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The impact of COVID-19 on adolescents' mental health in Catalonia (Spain): a qualitative study

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THE IMPACT OF COVID-19 ON THE MENTAL HEALTH OF ADOLESCENTS IN CATALONIA

ABSTRACT

This study aimed to understand the experiences of adolescents regarding the perceived impact of COVID-19 on their mental health in Catalonia (Spain). A qualitative exploratory methodology was used with a purposive sample of 30 high-school students regarding their experiences of the self-perceived impact of COVID-19 on their mental health. Data were thematically analyzed using Braun & Clarke method. Three main themes emerged from the data: (i) the challenge of living confined, (ii) the footprint of COVID-19 on adolescents’ mental health, and (iii) school dynamics during the lockdown. The COVID-19 pandemic negatively impacted adolescents’ mental health, and adolescents perceived a lack of emotional support from educational centers. Therefore, incorporating emotional support in educational centers and offering emotional self-management tools to young students should be a priority. School nurses can play an essential role in recognizing and managing emotional needs and being the natural link between educational and primary care centers.

Keywords: Mental Health; Adolescents; COVID-19; Nursing school; Primary care.

INTRODUCTION

The coronavirus disease (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was declared a pandemic on March 11th, 2020. Many countries followed precautionary principles and imposed restrictions on citizens to limit the spread of the virus, such as promoting physical distancing, limiting the movement of people, and closing educational institutions and workplaces (Heavy et al., 2020). To control the contagion of COVID-19, the Spanish Government declared, on March 14th, 2020, a State of Alarm and confinement for the entire population (Pizarro-Ruiz et al., 2021).

From March 14th to April 26th, 2020, the population of Spain was confined at home for six weeks. To control the spread of COVID, the Spanish government announced the closure of schools and colleges throughout the country on March 14th. This closure was maintained until September 14th, 2020, when adolescents and children returned to face-to-face classes at educational centers, which led to essential changes in the management and maintenance of classes for both children and adolescents. In addition, online teaching methods were adopted by most educational centers, causing changes in routines and negatively influencing emotional well-being and organization in the learning acquisition of teenagers (Tarkar, 2020).

Factors associated with mitigation measures, such as social distancing, family discord, school closures, fear of the future, and quarantine, altered the lives of adolescents (OECD, 2020; Bosch et al., 2022). These disruptions include changes in routines and breaks in the continuity of learning associated with school closures. In addition, early research has indicated an increased impact on mental health in adolescents, presenting higher levels of depression and anxiety and a greater likelihood of post-traumatic stress symptoms (O'Sullivan et al., 2021; Pizarro, 2021; Wang et al., 2020; Zhou, 2020).

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Previous evidence with the adolescent population indicates high levels of stress, anxiety, and other psychosomatic symptoms due to COVID-19, identifying protective factors such as being able to talk to friends and sleeping for an adequate time (Chen et al., 2021; Cohen, 2021). Risk factors include having suffered from COVID-19 or having family members or acquaintances previously diagnosed with COVID-19 (Wang et al., 2020). The dimension of fear or anxiety during the pandemic has been related to high uncertainty and concern about losing close people, with younger people being the most affected (Ozamiz-Etxebarria et al., 2022). On the other hand, other studies also identified the loss of social contact, changes in social relationships, loneliness, and anxiety about homeschooling as factors associated with worsening adolescents' mental well-being (McKinlay et al., 2021; O'Sullivan, 2021). In addition, families face multiple challenges: reorganization of daily life, coping with the stress of quarantine and social distancing, homeschooling, increased pressure to work from home and care for school-aged children at home at the same time, reduced freedom and privacy, and economic concerns due to business closures (Pizarro-Ruiz, 2021; Fegert et al., 2020).

Regarding the emotional consequences of health events, a preliminary study conducted in the province of Shaanxi (China) during the second week of February 2020, in which the Chinese population was confined, showed that the most common psychological and behavioral disorders of 320 children and teenagers were bonding problems, distraction, irritability, and fear of asking questions about the pandemic. Furthermore, regarding differences according to age, children between 6 and 18 years showed more attention problems and persistent inquiry (Jiao, 2020).

Evidence from Europe with parents and adolescents evaluates the initial impact of quarantine in three countries (Spain, Portugal, and Italy), showing that parents see their children as more irritable, lonely, restless, and uncomfortable (Francisco et al., 2020).

Another study conducted in Spain on people between 19 and 84 years of age during the confinement period showed high levels of emotional impact, reflected by frequent problems in falling asleep and emotional symptoms such as worry, stress, hopelessness, anxiety, nervousness, and restlessness (Sandín et al., 2020). However, in Catalonia (Spain), evidence regarding adolescents' experiences managing the COVID-19 lockdown and its impact on mental health is scarce. These data are crucial to highlight the needs of students and the educational system, especially during health crises. Therefore, this study aimed to understand the experiences of adolescents between 12 and 18 years of age regarding the self-perceived impact of COVID-19 on their mental health.

