tremblay, M. S. (2020).*<br><br>*Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey. Internation*<br><br>*Original Research*<br><br>*Canada* | Public health officials support parents by implementing safe physical distancing measures that provide extra space for everyone to walk, cycle, wheel, and scoot. This could include temporary reallocation of roadway space and keeping expansive green spaces open." (p.9) | Parents | Public health officials | Not specified | Community | Covid-19 |
| *Zhou, J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X. & Chen, J. X. (2020).*<br><br>*Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. European Child & Adolescent Psychiatry. https://doi.org/10.1007/s00787-020-01541-4*<br><br>*Original Research*<br><br>*China* | "Positive and optimistic attitude towards the development of COVID-19 epidemic was also a protective factor against depressive and anxiety symptoms. The epidemiology of infection rates and deaths likely affects depressive and anxiety symptoms. (p.7) | Not specified | Not specified | Not specified | Not specified | Covid-19 |