




## RESEARCH ARTICLE

# Study of resilience and loneliness in youth (18–25 years old) during the COVID-19 pandemic lockdown measures

Simone Marchini MD<sup>1,2,3</sup>  | Elena Zaurino<sup>4</sup> | Jason Bouziotis<sup>3,5</sup>  |  
Nataschia Brondino MD, PhD<sup>6</sup>  | Véronique Delvenne MD, PhD<sup>2,3</sup> |  
Marie Delhay MD, PhD<sup>1,3</sup>

<sup>1</sup>Department of Child and Adolescent Psychiatry, Erasme Hospital, Brussels, Belgium

<sup>2</sup>Department of Child and Adolescent Psychiatry, Queen Fabiola Children's University Hospital, Brussels, Belgium

<sup>3</sup>Faculty of Medicine, Université Libre de Bruxelles (ULB), Brussels, Belgium

<sup>4</sup>Department of Economics, Katholieke Universiteit Leuven (KUL), Leuven, Belgium

<sup>5</sup>Department of Biomedical Research, Erasme Hospital, Brussels, Belgium

<sup>6</sup>Department of Brain and Behavioral Sciences, University of Pavia, Pavia, Italy

## Correspondence

Simone Marchini, MD, Department of Child and Adolescent Psychiatry, Erasme Hospital, Route de Lennik 808, Brussels, 1070, Belgium.  
Email: [simone.marchini@ulb.be](mailto:simone.marchini@ulb.be)

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## Abstract

This study evaluated the risks and protective factors in mental health in 825 emerging adults aged from 18 to 25 years old in Belgium and in Italy. Resilience, loneliness and social, and family context were explored to determine their specific role in coping with the emotional distress that spread worldwide during the coronavirus disease 2019 (COVID-19) pandemic. We conducted an online survey on the secured platform Research Electronic Data Capture©. Data were collected between April 7th and May 4th, 2020. The primary outcomes were the resilience scale for adults (RSA) and the University of California Los Angeles Loneliness Scale. The secondary outcomes included mental health status in terms of professional help seeking, use of psychotropic drugs, admission to a psychiatric department before and during lockdown measures. Responders were divided into three groups following the mental healthcare needs (MHCN) before and after the lockdown measures. The group who experienced an increase in MHCN represented almost 5% of the assessed youth. Statistically significant differences were found in means of RSA total score and RSA perception of self. This study enlightens the possibly traumatic impact of the COVID-19 pandemic on at-risk

youth's mental health. Early detection and intervention should be structured in large-scale disasters.

#### KEYWORDS

COVID-19 pandemic, emerging adulthood, loneliness, mental health, PTSD, resilience, youth

## 1 | INTRODUCTION

The outbreak linked to the coronavirus disease 2019 (COVID-19) pandemic resulted in lockdown measures in almost all European countries. Since March 2020, both Italy and Belgium governments acted social and physical isolation at home to flatten the curve of viral contagion.

Italy resulted to be the first European country affected by the COVID-19 pandemic, whereas Belgium registered one of the highest percentages of deaths proportionally to the whole population.

All the implications of the COVID-19 pandemics, such as social isolation and widely spread fear of contagion, represent important stress factors on mental health (Galea et al., 2020; Mengin et al., 2020; Rossi et al., 2020). During isolation, experience of anxiety, anger, confusion, and posttraumatic stress symptoms seem to display significant distress (Brooks et al., 2020).

Adolescents and emerging adults represent a particular at-risk population (Labana, 2020). More than one-third of Chinese adolescents, aged from 12 to 18 years old, were presenting depressive and/or anxious symptoms during the COVID-19 pandemic, which represents around double than usual (Zhou et al., 2020).

Recommendations on children's and adolescents' clinical services suggest preventive support and early intervention (Loades et al., 2020).