METHOD

This was an exploratory qualitative study. This design allows one to understand a specific phenomenon in a specific context and is very useful when studying little-known phenomena (Polit & Beck, 2017). Within the 'Escoles Sentinella' (<https://escolessentinella.cat/escoles-sentinella/>) project, this study aimed to understand the experiences of adolescents between 12 and 18 years old regarding the self-perceived impact of COVID-19 on their mental health. Preliminary data collected during the 2020–2021 academic year already highlighted the negative impact of the confinement period, as part of the pandemic, on their mental health, especially among older schoolchildren. Thus, adolescents aged between 12 and 18 from nine sentinel schools belonging to different sociocultural contexts of Catalonia were invited to participate in the study. Heterogeneous sampling was sought to include diversity in the data, thus not limiting the results to a specific group or location (Robinson, 2014).

The study obtained the approval of Ethics Committee IDIAP Jordi Gol (reference 20/192-PCV). The centers then proceeded with the collection of information. Before starting

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the study, participants resolved their doubts with a research team member. Likewise, efforts were made to ensure that complete information was provided to participants and their families (in the case of minors) and that they signed an informed consent document before the interviews. All recruitment management was carried out entirely by team members of researchers through contact and direct coordination with educational centers.

Data were obtained through semi-structured interviews, a tool that allows personal information to be obtained in a guided manner with maximum credibility (Polit & Beck, 2017). The interview script was created based on previous evidence and the research team’s interests. Two mental health nurses agreed upon the first draft of the interview, an expert qualitative researcher, and two secondary school teachers. The interview script included the following topics: (for adolescents) description of previous and current mental health status, self-perception of the impact of COVID-19 on mental health, emotional management of the pandemic, barriers and facilitators to promoting mental health during the pandemic, perception of the impact of social limitations, perception of the impact of the virtualization of teaching, living with the family longer than usual, and the fear of becoming infected. In addition, parents and teachers were asked about their perception of their own children/students’ mental health status in adolescence; possible causes and consequences; barriers and facilitators to improvement, management, and promotion of mental health in school; and management of incidents related to adolescent mental health at school or home. It should be clarified that the interviews with parents and teachers were only used to confirm our conclusions and interpretations from the data collected from the adolescents.

Two authors interviewed students in the schools after coordinating with the center directors. All interviews were audio-recorded and conducted in a safe and private space within an educational center. Given the diversity of contexts, it was estimated that approximately 80 students would be interviewed. Nevertheless, this was reduced to 30 when

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3 data saturation was identified. In addition, three mothers and three teachers were interviewed
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5 to discuss the experiences described by the students. This action was fundamental in
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7 confirming the results' interpretation, including complementary views. All information
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9 regarding the identity and origin of the participants was kept anonymous. The transcripts were
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11 kept in a secure space within university facilities, protected with a security key, and with
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13 limited access to the qualitative research team.
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17 The data were analyzed following the thematic analysis method proposed by Braun
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19 and Clarke (2022). It includes six key moments: 1) familiarisation with the data, 2) coding, 3)
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21 categorization, 4) review of the categories, 5) definition and naming of the categories, and 6)
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23 writing the report. Two researchers performed this procedure in parallel to provide more
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25 credibility and consistency in results. In addition, Atlas.ti® software was used to facilitate the
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27 management of texts and data analysis, providing greater rigor to the procedure. Guba and
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29 Lincoln's (1981) criteria for credibility, transferability, dependence, and reflexivity were
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31 applied throughout the process. Consensus meetings were conducted with two expert
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33 researchers, constant discussions, and debriefing sessions. Reflective and critical thinking
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35 guided the entire process and provided robustness to the findings. Each data analyst reviewed
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37 the codes, themes, and interview quotations separately, and all disagreements were resolved
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39 through discussion. Finally, the findings were discussed with five experts in three sessions,
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41 and no changes were proposed.
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47 FINDINGS

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51 Twenty adolescents (17 girls) participated in this study. Further details on age are
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53 presented in Table 1. Three mothers (mean age, 45 years) and three teachers (mean age, 40
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55 years) also participated in the study. Pseudonyms were used to preserve participants' identity.

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Three themes and numerous descriptive codes emerged. The latter was reduced to 11 (Table 2). The data did not reveal gender or age differences in speech.

(Insert Table 2 here)

The challenge of living confined

The pandemic forced people to change their ways of being at home, and the period of confinement forced them, including young people, to remain in their homes without leaving. This situation caused adolescents to face new and challenging situations. One involved the effect of restrictions due to COVID-19. This situation generated adolescents’ feelings of a lack of freedom to carry out their usual activities. It also highlighted the impediment to visiting their most vulnerable relatives owing to the restrictions imposed. This restriction was accompanied by anxiety, given the impossibility of seeing their loved ones in person (beyond their parents). Likewise, adolescents also reported fear that their loved ones could contract the disease and they would die without being able to say goodbye to them. Being limited to going out or the impossibility of getting together with friends in bars or other leisure events caused the most significant impact, especially on those who, in normal conditions, stayed in their homes for a short time.

No, I mean, it affected me not being able to hug my grandparents and also checking the news to see if one of them has COVID-19 and something happened to them. (Susana, 15 years old).

On the third day, I was already falling to the ground, I no longer knew where to go, and my mother was upset, in a certain way, by the fact that I wanted to be upside down and did not know what to do (Gemma, 16 years).

