



Original article

Psychopathological consequences of the COVID-19 pandemic on the mental health of children and adolescents worldwide

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Summary

The COVID-19 pandemic has had a massive impact on world's population, including children and adolescents. National containment, including lockdown and the main restriction measures such as closure of schools, educational institutions and areas of activity has led to deep changes in daily life and routine activities as well as bringing significant health, economic, financial and social consequences. The nature and extent of the effect on the mental health of children and adolescents depend on numerous vulnerability factors. In the present work we aim to address the mental health disorders induced by the COVID-19 pandemic in children and adolescents and subsequently its impact on the pre-existing neuropsychiatric disorders in the population of this age group. Finally, we report intervention strategies to deal with this situation and the advices of the experts.

The general framework

The COVID-19 pandemic has had a strong impact on the lives of the entire world population, including children and adolescents, in an unexpected way in history. There are more than 2.2 billion children in the world, representing about 28% of the population and those between the ages of 10 and 19 representing 16% overall¹. Worldwide, the main ways of preventing COVID-19 infection have been isolation and social distancing². Since January 2020, several countries have carried out regional and national containment measures or complete lockdowns. Main restriction measures were the closure of schools, educational institutions and areas of activity. According to UNESCO monitoring, more than 160 countries have implemented nationwide closures, involving more than 87% of the world's student population³, leading to radical changes in daily life and routine activities^{4,5}, as well as bringing significant health, economic, financial and social consequences⁶. In addition, the huge pandemic induced changing of life-styles and the fear of contagion have had a negative effect on the lives of children and adolescents⁶⁻¹¹, together with long-term consequences for this section of the population², to a greater extent than for adults. The nature and extent of the effect of the COVID-19 pandemic on the mental health of children and adolescents depend on numerous vulnerability factors such as evolutionary age, level of education, special needs, pre-existing mental health conditions, economic disadvantage and quarantine of the child and/or parent for the prevention of contracting the infection.

The negative effects resulting from the pandemic situation have been detected even before the baby is born. During pregnancy, parents, especially pregnant mothers, may experience anxiety and depression¹² that could affect the health

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Conflict of interest

The Authors declare no conflict of interest.

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of the unborn child¹³. A particular situation is that of women who have contracted COVID-19 infection during pregnancy. A recent study conducted in Turkey reported that 14.7% of women who had had a pregnancy marked by COVID-19 infection developed postpartum depression within 48 hours of birth and that the mother-baby bond in depressed women was more evident when compared to that of women who had not developed a mood disorder¹⁴. Furthermore, infection in pregnant woman often causes a mother-child separation after childbirth. A Chinese study¹⁵ showed a link between separation days and an early developmental delay in many domains such as communication, coarse drive, problem-solving, personal-social and social-emotional development. In addition, although there was no evidence of a connection between mother-child separation and maternal mental disorders, the same study found that more than a fifth of patients had developed Post-Traumatic Stress Disorder (PTSD) or depressive disorder 3 months after childbirth or abortion. Pandemic and lockdown in children and adolescents have had a major impact on emotional and social development. In particular, younger children (3-6 years) seem to have shown a greater chance of expressing symptoms of attachment and fear due to the possible infection in older family members (6-18 years). The latter, on the other hand, have easily developed problems of inattention, together with the attitude to request continuously information about COVID-19. Beyond these subtle distinctions, serious psychological conditions of increased irritability, inattention and separation anxiety have been highlighted in all children regardless of their age group¹⁶, together with sleep disturbances, nightmares, poor appetite, insecurity and a sense of isolation¹⁷. Globally, pre-lockdown learning for both children and adolescents mainly involved interaction with teachers and peer groups. Restriction measures such as home confinement in children and adolescents is associated with uncertainty and anxiety related to the interruption of their education, physical activities and socialization opportunities¹⁷. The prolonged absence of a structured and organized setting, such as the school, resulted in routine changing, boredom and lack of innovative ideas to engage in the various academic and extracurricular activities. Some children have shown a reduction in mood tone due to the fact that they can no longer play outdoors, meet friends and engage in school activities¹⁸⁻²⁰. They have also developed phenomena of attachment and dependence towards parents. These limitations have had immediate consequences on learning²¹ and children may encounter difficulties in returning to school and re-establishing relationships with teachers and classmates, with the potential risk of a long-term negative effect on their overall psychological well-being¹⁸. Older teenagers and young people have experienced concern about the cancellation of exams, exchange programs, academic events¹⁸ and their working future²². During the pandemic, the adolescent also saw an increase of shopping activities²³ and accumulation phenomena²⁴,