Specific studies on youth's mental health during the COVID-19 pandemic are missing. Extrapolated data from larger age surveys suggest that young adults (19–24 years old) in the early phase of lockdown measures in Italy, felt less fear and anxiety when compared with older adults (40–49 years old), but, at the same time, more boredom and loneliness (Colombo et al., 2020). Concerning mental health symptoms, an assessment in Belgium enlightened that anxiety and depression in the 16–24 year-old-age span increased when compared with a past survey in 2018. It represents the highest rates compared to other age spans. However, the support of the entourage seems to protect from the anxious and depressive effects of the COVID-19 pandemic (Sciensano, 2020).

High levels of loneliness were reported in more than one-third of adolescents and almost half of the 18–24-year-old youth felt lonely during lockdown (Loades et al., 2020). Social isolation can be connected to a negative feeling of loneliness, that is strongly linked with psychiatric troubles and psychosocial risk factors, such as depressive symptoms, suicidal thoughts, social anxiety, alcohol dependence, aggressive behaviors, and impulsivity (Cacioppo et al., 2015).

In terms of the emergence of psychopathology, epidemiological data support that the beginning of symptoms in chronic psychiatric troubles normally occurs before the age of 24 years old (Kessler et al., 2007). In their ordinary lives, emerging adults are supposed to experience transitional periods rich in issues and oscillations in the sense of independence, autonomy, belongingness towards society, peers, and family (Ramos, 2011). All these challenges could possibly be affected by such a perturbing period.

Psychological resilience consists of the positive adaptation to adversity (Reich et al., 2010), and the ability to recover from challenges and to adapt to change (Lengnick-Hall & Beck, 2005). Resilience appears to be a crucial clue to cope with the COVID-19 pandemic implications (Holmes et al., 2020). In fact, COVID-19 represents a vital

risk for individuals and their entourage. The lockdown measures required each of us to find in our personal resources to face the challenging world (Cleland, 2020; Mengin et al., 2020).

In addition, the COVID-19 outbreak obliged mental health professionals to implement synchronous distant web-based interventions, such as videoconference interviews or teleconsultations. Telepsychiatry in acute settings helps us to decrease the number of admissions to psychiatric inpatient units with a clinical interaction quality that seems similar to that in face-to-face care (Salmoiraghi & Hussain, 2015). In particular, telepsychotherapy carried out during social isolation contexts resulted to be efficient to treat common mental-health disorders such as anxiety, depression, and posttraumatic distress. These benefits of synchronous distant mental healthcare seem to be greater if the patients are familiar with web-based communication (Poletti et al., 2020).

## 1.1 | Study aims

This study aimed to identify, in a group of youth, aged from 18 to 25 years old, which factors predispose to issues in coping with this potentially traumatic period and freedom-limiting context. The primary goal is to assess the relationship between resilience factors and solitude, evaluated by questionnaires, and the emergence of new or increased need in mental health support during lockdown measures. Second, we aimed to evaluate the potential protective roles of social and family functioning during this period, in this population of young adults.

## 1.2 | Ethics and dissemination

This study has been approved by the Institutional Review Board (IRB) of Erasme Hospital and the IRB of the Department of Brain and Behavioral Sciences of the University of Pavia.

The study was conducted in accordance with the International Conference on Harmonization for good clinical practice and it was registered on [ClinicalTrials.gov](https://www.clinicaltrials.gov) (Identifier: NCT04371250).

All participants gave their own written consent to participate to the present anonymous survey.

# 2 | MATERIALS AND METHODS

## 2.1 | Procedures

The online survey was set up on the secured Research Electronic Data Capture (REDCap©) platform. Data on study participants have been stored in the secured REDCap© platform database located on the leading site, Erasme Hospital in Brussels.

Data were collected between April 7th and May 4th, 2020, just after the enactment of the lockdown measures in the two European countries concerned by the survey (Italy—March 9th and Belgium—March 18th).