Regarding daily life during confinement, the participants identified valuable learning spaces in family relationships, such as private spaces for meditation, cooking together or playing

board games. As a result, new spaces for sharing with the family were created, and activities focused on crafts and cooking recipes. As a result, the participants could positively value family time in daily life, consolidating ties with fathers/mothers and strengthening bonds with brothers and sisters. The main benefits of the confinement period were the consolidation of family ties and the promotion of spaces for reflection and personal rest. They also valued that the pandemic allowed them to acquire self-responsibility regarding the importance of self-care and susceptibility to contracting the disease. The pandemic situation forced the implementation of online home learning, which required self-learning behavior; however, the pandemic also promoted a sense of preference for self-learning behavior due to the fear of infecting loved ones during periods of high infection and mortality rates.

Before, you could not because the adults had to work and the little ones had to go to school or institute, so there were few hours to be together. So, it was good for us all to get together at home (Julia, 15 years old).

You have seen your family, well now you value seeing your family, your friends, being here on Sundays to play hockey, you value things much more than before. (Anna, 12 years old)

Regarding the strengthening of family ties, it was observed among the participants the need to take refuge in their parents and in the people with whom they shared daily life during the period of confinement. This behavior helped them to strengthen the bond with their parents and siblings; thanks to the confinement, the participants valued other ways of being and sharing with their families.

Well, first, I talk with my peers. Because I am a very close person with my peers, we are always together a lot, and with my brothers, too, the whole family more, but more with both of them. (Carlo, 13 years old).

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The footprint of COVID-19 on adolescents’ mental health

COVID-19 impacted negatively and positively on participants. Negative experiences were mainly resumed as episodes of destabilization that exacerbated their symptoms (especially among those who had already been diagnosed with a mental health disorder), and general mood changes among those with no previous mental health diagnosis. Moreover, adolescents highlighted adolescents’ main concerns going through a difficult stage due to the changes in this period. The difficulty lay in needing more preparation for higher education, especially in the 16–18 age group. Faced with this decision, some participants reported feeling very worried, helpless, and under high personal pressure in the face of success in their professional future. Furthermore, although most of the adolescents did not fear the impact of the virus on their bodies, as they believed that the disease develops mildly in adolescents, they said they were very concerned about the fear of infecting their most vulnerable loved ones.

I don't know, the things that happen to me affect me more, I feel sadder, more depressed, I think that has made me more vulnerable (Isabel, 16 years old)

Covid-19 doesn't scare me; I've been through it, and it wasn't that bad. I was sick for a few days but nothing much, like a cold. The same thing happened to my parents (Amelia, 16 years old).

I have always worried about my studies, but I was happy. However, now I have more pressure because I want to go to college, and with everything we've been through this past year with the confinement, the online classes and everything, I don't know, I'm nervous (Maria, 17 years old).

Confinement forced students to manage their emotional health in ways they had never been presented with before. The students were not trained to deal with emotional self-

management, so they did the best they could with their own resources and reveals a need for emotional support in most of them. This finding was evidenced by the exacerbation of some of the symptoms typical of a previous diagnosis of a mental health disorder reported by adolescents, mostly anxiety.

Being locked up at home for a long time meant not being able to go out to play sports, for example. Of course, being locked up affected me negatively because in my case it helped to worsen my mental illness (Juan, 13 years old).

Wearing a mask all this time; that gives me anxiety (Gemma, 16 years old).

Conversely, as previously mentioned, COVID-19 lockdown brought some positive outcomes. Adolescents who reported feeling satisfied with their personal lives before the pandemic developed adequate resources to face the consequences of this period. In addition, in most cases, adolescents who showed greater emotional stability before the pandemic did not describe their emotional balance as affected during the period of confinement, mainly because of practicing some sports on a routine basis.

There were some awkward moments, especially when I got angry; the confinement made everything a little weird, but it didn't affect me too much. I started doing sports on the elliptical or running around the house and things like that; it didn't bother me much; it was good for me because it distracted me (Carlo, 13 years old).

Adolescents expressed feelings of difference and personal growth because of the pandemic; moreover, adolescents acquired maturity regarding the severity of the pandemic.

The confinement has made me know myself better. Before Covid, I was a pretty influenceable person. I always followed what my group of friends did; it was better than being alone. During the pandemic I had to explore myself and reflect a bit more on myself, how I wanted to be, rethink my friendships, and so on (Flower).

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Likewise, after confinement, through reflection and personal growth, they were able to realize the convenience of some friendships and the value of establishing trustworthy friendships, a fact that meant a strengthening of self-esteem and that was crucial to consolidate identity.

I saw who was there and whom I could trust and whom I could not; those people with whom I spoke, not daily, but I did talk and such, and I saw that these people are the ones who are my friends and for whom it seems that I am too (Flor, 17 years old).

School dynamics during the lockdown

One of the activities maintained during confinement was schooling children and young people, which meant a drastic change in the teaching and learning of teachers and students, respectively. One of the main changes was implementing classes in a virtual format. The analysis of the interviews allowed us to identify essential findings on participants’ perceptions of the value of virtual classes during COVID-19. First, they valued them with a certain degree of ambivalence. On the one hand, they considered that this methodology allowed them to maintain contact with their classmates, continue with the academic program, and feel freer when it came to being in class. However, on the other hand, most adolescents recognized the poor learning obtained during virtual classes in confinement. In this way, the quality of learning was perceived as causing significant damage to the teaching and learning process during the pandemic. In their words, the main factor impeding learning was a lack of motivation for the task.

I was attentive; I had to answer if I heard her [the teacher] saying my name or asking me something. However, most of the time, I was with my cell phone or left alone to do whatever I liked. (Gemma, 16 years old).

