



## Brief report

# Italian adolescents' adjustment before and during the coronavirus disease 2019: A comparison between mothers' and adolescents' perception

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The current cross-sectional study aimed to analyse adolescents' adjustment during and before the lockdown caused by the coronavirus disease 2019 pandemic, by evaluating levels of emotional problems and hyperactivity as referred by adolescents themselves. A further purpose was to compare adolescents' and mothers' perception about adolescents' adjustment. Participants comprised 206 adolescents (50.5% females; mean age = 12.2; *SD* = 3.3) and their mothers (mean age = 43.9; *SD* = 5.9). Findings showed that levels of emotional symptoms and hyperactivity in adolescents during the pandemic were significantly higher than before. This worsening was consistently detected by both mothers and adolescents themselves. Two main conclusions are highlighted by the current research: During the first wave of the COVID-19 pandemic, adolescents participating to this study detected a worsening in their well-being; mothers' perceptions of their adolescents' psychological problems may be considered reliable and consistent with the offspring's point of view.

## Practitioner points

- Italian adolescents' adjustment during the COVID-19 outbreak has been little investigated.
- The current study highlighted a worsening in adolescents' well-being, in terms of higher emotional symptoms and hyperactivity, with respect to the pre-pandemic period.
- This worsening was consistently highlighted by both adolescents themselves and their mothers.

In the first months of 2020, Italy was the second country (after China) most heavily affected by the rapid spread of the coronavirus disease 2019 (COVID-19). To face this critical emergency, the government imposed a lockdown in the national territory, lasting almost two months (from 11 March to 4 May 2020), with the closure of all public places (e.g., schools, parks), and a ban on leaving home, except for proven work and health

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needs and for necessity reasons. These measures created drastic changes in daily social life, as children and families were deprived of their usual activities, friendship, and relational contacts outside family house.

Due to the lower incidence of infection and mortality in young people than adults, clinical professionals were less focusing on the unique impact of COVID-19 on adolescents' mental health status (Duan et al., 2020). Some previous studies highlighted a worsening in adolescents' psychological adjustment during the COVID-19 outbreak (Munasinghe et al., 2020; Rogers, Ha, & Ockey, 2020), but this issue has been little investigated among Italian adolescents (Buzzi et al., 2020).

A widely used way to assess adolescents' behavioural and emotional symptoms is to ask parents to evaluate them but, notwithstanding well validated, this method has been debated and criticized as parents' reports of their children's adjustment could be biased by their own psychopathology (Crescentini et al., 2020; Kroes, Veerman, & De Bruyn, 2003).

The present study developed from these premises. A first aim was to analyse adolescents' adjustment during and before the lockdown, by evaluating levels of emotional problems and hyperactivity as referred by adolescents themselves. A further purpose was to compare adolescents' and mothers' perception about adolescents' emotional problems and hyperactivity.

## **Methods**

### ***Participants and procedure***

A total of 206 adolescents (50.5% females) aged 7–18 years (mean age = 12.2;  $SD = 3.3$ ) and their mothers (mean age = 43.9;  $SD = 5.9$ ) participated to this cross-sectional study completing an online survey during the first peak of pandemic (April 2020), when in Italy there was the lockdown. A web-based survey, developed using Qualtrics XM software, was released on the Internet through the mainstream social networks. Mothers were recruited via snowball sampling. They gave their consent to participation and, when they finished to fill in the questionnaires, they were asked to give the consent to allow their children to participate in the study. Children whose mothers gave their consent were asked to give their own consent. Economic condition of participants was mainly comprised between low to medium (58.7%), with an annual income of less than fifty-five thousand euros. 51.5% of mothers had a secondary school diploma, and 26.5% reached a degree.

### ***Materials***

To assess adolescents' emotional and behavioural problems, the parent form and the children form of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) were used. In this study, the two subscales of emotional symptoms (sample item: 'Nervous or clingy in new situations, easily loses confidence') and inattention/hyperactivity (sample item: 'Restless, overactive, cannot stay still for long') were considered. Both scales were administered to mothers and adolescents twice: the first with the instruction to refer to the past two weeks and the second recalling the adolescent's adjustment before the start of the COVID-19 emergency. Higher scores reflect greater difficulties. The reliability of all scales was satisfactory with Cronbach's alpha values included in the range .717 to .794.

### Ethics statement

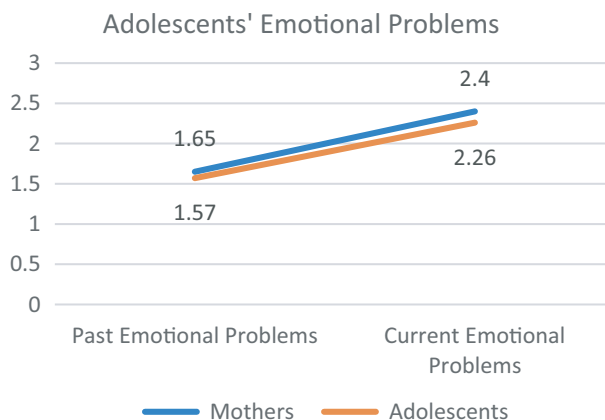
The procedure and all the tools used in this survey were fully compliant with the indications of the Declaration of Helsinki. The Institutional Review Board of the Department of Psychological, Health and Territorial Sciences (University "G. d'Annunzio") approved the study.