The date of survey completion, automatically gathered by the REDCap© system, was used to compute the number of days since the official lockdown in the country of residence. Thus, the first and last days of data collection (April 7th) were coded in two different ways depending on the country of residence. For participants answering from Italy, the first day of data collection (April 7th) was coded 30 (30 days from the beginning of the lockdown on March 9th) and the last day (May 4th) was coded 57. For participants answering from Belgium, the first day of data collection (April 7th) was coded 21 (21 days from the beginning of the lockdown on March 9th) and the last day (May 4th) was coded 48.

## 2.2 | Recruitment

The study was advertised on various social media platforms with a brief post explaining our general aim (i.e., investigate the psychological status of youth, from 18 to 25 years old, during the COVID-19 pandemic lockdown measures) and providing the link to the online survey. Once they clicked on the link, participants were initially presented with the information sheet and the consent form. Details of inclusion and exclusion criteria are provided in Table 1.

## 2.3 | Materials

The online survey was composed of four sections. The first section consisted of sociodemographic information (i.e., gender, age, nationality, usual occupation, and housing). The second section explored the change in life habits during lockdown measures, such as a change in daily activities, housing, and change in online contacts (i.e., through phone and social media) and offline contacts (i.e., face-to-face) with family and friends. The third section aimed to assess the mental healthcare needs (MHCNs) before and during the lockdown measures (i.e., psychiatric outpatient or inpatient care, psychotherapy, or psychotropic medication). The fourth and last section was composed of two self-reported questionnaires assessing resilience and loneliness.

### 2.3.1 | Resilience scale for adults

The resilience scale for adults (RSA) consists of a 33-item self-report scale (Friborg et al., 2003; Hjemdal et al., 2001). We used the revised version of the RSA, a 7-point semantic differential scale (Friborg et al., 2006). Half of the items are reversely scored and shuffled within the questionnaire. The final domain structure is composed of six intrapersonal and interpersonal resilient factors: (1) *perception of self* (six items), (2) *planned future* (four items), (3) *social competence* (six items), (4) *structured style* (four items), (5) *family cohesion* (six items), and (6) *social resources* (seven items) (Friborg et al., 2006; Hjemdal et al., 2005).

The first four factors explore specifically personal abilities of the subjects, throughout the assessment of self-esteem, self-efficacy, and self-appreciation; hope, determination, and goal-oriented attitude; the individual's competence to establish friendships and to provide support; and, finally, the ability to uphold daily routine, the preference of clear plans, and goals before undertaking activities. *Family cohesion* refers to the domains of family support, by measuring family conflicts, cooperation, support, loyalty, and stability. The last factor, *social resources*, measures the availability of social support outside family, the access to external support from friends and relatives, and intimacy (Hjemdal et al., 2011).

**TABLE 1** Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Male and female	Incomplete surveys
18–25 years old	Survey filling date after the end of lockdown measures in the country of residence
French-speaking or Italian-speaking	
Informed consent is given by the participant	
Current country of residence: Belgium or Italy	

RSA total score refers to a global index of resilience: a higher total score indicates greater levels of resilience; each factor subscore was analyzed to identify which one was more closely associated with the MHCN increase during the lockdown period.

This scale is validated in both the Italian-speaking population (Bonfiglio et al., 2016) and Belgian French-speaking one (Hjemdal et al., 2011).

### 2.3.2 | University of California Los Angeles Loneliness Scale

The University of California Los Angeles (UCLA) Loneliness Scale is a 20-item self-report measure (Russell, 1996). Participants are required to choose the frequency of specific loneliness feelings in their daily life from a 1 (never) to 4 (always) scale. Reverse items are shuffled within the questionnaire. Higher scores represent greater loneliness feelings.

This tool is validated in both the Italian-speaking population (Boffo et al., 2012) and the French-speaking one (Grace et al., 1993).