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3 Similarly, Diana, a 41-year-old teacher, confirmed to us when asked about the quality
4 of learning through virtual classes.
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7 *It [teaching] was more difficult because you do not have personal contact, and I think*
8 *that helps them, especially adolescents, a lot. So, the teaching provided during the*
9 *lockdown had less quality.*
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13 The adolescents' self-perception of acquired learning was variable; for some, it was
14 practically null; for others, it consisted of organizing and knowing how to manage time alone.
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16 Once again, this question shows the importance of confinement in managing self-
17 responsibility and acquiring personal maturity in adolescence. Regarding the school's
18 approach to public spaces, most adolescents reported feeling uncomfortable with the measures
19 imposed by the educational centers during return to face-to-face sessions. Not being able to
20 interact with their peers was very frustrating, and it caused them discomfort, given the
21 impossibility of interacting spontaneously and freely in public spaces.
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25 *I did not learn anything. I did the exercises, and then they sent us the correction. We*
26 *even had to correct our exercises sometimes. So, I did not learn anything (Amelia, 16*
27 *years old).*
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31 In addition, adolescents claimed little or no emotional approach from educational
32 centers during the pandemic. They considered the measures to address this new school stage
33 insufficient or inappropriate. They mainly reported the need to have identified spaces or
34 reference figures for school support. The existence of more emotional support spaces in
35 educational centers was identified as necessary. Thus, adolescents demanded the presence of a
36 permanent psychologist at their disposal to be able to consult them in situations of stress and
37 emotional discomfort.
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They are teaching us things instead for the future. It would allow students to say their problems, propose things, and for teachers to help them with the things they need at that very moment. (Juan, 13 years old).

DISCUSSION

This study showed how the experiences of adolescents between 12 and 18 years of age on the self-perceived impact of COVID-19 on mental health were fundamentally focused on confinement, the mark it has left on their mental health, and the dynamics of the school during this period. In general, the results coincided with recent findings from other investigations regarding the impact of COVID-19 on adolescents' social and emotional development. For example, in a study by Liang et al. (2020), adolescents reported higher rates of depression and anxiety associated with the pandemic, and 14.4% of teenagers reported post-traumatic stress disorder, whereas 40.4% reported having depression and anxiety. In another study focused on girls, life satisfaction decreased from 81% before COVID-19 to 62% during the pandemic, with the oldest teenage girls reporting the lowest life satisfaction values during COVID-19-related restrictions (Von Soest et al., 2020).

Regarding the period of confinement and its repercussions on adolescents, it was worth noting the lack of freedom to carry out different daily life activities such as playing sports, getting together with friends, and using leisure and fun. This finding coincides with the study by Zeiler et al. (2021), carried out with girls who suffered from anorexia nervosa, stating that they felt imprisoned and limited in their usual activities during the pandemic. Furthermore, daily life during the lockdown was affected by global efforts to control the pandemic, social distancing, and school closures, which drastically changed the lives and routines of adolescents who stayed at home for long periods and limited their social contact with peers (Shoshani & Kor, 2021). These disruptions to typical social and physical routines

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3 may lead to decreased social support, poorer stress regulation, increased loneliness, social
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5 isolation, and distress (Fegert et al., 2020). Similarly, it is essential to highlight adolescents'
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7 self-perceived benefits attributed to the confinement period. This fact coincides with the study
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9 by Zhang et al. (2021) regarding the benefits of the pandemic in developing resilience and
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11 individual coping strategies because of confinement.
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15 Another aspect identified in this study involved the concerns reported by adolescents,
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17 especially the fear of losing loved ones or that the confinement will never end, topics that
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19 have already been explored (Masuyama et al., 2020), and gave rise to further research. For
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21 instance, the DESK cohort, a project aimed at monitoring high-school students aged 12 to 18
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23 in Central Catalonia over time, analyses their behavior and other relevant aspects that may
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25 affect their health and social and educational life (<http://deskcohort.cat/en/about-deskcohort/>).
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27 Regarding mental health among young people, fear was the emotion that had the most
28
29 significant impact on the participants in this study. Adolescence involves numerous
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31 biopsychosocial changes and challenges, including independence from parents, exploration of
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33 various domains of identity, coping with daily life, and school attendance difficulties. The
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35 concerns of adolescents during the COVID-19 pandemic identified in this study coincided
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37 with the available evidence on the subject; thus, adolescents were concerned about the
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39 restrictions established by the government and not about the virus itself. These worries were
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41 associated with increased anxiety, new (or worsening) depressive symptoms, and decreased
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43 life satisfaction (Magson et al., 2021; Hawes et al., 2021).
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50 Moreover, evidence showed that adolescents who suffered a decrease in their family
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52 income and those who knew a close person or relative who died of COVID-19 were more
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54 likely to report poor overall well-being (Folch et al., 2022). Researchers currently point out
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56 that a long-term examination of the consequences of the pandemic on adolescents' mental
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58 health will be necessary (Lee, 2020; Viner et al., 2020). This need is supported by evidence
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that adolescent trauma can predict mental health impairments in adulthood (Johnson et al., 2018).

Recent research (Distor & Nicomedes, 2020) indicates that during the pandemic, higher levels of resilience have been associated with lower stress levels and, therefore, better mental health. These data support the results of this study, given that adolescents who were less emotionally labile and more empowered in their self-esteem were less affected by the consequences of the pandemic and favoring/probably being able to develop better health.