as a survival mechanisms looking for security in material goods.

In addition, because of the restriction measure, an increase in internet and social media use has been recorded in children and adolescent, with the risk of compulsively use and addiction to the Internet, accessing questionable content and being more easily bullied or abused^{25,26}. Moreover, during the lockdown, while schools were closed and legal and preventive services not fully functioning, children had experienced more possibilities of violence, abuse and harm caused by a possible hostile domestic environment²⁷. Confinement could be a trigger for intra-family violence, as families have found themselves spending almost all of their days at home in a stressful situation that can cause emotional distress in parents and consequently less attention towards children, with a more punitive behaviour towards them. Several countries have reported an increase in domestic violence²⁸. Women and girls have also reported to be more exposed to gender-based violence, including sexual violence²⁹.

Excessive internet and social media use seem to be related to depression, anxiety, psychological discomfort³⁰ and sleep problems³¹.

Trends like poor physical activity and the tendency to an unhealthy diet, with the prevalence of ultra-processed foods, have been reported during the COVID-19 pandemic among the population of children and adolescents in many countries of the world³².

As a mechanism of dealing with stress, some authors point out to the possibility risky behaviors such as drug abuse and dangerous sexual relationships³³. The same can happen for the development of gambling addiction.

One in six children between the ages of 2 and 8 show neurological, behavioral or emotional development difficulties³⁴. These children, suffering from autism, Attention Deficit Hyperactivity Disorder (ADHD), cerebral palsy, learning difficulties, developmental delays and other behavioral and emotional difficulties, have peculiar needs and, together with their families, have experienced major trouble during the pandemic and lockdowns.

Severe lockdown, fear of infection and related consequences have worsened symptoms even in patients with other psychiatric disorders. Adolescents with mental health problems are less able to tolerate a lockdown than their peers who are not affected by such pathologies³⁵. The interruption of psychological and/or institutional assistance represent an important adverse factor. A survey involving 2111 adolescents with a history of psychiatric disorders in the UK reported that 83% agreed that the pandemic had worsened their disorders and that 26% had had difficulty accessing treatment and psychological support³⁶.

Social inequality has contributed to the risk of developing mental health problems. The pandemic and lockdowns have led to a global economic crisis, worsening pre-existing social inequality. An increasing number of poor families have lost their daily wages, developing frustration, feelings of helplessness, conflictuality and violence. As result,

children have become more vulnerable to depression, anxiety and suicide^{17,37,38}. Finally, the closure of schools combined with economic crisis could expose children to the risk of child labour and exploitation, especially for those without parents or guardians³⁹.

During the lockdown, many schools offered students distance or online training courses. However, disadvantaged children could miss these opportunities, in particular if they cannot access to the online material to study. In disadvantaged families, girls, compared to boys, have no access to computer and related education platforms⁴⁰. Due to this gender inequality, an increasing number of girls could drop out of school when normal teaching activities resume^{25,41}.

A good socio-economic level of the family is protective for the mental health of both parents and children⁴².

Despite the numerous data on adults, data concerning on the development of psychiatric disorders in adolescents during economic crises are deficient. In adults periods of economic crisis are associated with an increase in suicides and depression, anxiety and addiction disorders⁴³. During the economic crisis in Greece, teenagers reported more tensions and lack of harmony within the family⁴⁴.