## 2.4 | Participants

The snowball sampling method allowed us to obtain a wide sample of youth aged 18–25 years old. Overall, 1323 persons accessed the online survey. However, 38 participants only opened the link and did not give their consent, thus they did not fulfill any question, reducing the sample size to 1285. Among these participants, 373 did not complete one or more independent variables (i.e., gender, age, and space adequacy), further reducing the sample to 912 individuals. Then, 87 participants compiled the survey outside the two selected countries (i.e., outside Italy and Belgium). Thus, the final sample, on which the analyses were conducted, consisted of 825 participants.

## 2.5 | Groups

Based on the mental health part of the survey, participants were divided into three groups as follows. Group 0 consists of subjects who never seek mental health help during their life (no MHCNs). Group 1 includes youth who have had mental healthcare in their life (i.e. psychological or psychiatric follow-up) and declared that their need in mental healthcare did not change during the pandemic period (constant MHCNs). Group 2 represents youth who experienced an increase of MHCN after the beginning of lockdown measures (increased MHCNs), such as the first contact in life with psychologists or psychiatrists, the start of psychotropic treatment, or inpatient care in a psychiatric unit.

## 2.6 | Statistical analysis

All statistical analyses were conducted using the software Stata/MP 14.1.

Descriptive statistics were used to study the demographic and clinical characteristics of the sample.

For numerical variables, the normality of the distributions was assessed with graphical representations `formatting.currentStyle.letterSpace = "0.1w";` (histogram, a box plot) and Shapiro–Wilk test. If the distribution was normal, we presented the mean and standard deviation; if the distribution was asymmetrical, we presented the median and interquartile range. Categorical variables were described with relative frequencies.

To analyze whether the differences in psychometric measures (UCLA total scores, RSA total scores, and subscores, days of lockdown) between the groups were statistically significant, we performed an analysis of variance if the data were normally distributed and if the variance was homogenous, or Kruskal–Wallis test otherwise.

The homogeneity of variance was verified with Levene's test. With categorical variables, such as change in contacts with family or friends, and change in time spent with family or friends, and change in housing and activities during the lockdown, we used Pearson's  $\chi^2$  test to compare proportions across groups.

Pairwise comparisons between groups were performed with the Bonferroni method and we presented the adjusted  $p$ -value.

The statistical significance level was set at 0.05.

### 3 | RESULTS

#### 3.1 | Demographic and clinical data

The whole sample was unbalanced for gender because out of 825 participants, it included 616 (74.7%) females. Following the inclusion criteria, the age range was between 18 and 25 years, median (interquartile range) = 22 (20–24), and consisted of 443 (53.7%) participants living in Italy during the lockdown measures and 382 (46.3%) living in Belgium. Within the sample, 418 (50.7%) participants were single of the survey, 406 (49.2%) in the couple, and 1 (0.1%) was married. These data are resumed in Table 2.

Concerning the distribution among the three groups, Group 2 (increased MHCNs) was composed of 40 respondents (4.9%), Group 0 (no MHCNs) represented half of the assessed youth ( $n = 425/51.5\%$ ), and Group 1 (constant MHCNs) represented 43.6% ( $n = 360$ ).

Participants were asked to specify their principal housing before and during the lockdown period. A total of 630 (76.4%) participants stayed at the same place as usual: among those, 35 (4.2% of all participants) were living alone, 487 (59.0%) lived with their family, and 108 (13.09%) lived with partner, roommate, or other students. A total of 195 (23.6%) participants moved during the lockdown measures: 156 (18.9%) moved to live with their family, 31 (3.8%) moved to live with the partner or friends, and for 8 (1.0%) participants, the relocation was not specified.

The participants' principal activity during their usual lives was distributed as follows: 99 (12.0%) youth were secondary level students; 585 (70.9%) participants were postsecondary level students; 130 (15.8%) participants declared a working status and 11 (1.3%) youth did not have any activity. During lockdown measures, 633 (76.7%) participants were studying from home, 76 (9.2%) were working remotely, 45 (5.5%) mainly worked at the workplace, 56 (6.8%) declared to have no activities, and 15 (1.8%) reported other activities.