As previously described and following similar evidence (Waselewski, 2020), the adolescents participating in this study experienced unmet needs for emotional support and a negative impact on mental health due to COVID-19. Connecting with friends and peers through virtual mediums while maintaining social distancing was critical in coping with the impact of the pandemic, particularly given the critical growth and development that occurs during adolescence. The data from this study highlights the need for emotional support for adolescents. Specifically, participants demanded the presence of an expert mental health professional in the educational centers to whom they could turn when needed. Given the non-existence of the resource or difficulty in accessing it, adolescents effectively self-managed the situation through self-responsibility and mutual care. In short, adolescents learned to care for each other among their peers, confirming the friendship protection hypothesis proposed by Boulton et al. (1999), which shows how friendship factors can improve the impact of COVID-19 among adolescents (Espinoza & Hernandez, 2022). This study identified the online learning methods implemented during the COVID-19 pandemic as a stressor and source of student dissatisfaction. There is currently debate about the pros and cons of online learning, especially among children and adolescents. Few researchers believe that online learning at this age results in notable academic progress among students (He et al., 2021). Furthermore, many parents of adolescents report concern not only about the academic effects of this type of

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3 learning but also about the physical problems that online learning may cause their children,
4 such as obesity or vision problems (Robinson et al., 2017; Strasburger et al., 2010).
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8 Regarding satisfaction with learning during the pandemic, it should be noted that in
9 Canada, students who attended the institute partially, with the rest of the time online, reported
10 being partially satisfied, and those who did all their learning online reported less satisfaction
11 (Vaillancourt et al., 2022). On the other hand, in India, adolescent students showed great
12 acceptance and positive attitudes toward online learning during the COVID-19 crisis (Khan,
13 2020). Therefore, the variability in student satisfaction with these methods may differ.
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23 Consistent with other available evidence (Tarkar, 2020), this study identifies online
24 classes or "e-learning" as disruptive for students, teachers, and parents alike. During
25 adolescence autonomy is developed through the redefinition of roles and ties in the family
26 (Fioretti et al., 2020); however, this study shows that confinement truncated this process despite
27 the efforts to adapt using spontaneous self-management strategies such as the use of video calls
28 with friends, seeking mutual support, engaging in social networking, and practicing
29 introspection. Some of the adolescents stated that the lack of face-to-face interaction with
30 teachers and peers made it difficult to maintain motivation and commitment to one's learning.
31 The transition to the virtual classroom may have hindered the learning process, as it limited
32 their access to immediate support and feedback. It should be noted that this disruption and
33 changes in the learning environment during the pandemic could also have affected the cognitive
34 and intellectual growth of the learners. The lack of interactive and personalized instruction on
35 guidance could have hindered the development of critical thinking and problem-solving skills.
36 In addition, the predominant emphasis on homework and assessments could have hindered the
37 development of critical thinking and problem-solving skills. The online classes required a high
38 degree of self-study and autonomous work, which forced adolescents to quickly develop this
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competency. Although no one was prepared for the impact of a pandemic, students managed it autonomously by drawing on their own personal resources.

This finding could be explained considering that adolescents have a resilience capacity that helps them develop their social and emotional skills, as well as their emotional regulation (Leipold et al., 2019), which seems to reduce stress even in moments like those experienced during a pandemic (Sakka et al., 2020). In addition, the adolescents interviewed emphasized that their schools did not adequately address how to manage on an emotional level all that happened during the pandemic. This finding is explained by the fact that during the COVID-19 pandemic, most of the educational institutions that worked with adolescents prioritized health measures to stop the spread of the virus, leaving aside the emotional aspects.

This study has some limitations that must be considered. First, it must be noted that most of the adolescents who agreed to participate were those motivated and interested in the topic; thus, some voices may have remained unheard and could have affected the results. Second, even though, some mothers and teachers were interviewed, their discourses were used only to verify adolescents' experiences. It would have been positive to include more parents and teachers to explore the phenomenon from a broader approach; however, this was not the aim of this research.

IMPLICATIONS FOR PRACTICE

The COVID-19 pandemic posed a challenge for adolescents because most of their socialization activities were abruptly interrupted. Mainly, the confinement had negative consequences on the adolescents' mental health, due to the fear of becoming infected and being able to infect their loved ones and having to adapt their activities with family, friends and school. Regarding the latter, the adolescents emphasized that they perceived a lack of emotional support from the educational centers.

The results of this study highlight the importance of promoting mental health in adolescents at all levels. Therefore, professional specialization and advanced practice in treating and preventing mental health problems in schools, especially in countries where school nurses are not common. Consequently, it is imperative to engage management and coordination between educational centers and health care centers, not only in terms of controlling health within the school but also in managing adolescent emotions in educational contexts. Furthermore, in training future nurses, it is essential to establish content focused on emotional self-management, not only as a tool for personal growth but also as a fundamental competence of humanized care offered to people.

This study shows that professional specialization and advanced practice in the treatment and prevention of mental health problems in schools is required, especially in countries where school nurses are not common. This requires a commitment on the part of political, administrative, and professional bodies to promote management and coordination between schools and health centers, not only in terms of health control within the school but also in the management of the emotions of adolescents in educational contexts. It is not a matter of referring students to specialized professionals in the field of mental health or having them come to schools from time to time but of school nurses taking on this role by educating, preventing, and treating mental health problems in schools. Finally, there is a need for a regular and stable space in schools where students can share with their school nurse their emotions and their personal resources to cope with difficulties. These spaces will allow early detection of irregular situations and rapid intervention.