COVID-19 infection occurs less frequently and is less aggressive in children and adolescents. However, cases of infection and related quarantine have been reported worldwide in minors. In addition, during the quarantine parents and children have been separated. Although quarantine measures are strongly necessary to deal with the pandemic, they can have significant negative psychological effects⁴⁵. Children in isolation are at risk of developing mental health problems due to the lack of the relationship with the key figures during phases of growth^{17,25}. They could develop feelings of sadness, anxiety, fear of parental death and isolation in the hospital. These findings could have an important relevance on their psychological development^{34,46,47}. Finally, the condition of isolation can even trigger the development of hallucinatory symptoms⁴⁸. Death of one or both parents, as a frequent occurrence during this pandemic, especially in the most affected areas, represents a risk factor for depressive disorder in adolescents⁴⁹. At the same time adolescents with a history of depression are exposed to prolonged psychological suffering in relation to the sudden loss of a parent^{50,51}, with the risk of an exacerbation of the pathology. In conclusion, an alarming phenomenon is spreading, as the media are constantly reporting: a significant increase in self-harm practices and suicide attempts among young people⁵².

In the following paragraphs, this paper examines the mental health disorders induced by the COVID-19 pandemic in children and adolescents and subsequently its impact on the pre-existing neuropsychiatric disorders in the population of this age group. Finally, we report intervention strategies to deal with this situation and the advices of the experts.

Pandemic-induced disorders

Sleep disorders

According to the first studies carried out on sleep disorders of preschoolers during the first phase of the COVID-19 pandemic, after a critical period corresponding to the first month, there is a decreased sleep quality, afterward there would be a stabilization of the night routine. However, sleep quality never match that of the pre-lockdown period⁴⁵.

Subsequent studies have revealed a significant increase in sleep disorders among young children⁴⁵.

A Chinese study⁵³ revealed a high prevalence of sleep problems in adolescents and young adults, particularly among high school and university students. The highest levels of insomnia were found in combination with anxiety, depression and pessimistic viewing of the pandemic.

Sleep disorders result as a relevant problem not to be underestimated during the current pandemic: they represent a risk factor for the development of mental illness in children and adolescents with neuropsychiatric disease are very vulnerable to as well⁵⁴.

Anxiety disorders and mood disorders

To date, depression and anxiety are the most common mental disorders in children and young people, with significant functional impairment and associated risk of suicide⁵⁵.

A recent Chinese study suggested an early increase in the prevalence of COVID-19-related issues, although the full impact is currently unknown⁵⁶; the potential evolutions of this framework will be better assessed as events evolve.

During this pandemic many child and adolescent had to interrupt many of the activities they regularly and daily carried out, with the possibility of worsening depressive symptoms and strengthening the social withdrawal, anhedonia that represent the symptomatologic core of these disorders⁵⁵.

In addition, many of them are experiencing a new period of insecurity: concerns about the health and work of their relatives, issue of death, sudden separation from friends, and school closure⁵⁷. In this context, parental figures play a fundamental role in guiding, protecting the youngest and giving physically and emotionally support. Therefore, stressful events of life can lead to emotional distress even in parents, resulting in less availability towards children²⁷. A survey of 8079 Chinese teenagers aged 12-18 found a high prevalence of symptoms related to depression (43%), anxiety (37%), depression and anxiety combined (31%)⁵⁸. In a Spanish sample of university students, a considerable proportion (34%) showed depressive symptoms during the first few weeks of confinement⁵⁷.

Based on the data currently available, an increase in the incidence of mood and anxiety disorders associated with the COVID-19 pandemic is expected.