### Results

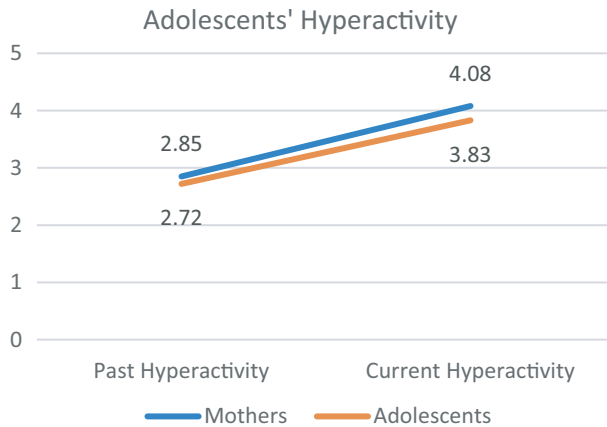
Paired *t*-tests were conducted to compare adolescents' perceptions of their emotional problems and hyperactivity before the pandemic and during the lockdown, as well as mothers' perceptions of children's adjustment. Adolescents showed a statistically significant increase of emotional problems ( $t = 6.52$ ;  $p < .001$ ) and hyperactivity ( $t = 7.89$ ;  $p < .001$ ) during the lockdown than in the pre-pandemic period. Also, mothers referred significant higher levels of emotional problems ( $t = 5.59$ ;  $p < .001$ ) and hyperactivity ( $t = 8.68$ ;  $p < .001$ ) in their children during the pandemic than in the past. A comparison between adolescents' and mothers' perception about children's adjustment did not detect significant differences; therefore, mothers' perception about their adolescents' problems and adolescents' perception on their own problems were overlapping. Results about emotional problems and hyperactivity are respectively synthesized in Figure 1 and in Figure 2.

### Discussion

Adolescents' reactions to COVID-19 pandemic have been mainly investigated through parents' (primarily mothers') reports on their offspring's adjustment (Crescentini et al., 2020; Cusinato et al., 2020; Morelli et al., 2020; Spinelli, Lionetti, Pastore, & Fasolo, 2020). Less frequently, adolescents have been directly involved in research analysing their own psychological problems (Janssen et al., 2020). The present study aimed to analyse emotional problems and hyperactivity in Italian adolescents aged 7–18 years during the first peak of COVID-19 and before the beginning of the outbreak, by directly involving them.



**Figure 1.** Adolescents' emotional problems during and before the COVID-19 lockdown, as perceived by themselves and their mothers.



**Figure 2.** Adolescents' hyperactivity during and before the COVID-19 lockdown, as perceived by themselves and their mothers.

Findings showed an increase of emotional problems and hyperactivity during the COVID-19 pandemic with respect to the pre-pandemic period. Adolescents may be particularly exposed to the psychosocial effects of the pandemic due to a massive disruption in their daily life at different levels, such as school commitments, peer relationships, sport, and free-time activities. This risk condition might be exacerbated by their still immature ability to process the short- and long-term effects of the emergency (Crescentini et al., 2020).

Furthermore, interestingly, mothers' perception of their offspring's emotional problems and hyperactivity was similar to adolescents' perception. Hence, mothers and adolescents consistently highlighted a worsening of children's well-being during the first wave of the COVID-19 pandemic. This last result is quite new as any previous research compared mothers' and adolescents' points of view during this pandemic.

Some limitations have to be considered when interpreting the study findings: First, its cross-sectional nature does not permit to draw conclusion about cause-and-effect relations; second, as mothers' and adolescents' evaluation of emotional state prior the emergency situation was detected during the lockdown, a possible retrospective bias may not be excluded, although it has been recently demonstrated that data elicited by retrospective questions are quite consistent at the aggregate level (Hipp, Bünning, Munnes, & Sauermann, 2020); third, the use of only two subscales (i.e., emotional symptoms and inattention/hyperactivity) of the Strengths and Difficulties Questionnaire, with the exclusion of the behavioural problems and peer problems subscales, reduced the considered symptomatologic domains; fourth, the survey was restricted to the 7- to 18-year age group of children. All these issues prevent the possibility to generalize the results.

Notwithstanding these limits, this is the first study that compared mothers' and adolescents' perception of children's adjustment during the COVID-19 pandemic, highlighting that maternal perceptions of their adolescents' psychological problems may be considered reliable and consistent with the offspring's point of view. Besides, the focus was on Italian young people, a group little investigated by existing research.

With the sudden outbreak and rapid spread of COVID-19, the psychological well-being of adolescents in Italy has been put at risk. According to the results of the present study, levels of emotional symptoms and hyperactivity in adolescents during the outbreak were

significantly higher than before. This worsening was consistently detected by both mothers and adolescents themselves.

Although the COVID-19 has led public health to focus its attention on the physical health of older and more vulnerable people, young people should not be forgotten, as the onset of most mental health problems is detected in adolescence (Ramadhan et al., 2020), making it crucial to early recognize and promptly treat any related signs identified in this period.

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## Conflict of interest

All authors declare no conflict of interest.

## Author contribution

**Alessandra Babore:** Conceptualization (equal); Data curation (equal); Formal analysis (equal); Methodology (equal); Project administration (equal); Software (equal); Supervision (equal); Writing – original draft (equal); Writing – review & editing (equal). **Mara Morelli:** Data curation (equal); Formal analysis (equal); Software (equal); Writing – review & editing (equal). **Carmen Trumello:** Conceptualization (equal); Data curation (equal); Formal analysis (equal); Methodology (equal); Project administration (equal); Software (equal); Supervision (equal); Writing – original draft (equal); Writing – review & editing (equal).

## Informed consent

Informed consent was obtained from all individual participants (both mothers and adolescents) included in the study.

## Data availability statement

The data sets analysed during the current study are available from the corresponding author on reasonable request.

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