REFERENCES

Bera, L., Souchon, M., Ladsous, A., Colin, V., & Lopez-Castroman, J. (2022). Emotional and Behavioral Impact of the COVID-19 Epidemic in Adolescents. *Current psychiatry reports*, 24(1), 37–46. <https://doi.org/10.1007/s11920-022-01313-8>

Bosch, R., Pagerols, M., Prat, R., Español-Martín, G., Rivas, C., Dolz, M., Haro, J. M., Ramos-Quiroga, J. A., Ribasés, M., & Casas, M. (2022). Changes in the Mental Health of Children and Adolescents during the COVID-19 Lockdown: Associated Factors and Life Conditions. *International journal of environmental research and public health*, 19(7), 4120. <https://doi.org/10.3390/ijerph19074120>

Boulton, M. J., Trueman, M., Chau, C., Whitehand, C., & Amatya, K. (1999). Concurrent and longitudinal links between friendship and peer victimization: implications for befriending interventions. *Journal of adolescence*, 22(4), 461–466. <https://doi.org/10.1006/jado.1999.0240>

Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>

Clark, A. E., Nong, H., Zhu, H., & Zhu, R. (2021). Compensating for academic loss: Online learning and student performance during the COVID-19 pandemic. *China economic review*, 68, 101629. <https://doi.org/10.1016/j.chieco.2021.101629>

Cohen, Z. P., Cosgrove, K. T., DeVille, D. C., Akeman, E., Singh, M. K., White, E., Stewart, J. L., Aupperle, R. L., Paulus, M. P., & Kirlic, N. (2021). The Impact of COVID-19 on Adolescent Mental Health: Preliminary Findings From a Longitudinal Sample of Healthy and At-Risk Adolescents. *Frontiers in pediatrics*, 9, 622608. <https://doi.org/10.3389/fped.2021.622608>

Distor, J.M., Nicomedes, CJ. (2020) Impact of Anxiety to Coping under the Influence of Resilience of People Affiliated to State University During Enhanced Community Quarantine. Preprint available at <https://doi.org/10.13140/RG.2.2.19178.34247>

- Espinoza, G., & Hernandez, H. L. (2022). Adolescent loneliness, stress and depressive symptoms during the COVID-19 pandemic: The protective role of friends. *Infant and child development*, 31(3), e2305. <https://doi.org/10.1002/icd.2305>
- Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and adolescent psychiatry and mental health*, 14, 20. <https://doi.org/10.1186/s13034-020-00329-3>
- Fioretti, C., Palladino, B. E., Nocentini, A., & Menesini, E. (2020). Positive and Negative Experiences of Living in COVID-19 Pandemic: Analysis of Italian Adolescents' Narratives. *Frontiers in psychology*, 11, 599531. <https://doi.org/10.3389/fpsyg.2020.599531>
- Folch, C., González-Casals, H., Colom, J., Bosque-Prous, M., Barón-Garcia, T., Álvarez-Vargas, A., Casabona, J., & Espelt, A. (2022). Mental Well-Being during the COVID-19 Confinement among Adolescents in Catalonia: The Role of Demographic and Other COVID-Related Variables. *Children (Basel, Switzerland)*, 9(6), 783. <https://doi.org/10.3390/children9060783>
- Francisco, R., Pedro, M., Delvecchio, E., Espada, J. P., Morales, A., Mazzeschi, C., & Orgilés, M. (2020). Psychological Symptoms and Behavioral Changes in Children and Adolescents During the Early Phase of COVID-19 Quarantine in Three European Countries. *Frontiers in psychiatry*, 11, 570164. <https://doi.org/10.3389/fpsyg.2020.570164>
- Gómez Cotero, A., López-Armenta, F., Galan Vera, I. (2020). Impacto de la pandemia por COVID-19 en la salud mental de los adolescentes. *Psicopatología Salud Mental*, 36, 21-3.

Guba, E. G., & Lincoln, Y. S. (1981). Effective evaluation: Improving the usefulness of evaluation results through responsive and naturalistic approaches. Jossey-Bass.

Hawes, M. T., Szenczy, A. K., Klein, D. N., Hajcak, G., & Nelson, B. D. (2022). Increases in depression and anxiety symptoms in adolescents and young adults during the COVID-19 pandemic. *Psychological medicine*, 52(14), 3222–3230.
<https://doi.org/10.1017/S0033291720005358>

He, S., Shuai, L., Wang, Z., Qiu, M., Wilson, A., Xia, W., Cao, X., Lu, L., & Zhang, J. (2021). Online Learning Performances of Children and Adolescents With Attention Deficit Hyperactivity Disorder During the COVID-19 Pandemic. *Inquiry: a journal of medical care organization, provision and financing*, 58, 469580211049065.
<https://doi.org/10.1177/00469580211049065>

Heavey, L., Casey, G., Kelly, C., Kelly, D., & McDarby, G. (2020). No evidence of secondary transmission of COVID-19 from children attending school in Ireland, 2020. *Euro surveillance: bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin*, 25(21), 2000903. <https://doi.org/10.2807/1560-7917.ES.2020.25.21.2000903>

Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020). Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. *The Journal of pediatrics*, 221, 264–266.e1.
<https://doi.org/10.1016/j.jpeds.2020.03.01>

Johnson, D., Dupuis, G., Piche, J., Clayborne, Z., & Colman, I. (2018). Adult mental health outcomes of adolescent depression: A systematic review. *Depression and anxiety*, 35(8), 700–716. <https://doi.org/10.1002/da.22777>

- Jones, E. A. K., Mitra, A. K., & Bhuiyan, A. R. (2021). Impact of COVID-19 on Mental Health in Adolescents: A Systematic Review. *International journal of environmental research and public health*, 18(5), 2470. <https://doi.org/10.3390/ijerph18052470>
- Khan, M. A., Nabi, M. K., Khojah, M., & Tahir, M. (2020). Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. *Sustainability*, 13(1), 57. <https://doi.org/10.3390/su13010057>
- Leipold, B., Munz, M., & Michéle-Malkowsky, A. (2019). Coping and Resilience in the Transition to Adulthood. *Emerging Adulthood*, 7(1), 12–20. <https://doi.org/10.1177/2167696817752950>
- Lee J. (2020). Mental health effects of school closures during COVID-19. *The Lancet. Child & adolescent health*, 4(6), 421. [https://doi.org/10.1016/S2352-4642\(20\)30109-](https://doi.org/10.1016/S2352-4642(20)30109-)
- Liang, L., Ren, H., Cao, R., Hu, Y., Qin, Z., Li, C., & Mei, S. (2020). The Effect of COVID-19 on Youth Mental Health. *The Psychiatric quarterly*, 91(3), 841–852. <https://doi.org/10.1007/s11126-020-09744->
- McKinlay, A. R., May, T., Dawes, J., Fancourt, D., & Burton, A. (2022). 'You're just there, alone in your room with your thoughts': a qualitative study about the psychosocial impact of the COVID-19 pandemic among young people living in the UK. *BMJ open*, 12(2), e053676. <https://doi.org/10.1136/bmjopen-2021-053676>
- Magson, N. R., Freeman, J. Y. A., Rapee, R. M., Richardson, C. E., Oar, E. L., & Fardouly, J. (2021). Risk and Protective Factors for Prospective Changes in Adolescent Mental Health during the COVID-19 Pandemic. *Journal of youth and adolescence*, 50(1), 44–57. <https://doi.org/10.1007/s10964-020-01332-9>
- Masuyama, A., Shinkawa, H., & Kubo, T. (2022). Validation and Psychometric Properties of the Japanese Version of the Fear of COVID-19 Scale Among Adolescents. *International*

journal of mental health and addiction, 20(1), 387–397. <https://doi.org/10.1007/s11469-020-00368-z>

OECD. Policy Responses to Coronavirus (COVID-19): Combatting COVID-19’s Effect on Children (2020). Available online: <https://www.oecd.org/coronavirus/policy-responses/combating-covid-19-s-effect-on-children-2e1f3b2f/>

O’Sullivan, K., Clark, S., McGrane, A., Rock, N., Burke, L., Boyle, N., Joksimovic, N., & Marshall, K. (2021). A Qualitative Study of Child and Adolescent Mental Health during the COVID-19 Pandemic in Ireland. *International journal of environmental research and public health*, 18(3), 1062. <https://doi.org/10.3390/ijerph18031062>

Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cadernos de saude publica*, 36(4), e00054020. <https://doi.org/10.1590/0102-311X00054020>

Panda, P. K., Gupta, J., Chowdhury, S. R., Kumar, R., Meena, A. K., Madaan, P., Sharawat, I. K., & Gulati, S. (2021). Psychological and Behavioral Impact of Lockdown and Quarantine Measures for COVID-19 Pandemic on Children, Adolescents and Caregivers: A Systematic Review and Meta-Analysis. *Journal of tropical pediatrics*, 67(1), fmaa122. <https://doi.org/10.1093/tropej/fmaa122>

Pizarro-Ruiz, J. P., & Ordóñez-Camblor, N. (2021). Effects of Covid-19 confinement on the mental health of children and adolescents in Spain. *Scientific reports*, 11(1), 11713. <https://doi.org/10.1038/s41598-021-91299-9>

Polit, D. F., & Beck, C. T. (2004). *Nursing research: Principles and methods*. Lippincott Williams & Wilkins.

Ravens-Sieberer, U., Kaman, A., Erhart, M., Devine, J., Schlack, R., & Otto, C. (2022). Impact of the COVID-19 pandemic on quality of life and mental health in children and