Providing mental health care for children and young people

in the near future will be crucial. In recent years, different innovative approaches have spread among mental health services, such as Telemedicine and Telepsychiatry: randomised and controlled studies indicate that Internet-based care can be effective in treating young people with depression^{59,60}, in order to adapt the traditional elements of therapy to the new needs dictated by the pandemic situation. In addition, a strategy could be helping families and parents to identify distress situations and to propose new forms of creative activities for their children as an alternative to those precluded by the current safety regulations⁵⁵.

Post-traumatic stress disorder

In this pandemic, in all age groups an increased risk of developing PTSD has been recorded. A study of American families exposed to H1N1 and SARS-CoV viruses reported the onset of PTSD in 30% of children exposed to quarantine measures⁶¹. The prevalence of Post-Traumatic Stress Symptoms in the most affected areas of China a month after the COVID-19 outbreak was 7%⁶².

These disorders have a potential impact on the mental health of children and adolescents, affecting the physiological development of the brain, acting at the level of the fronto-limbic circuits, and thus determining greater responsiveness to threats and weaker regulation of the emotions⁶³.

Childhood and adolescence are crucial periods of brain development and that is why the psychological effects of traumas related to the disasters experienced in early life can be long-lasting⁶⁴.

Confinement, indispensable for the control of the COVID-19 pandemic, represents an important stress factor in the lives of children and adolescents. It has led to a deterioration in daily routine, social restrictions, inability to attend school, and feeling uncertainty towards psychophysical well-being^{65,66}. These negative elements resulted in a greater propensity of developing an Acute Stress Disorder, an Adjustment Disorder, or PTSD⁶⁶. An increase in the incidence of the latter is supposed to develop in the long term, even if it is difficult to predict the size of this phenomenon⁶⁷.

In order to reduce the risk of developing these disorders, it is particularly important to promote the well-being and safety of children and adolescents, providing adequate reassurances and information, increasing moments of dialogue to improve understanding of what is happening and relieve anxiety. As the main caregivers, parents represent the figures who can better perform this function⁶⁸.

Effects of the pandemic on pre-existing neuropsychiatric disorders

special needs: autism spectrum disorders and attention deficit hyperactivity disorder

It could be particularly difficult for children with special needs to fully understand the changes due to the

current pandemic. They may also have great difficulty in expressing their emotions, like fear, anxiety or frustration for the unknown⁶⁹.

In patients with Autism Spectrum Disorder (ASD), the pandemic, the suspension of treatment and lockdowns can have a very important impact⁷⁰. Disruption of the life routine is particularly problematic for these subjects, since inflexible behaviors, habits and rituals are often very important symptoms. Children with ASD find significant difficulties to adapt to changes, becoming more anxious, agitated and exasperated. They could also show an increase of their behavioural problems and present acts of self-harm. Before the pandemic, thanks to special schools, they had learned to develop a routine to follow daylong^{71,72}. Managing autistic children at home without the support of centers and specialized operators has represented a big challenge for parents⁷³, especially those with mental health disease⁷⁴, like depressive symptoms⁷⁵. Moreover, parents often lack necessary professional skills. With the closure of special schools and day centres, these children no longer have access to material resources, interactions with peer groups or the opportunity of learning and developing important social and behavioral skills⁴⁷. Acquired skills could also be declining¹⁸. Children with Specific Learning disorders often find difficulties in learning through online sessions⁷¹. The difficulties are also noticed in patients with high functioning autism, who easily acquire academic notions through forms of remote learning, but not social rules and norms⁷⁶. It is therefore necessary that health professionals should take care of the mental and physical health of the children's parents providing them with useful advice for managing their children at home during the lockdown phases⁷⁷. Subsequently, the development of innovative approaches to ensure continuity of care is essential, also providing programs in order to look after the needs of children and their families. The creation of a virtual helpline and health communities, such as hospitals and care centers, supported by a multidisciplinary team, should be considered⁷⁰.