The average UCLA total score was 42.8 ( $SD$ , 9.9) and the average RSA total score was 161.6 ( $SD$ , 28.3), as shown in Table 3.

#### 3.2 | Comparisons between groups

The results are presented in Table 4. The mean UCLA Total score was statistically significantly higher in Group 1 (constant MHCN) compared to Group 0 (no MHCN).

**TABLE 2** Characteristics of the sample ( $N = 825$ )

Gender (male/female)	209/616
Age (years) (median [IQR])	20 (20–24)
Country (Italy/Belgium)	443/382
Civil status (single/in couple/married)	418/406/1

Abbreviation: IQR, interquartile range.

**TABLE 3** Data on solitude and resilience

	Mean (SD)	Min–Max
UCLA total score	42.8 (9.9)	21–77
RSA total score	161.6 (28.3)	69–227
	Median (IQR)	Min–Max
RSA perception of self	27 (20–32)	6–42
RSA planned future	18 (13–22)	4–28
RSA social competence	31 (25–35)	6–42
RSA structured style	29 (23–35)	6–42
RSA family cohesion	42 (37–46)	13–49
RSA social resources	20 (16–23)	4–28

Abbreviations: IQR, interquartile range; Max, maximum; Min, minimum; RSA, resilience scale for adults; SD, standard deviation; UCLA, University of California Los Angeles.

The mean RSA total score was significantly lower in Group 1 and Group 2 (constant and increased MHCN) than in Group 0. RSA perception of self score in particular was significantly lower in Groups 1 and 2 than in Group 0. Furthermore, RSA structured Style score was significantly lower in Group 1 than in Group 0. Other subscores did not significantly differ between groups.

We also found statistical differences in terms of change in contacts with friends or family. The differences were in online contacts with family, and with offline contacts with friends. Group 2 had more increase in online contacts with family than Group 0 (40.0% vs. 21.7%), while Group 0 had more of the same habit than Group 2 (66.1% vs. 42.5%). Group 2 also had more increase in online contacts with family than Group 1 (40.0% vs. 21.1%), and Group 1 also had more of the same habit than Group 2 (65.61% vs. 42.5%). In offline contacts with friends, Group 1 had more decrease than Group 0 (31.1% vs. 23.8%), while Group 0 acted more the same than Group 1 (25.7% vs. 16.1%). On the other hand, Group 1 had more increase in offline contacts with friends than Group 2 (52.8% vs. 30.0%), while Group 2 stayed more the same than Group 1 (42.5% vs. 16.1%). Changes in housing did not differ significantly between groups, nor activity during lockdown.

## 4 | DISCUSSION

Our study has investigated, by an online survey, the consequences of the lockdown period and the social isolation, due to the COVID-19 pandemic, in 825 young adults aged from 18 to 25 years old in Belgium and in Italy. To do that, we have investigated the risks and the protective factors, such as resilience, loneliness and social, and family context on their mental health status evaluated by (increased) professional help seeking, use of psychotropic drugs, and admission to a psychiatric department before and during lockdown measures.

This survey was not conceived to assess epidemiological prevalence of MHCNs during the pandemic. However, an increased in MHCNs was observed in nearly 5% of the participants, after the beginning of the lockdown period, both in Belgium and in Italy. These needs vary from first contact in life with a psychologist or a psychiatrist, beginning a psychotropic treatment or an inpatient care in a psychiatric unit. In fact, we should consider that participants who accepted to respond to this survey could be a particularly mental health concerned population. Nevertheless, these results can be compared to the European Study of the Epidemiology of Mental Disorders, which showed that 6.4% of the total sample in a global population, aged from 18 and over, had consulted formal health services in the previous 12 months (Alonso et al., 2004). Considering the wide age range population and the