- adolescents in Germany. *European child & adolescent psychiatry*, 31(6), 879–889.
<https://doi.org/10.1007/s00787-021-01726-5>
- Robinson, O.C. (2014). Sampling in Interview-Based Qualitative Research: A Theoretical and Practical Guide. *Qualitative Research in Psychology*, 11, 1, 25-41.
<https://doi.org/10.1080/14780887.2013.801543>
- Sandín, B., Valiente, R. M., García-Escalera, J., & Chorot, P. (2020). Impacto psicológico de la pandemia de COVID-19: Efectos negativos y positivos en población española asociados al periodo de confinamiento nacional. *Revista de Psicopatología y Psicología Clínica*, 25(1).
- Sass, C., Farley, K., & Brennan, C. (2022). "They have more than enough to do than patch up people like me." Experiences of seeking support for self-harm in lockdown during the COVID-19 pandemic. *Journal of psychiatric and mental health nursing*, 29(4), 544–554.
<https://doi.org/10.1111/jpm.12834>
- Sakka, S., Nikopoulou, V. A., Bonti, E., Tatsiopoulou, P., Karamouzi, P., Giazkoulidou, A., ... & Diakogiannis, I. (2020). Assessing test anxiety and resilience among Greek adolescents during COVID-19 pandemic. *Journal of Mind and Medical Sciences*, 7(2), 173-178. <https://doi.org/10.22543/7674.72.P173178>
- Shoshani, A., & Kor, A. (2021). The mental health effects of the COVID-19 pandemic on children and adolescents: Risk and protective factors. *Psychological Trauma: Theory, Research, Practice, and Policy*.
- Strasburger, V. C., Jordan, A. B., & Donnerstein, E. (2010). Health effects of media on children and adolescents. *Pediatrics*, 125(4), 756–767. <https://doi.org/10.1542/peds.2009-2563>
- Tarkar, P. (2020). Impact of COVID-19 pandemic on education system. *International Journal of Advanced Science and Technology*, 29(9), 3812-3814.

Toland, J., & Carrigan, D. (2011). Educational psychology and resilience: New concept, new opportunities. *School Psychology International*, 32(1), 95–106. <https://doi.org/10.1177/0143034310397284>

Thinley, P. (2010). Technical comments on the design and designation of biological corridors in Bhutan: global to national perspectives. *Journal of Renewable Natural Resources, Bhutan*, 6, 91-106.

Vaillancourt, T., Brittain, H., Krygsman, A., Farrell, A. H., Pepler, D., Landon, S., Saint-Georges, Z., & Vitoroulis, I. (2022). In-Person Versus Online Learning in Relation to Students’ Perceptions of Mattering During COVID-19: A Brief Report. *Journal of Psychoeducational Assessment*, 40(1), 159–169. <https://doi.org/10.1177/07342829211053668>

Viner, R., Russell, S., Saulle, R., Croker, H., Stansfield, C., Packer, J., Nicholls, D., Goddings, A. L., Bonell, C., Hudson, L., Hope, S., Ward, J., Schwalbe, N., Morgan, A., & Minozzi, S. (2022). School Closures During Social Lockdown and Mental Health, Health Behaviors, and Well-being Among Children and Adolescents During the First COVID-19 Wave: A Systematic Review. *JAMA pediatrics*, 176(4), 400–409. <https://doi.org/10.1001/jamapediatrics.2021.5840>

Soest, T. V., Bakken, A., Pedersen, W., & Sletten, M. A. (2020). Life satisfaction among adolescents before and during the COVID-19 pandemic. *Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny raekke*, 140(10), 10.4045/tidsskr.20.0437. <https://doi.org/10.4045/tidsskr.20.0437>

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in

China. *International journal of environmental research and public health*, 17(5), 1729.

<https://doi.org/10.3390/ijerph17051729>

Waselewski, E. A., Waselewski, M. E., & Chang, T. (2020). Needs and Coping Behaviors of Youth in the U.S. During COVID-19. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*, 67(5), 649–652.

<https://doi.org/10.1016/j.jadohealth.2020.07.043>

Yokoyama S. (2019). Academic Self-Efficacy and Academic Performance in Online Learning: A Mini Review. *Frontiers in psychology*, 9, 2794.

<https://doi.org/10.3389/fpsyg.2018.02794>

Zeiler, M., Wittek, T., Kahlenberg, L., Gröbner, E. M., Nitsch, M., Wagner, G., Truttmann, S., Krauss, H., Waldherr, K., & Karwautz, A. (2021). Impact of COVID-19 Confinement on Adolescent Patients with Anorexia Nervosa: A Qualitative Interview Study Involving Adolescents and Parents. *International journal of environmental research and public health*, 18(8), 4251. <https://doi.org/10.3390/ijerph18084251>

Zhang, C., Ye, M., Fu, Y., Yang, M., Luo, F., Yuan, J., & Tao, Q. (2020). The Psychological Impact of the COVID-19 Pandemic on Teenagers in China. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, 67(6), 747–755.

<https://doi.org/10.1016/j.jadohealth.2020.08.026>

Zhou, S. J., Zhang, L. G., Wang, L. L., Guo, Z. C., Wang, J. Q., Chen, J. C., Liu, M., Chen, X., & Chen, J. X. (2020). Prevalence and socio-demographic correlates of psychological health problems in Chinese adolescents during the outbreak of COVID-19. *European child & adolescent psychiatry*, 29(6), 749–758. <https://doi.org/10.1007/s00787-020-01541-4>

Table 1: Characteristics of the sample

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	Frequency	<i>Female</i>	<i>Male</i>
Gender			
<i>Male</i>	13		
<i>Female</i>	17		
Age (years)			
<i>12–15</i>	18	7	11
<i>16–18</i>	12	10	2

Table 2. Codes and themes

Codes	Themes
Effect of restrictions	
Daily life in confinement	The challenge of living confined
Benefits of the period of confinement	
Adolescent concerns	
Pre-pandemic emotional stability	
Adolescent concerns	The footprint of COVID-19 on the mental
Strengthening of the family bond	health of young people
Need for emotional support	
Self-responsibility	
Assessment of virtual classes	
Learning quality	The dynamics of the school during
School approach to public spaces	lockdown