An increase of ASD cases related to COVID-19 infection contracted during pregnancy has been hypothesized, as long as the COVID-19-induced reduction of IGF-1, which also seems to be involved in the pathogenesis of autism⁷⁸. Children with ADHD struggle to conceive what is happening around them, trying to understand the input they receive from their caregivers. Moreover, an improvement in anxiety related to lower school tension and flexible hours seems to be observed in these patients⁷⁹, even if it is difficult for them to remain confined to a place and not touch things that could be infected. Being forced in quarantine, staying in one place, increases their hyperactivity and leads to the development of opposition/provocation attitudes and emotional explosions⁷⁹, and in some cases even to a reduction of mood tone⁸⁰. Involving these children in significant activities became difficult⁷². Implementation of interventions focusing on monitoring parents' mental health and their education in managing the problems

caused by the limitations imposed by the pandemic on children with ADHD should be considered ⁷². Early attempts in training group of tele-psychology are providing good results ⁸¹ and the use of tele-psychiatry also seems to be promising ⁸². In this particular situation, the risks and benefits of drug therapy should also be carefully considered ⁷². Some studies report significant difficulties with forms of remote learning ⁸³. According to others ⁸⁰ hyperactivity symptoms would decrease as the hours of study in online mode increase: this represents a factor that has to be considered for the management of this problem both in this specific situation and in the future.

Again, an increase in the incidence of ADHD cases is expected, as long as the residual effects of COVID-19 disease could selectively affect brain regions underlying attention and motivation and which are insufficient in ADHD, as had already happened during the 1918 flu pandemic ⁸⁴.

Obsessive-compulsive spectrum disorders

Obsessive Compulsive Disorder (OCD) is a psychiatric disorder characterized by unwanted thoughts, images or impulses and by mental acts or repetitive behaviors that occur in response to anxiety or unpleasant feelings. It affects about 0.5-3% of children and adolescents ^{85,86}.

In children and adolescents, OCD often has an important impact on daily life ⁸⁷ and is known to be a trigger for OCD symptoms or may contribute to a worsening of symptoms in people already affected ^{88,89}.

Although there are studies that have clearly reported cases of adult patients with OCD who have had a worsening of symptomatology during the COVID-19 pandemic ²³, the effects in young populations suffering from OCD have not been thoroughly examined

However, it is suspected that children with OCD among those with mental disorders are supposed to be the most affected by this pandemic. Due to obsessions and compulsions related to contamination, accumulation and somatic concern, they are expected to experience greater discomfort, also because cleaning is a key protective measure against the spread of COVID-19 ⁹⁰.

However, the worsening of anxiety and depressive symptoms, as well as avoidance behaviors ⁹¹ and an increase in contamination obsessions and cleaning/washing compulsions ⁹² have been documented.

The World Health Organization has suggested a number of possible preventive approaches for young people with OCD:

- limit or avoid over-exposure to issues related to the COVID-19 pandemic reported by the media or social environments in order to prevent fear and concern;
- encourage parental communication skills to address their children's concerns;
- anticipate the worsening of any symptoms of OCD;
- encourage adherence to treatments.

Eating disorders

It is well known that Eating Disorders (ED) represent a pathology that is able to determine important consequences not only at the psychiatric level, but also at the medical and psychosocial ones.

Anorexia nervosa, for example, is often complicated due to immunodeficiency caused by chronic malnutrition ⁹³, which generally leads to greater vulnerability to infections. EDs affect about 2.8-10.5% of adolescents and young adults ⁹⁴⁻⁹⁷. During the COVID-19 pandemic, in this category of patients and in particular in those with anxiety related to their state of health and the fear of "contamination", commonly found in this population ⁹⁸, a worsening of the disorder in question was observed ⁹⁹.

Anxiety can increase the difficulties in this group of patients in controlling their eating behavior ¹⁰⁰.

A study conducted in Spain ¹⁰¹, reported that a considerable number of patients with ED and belonging to the National Health Service (41.9%) presented an exacerbation of symptomatology during lockdown. In particular, food restriction, excessive exercise, concerns about fear of weight gain and increased emotional symptoms have been reported.

The role of stressful events in inducing a worsening of symptomatology in patients with EA is well known ¹⁰² and it seems to be closely related to "intolerance towards uncertainty" that characterizes these patients ¹⁰³ with a psycho-pathological function of primary importance during this pandemic. In addition, fears of losing control on various life situations, postulated by some as an etiological factor of these disorders, can also trigger an increase of weight control behaviors as a compensation mechanism ¹⁰⁴.

In view of this, it is clear how critical a diagnosis and effective treatment are for these patients, especially during a delicate period like the COVID-19 pandemic. The use of Telemedicine web-based platforms could be a valuable therapeutic tool ¹⁰⁵.

Induction or deterioration due to the pandemic of substance and behavioural addictions

During the pandemic, digital entertainment increased dramatically: among games and apps, the volume of downloads reached record levels ^{106,107}.

Thanks to quarantine and staying at home, gaming not only represents a diversion but can also be used to cope with the psychological stress of the pandemic, thus being able to contribute to the risk of developing gaming disorders. In times of great distress such as a pandemic, people make efforts to find tools to deal with anxiety and stress, since the most popular activities commonly used to distract themselves from daily problems, such as participation in sporting events, celebrations and gatherings of various kinds have become prohibited or impassable. Given these limitations, gaming can be used as a way to escape

from unpleasant and painful emotions, shaping up as a short-term adaptive coping strategy. However, on the long term, instead of a habitual coping strategy at the expense of more beneficial alternatives for health, it can become maladaptive and expose to the risk of developing a gaming disorder or other problems¹⁰⁸. School closures, the limitation of many activities and social interaction have particularly affected younger subjects, increasing and favoring the isolation in their rooms playing video games. By the way, teenagers should be adequately monitored in their gaming activities in front of a screen, particularly taking care of their physiological sleep-wake rhythm¹⁰⁹. About the alcohol consumption, a study¹¹⁰ conducted on adolescents and young adults in the weeks immediately before and after the Italian lockdown and in the same period of 2019 resulted indicative. Young people's hospital treatment was investigated for alcohol abuse, psychomotor agitation and other mental problems. The frequency of severe alcohol poisoning increased from 0.88% during the last part of the block to 11.3% after the end of the block. Comparing these figures with those of 2019, a big difference emerged, as alcohol poisoning in the previous year stood at 2.96%. The average blood alcohol level was 2.4 g/L and 32% of the study sample had a combined intake of alcohol and drugs, mainly cannabinoids. This may have been determined by an uncontrolled emotional response at the end of the lockdown, associated with the resumption of social interactions with peers. Based on this experience, the authors suggest that both pediatric and adult services should be prepared for a possible spike in alcohol-related emergencies.

Another study¹¹¹ highlights the patterns, contexts and correlations of substance use in adolescents during the COVID-19 pandemic. For most substances, the percentage of users has decreased; however, the frequency of alcohol and cannabis use has increased. Although the highest percentage of adolescents had consumed the substances alone (49.3%), many used them with peers through technology (31.6%) and, surprisingly, also "face to face" (23.6%). It has also been shown that the first mode was more used by adolescents with medium-high popularity among peers, while the latter by those with low self-declared popularity. This shows that adolescents are very sensitive to the influence of their peers in being approved, accepted or rejected^{112,113}.

Finally, it has been noticed that the highest percentage of adolescents was found to using substances alone (49.3%); this is a surprising fact since the use of substances during adolescence typically occurs among peers¹¹⁴. Using in solitude was found to be related with the fear of contracting COVID-19 infection and to arousing of a depressive symptomatology as a result of the period of social isolation.

Expert advice and intervention strategies

Since every disorder and every patient represents a peculiar case, requiring specific and dedicated attention,

several general considerations can be made regarding to what could be the best measures to be implemented in the immediate and future in order to ensure the psychological well-being of children and adolescents who are facing this pandemic with such a strong impact that on humanity. It is also essential to identify possible intervention strategies to ensure the continuity of care for those suffering from neuropsychiatric problems, whether or not this pandemic situation is posthumous.

With the aim of universal prevention and mental health promotion, International Organizations and advisory bodies have issued various guidelines that consider children's mental health needs during the COVID-19 pandemic. Parents were therefore advised to interact constructively with children by giving them explanations about the current pandemic, based on their level of maturity and their ability to understand the ongoing crisis, and leading them to understand their social responsibilities. Parents should also plan their children's homework, engage them in various household activities, educate them to follow hygiene habits and social distances, engage in indoor games and creative activities with them¹¹⁵. The activities of children and adolescents should include a well-structured home education which reproduces the regularity normally imposed by the school. In order to cope with the closure of schools, children should be encouraged to socialize with their friends and classmates through digital forums, under the supervision of an adult¹¹⁶. While it is true that the increase in "screen time", inevitable in this period, can be a harmful factor for health, it could also be a valuable tool. Typically associated with sedentary lifestyle, it could instead promote the practice of physical activity through platforms that perform online lessons, applications for exercises on mobile devices or video games that have a component of physical activity. The increase in the latter, together with the precaution of not spending the evening hours in front of the screen, could also have a beneficial effect on sleep (Nagata et al., 2020). If combined with correct eating habits, physical activity could also have positive effects on weight control, immune system and mental health³².

It is therefore strongly recommended to promote balanced lifestyles, in particular sleep patterns (Guichard et al., 2020). The World Health Organization has published recommendations aimed at adolescents to help them cope with stress: identify normal emotional reactions, engage in dialogue and social exchange, maintain appropriate lifestyles and social contacts, avoid smoking, alcohol and other drugs, seek the help of necessary health workers, seek information from reliable sources, limit media exposure, develop strategies for emotional regulation¹¹⁷. Beyond prevention, it is crucial to plan strategies to improve access for children and adolescents to mental health services during and after the current crisis. It is equally important to support parents and monitor their mental health¹¹⁸. It is therefore necessary to establish a direct and digital collaborative network involving parents, teachers, pediatricians, community volunteers, the health system

and policy makers. Adapting the mental health system with integrated services designed for young people can be a big challenge¹¹⁹. In many countries, rehabilitation services and mental health centers for adolescents have closed or reduced their activity due to lockdown^{47,118}. This inevitably led to a period of discontinuation of care, but it was also the stimulus to develop new therapeutic methodologies, such as psychiatry consultations, psychotherapy, psychoeducational interventions for children, adolescents and families, and rehabilitation programs promoted through the use of tele-psychiatry^{8,120,121}. The first results obtained with the use of these therapeutic innovations are encouraging, it is now necessary to work to make them more and more functional and usable by everyone¹²².

Finally, in this vast and complex scenario, we must not forget the most basic resources and possibilities for intervention: some studies¹²³ have highlighted the remarkable, healthy and certainly unexpected emotional balance of the new generations facing a sudden and unpredictable phenomenon capable of endangering life itself. While understanding the seriousness of the phenomenon, adolescents still seemed to express an excellent ability to manage situations of insecurity and to face unfavorable and adverse conditions by adapting to the new routine and finding alternative and innovative ways to meet their social and psychological needs. This capacity is an important resource, which should be enhanced by interventions aimed in promoting mental health during the current health emergency, in order to allow the acquisition, by children and adolescents, of a good degree of resilience¹²⁴ that allows their healthy psychological development in the years to come.

With regard to the containment of violence, social connection is an important strategy during periods of isolation¹²⁵. In addition, information on services available locally, such as tele-help provided by healthcare professionals, must be promoted and made well known to everyone, to improve safety and connect people with relevant support service¹²⁶.

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