**TABLE 4** Comparison of data between groups

Variables	Group 0 (no MHCN) n = 425	Group 1 (constant MHCN) n = 360	Group 2 (increased MHCN) n = 40	p	Pairwise comparisons: Significant difference adjusted p
	Mean (SD)/ median (IQR)	Mean (SD)/ median (IQR)	Mean (SD)/ median (IQR)		
UCLA total score	41.9 (9.3)	43.7 (10.5)	43.6 (9.8)	.04	G0 versus G1: 0.04
RSA total score	165.2 (26.6)	158.3 (29.5)	153.9 (30.2)	<.001	G0 versus G1: 0.002; G0 versus G2: 0.046
RSA perception of self	28 (23–32)	25 (18–31)	25 (16.5–29)	<.001	G0 versus G1 <0.001; G0 versus G2: 0.002
RSA planned future	18 (13–22)	18 (12–22)	17 (11–20)	.08	/
RSA social competence	31 (25–35)	30 (24–36)	30.5 (25–34)	.58	/
RSA structured style	30 (25–36)	28.5 (22–35)	29 (18.5–33.5)	.007	G0 versus G1: 0.01
RSA family cohesion	42 (37–46)	42 (36–46)	43 (33.5–45)	.80	/
RSA social resources	20 (16–24)	20 (16–23)	20 (15.5–22)	.59	/
Days of lockdown	33 (30–44)	33 (30–44)	32 (30–44)	.64	/
	%	%	%	p	
Change in online contacts—Friends				.18	/
Same	73.4	70.6	67.5	.55	
Increase	9.2	10.8	2.5	.22	
Decrease	17.4	18.6	30.0	.15	
Change in online contacts—Family				.04	G0 versus G2: 0.03; G1 versus G2: 0.03
Same	66.1	65.6	42.5	.01	G0 versus G2: 0.009; G1 versus G2: 0.01
Increase	21.7	21.1	40.0	.02	G0 versus G2: 0.03; G1 versus G2: 0.02
Decrease	12.2	13.3	17.5	.61	/
Change in offline contacts—Friends				<.001	G0 versus G1: 0.006; G1 versus G2: <0.001
Same	25.7	16.1	42.5	<.001	G0 versus G1: 0.003; G1 versus G2: <0.001
Increase	50.6	52.8	30.0	.02	G0 versus G2: 0.04; G1 versus G2: 0.02
Decrease	23.8	31.1	27.5	.07	/
Change in offline contacts—Family				.17	/
Same	45.4	40.3	42.5	.35	/
Increase	32.0	29.2	32.5	.67	/
Decrease	22.6	30.6	25.0	.04	G0 versus G1: 0.03
Change in housing				.06	/
Same alone	4.2	3.9	7.5		
Same with family	60.2	58.3	52.5		

(Continues)



**TABLE 4** (Continued)

	%	%	%	<i>p</i>
Same with friends/partner	10.8	16.1	10.0	
Move to family	20.5	15.3	30.0	
Move to friends/partner	2.8	5.3	0.0	
Move to undefined	1.4	0.6	0.0	
Activity during lockdown				.97 /
Home study	76.0	77.8	75.0	
Working remotely	10.1	8.3	7.5	
Workplace	5.2	5.8	5.0	
No activity	7.1	6.1	10.0	
Other	1.7	1.9	2.5	

Abbreviations: IQR, interquartile range; RSA, resilience scale for adults; SD, standard deviation; UCLA, University of California Los Angeles.

longer time span of this study, the 4.9% of participants aged from 18 to 25 years old, assessed in the following month after the beginning of lockdown measures, appears to be high.

The entire population of our study was divided in three groups: Group 0 consisted of subjects who never seek for mental health help during their life (no MHCNs), Group 1 included youths who have had mental healthcare in their life (i.e., psychological or psychiatric follow-up) and declared that their need in mental healthcare did not change during the pandemic period (constant MHCNs) and Group 2 represented youths who experienced an increase of MHCN after the beginning of lockdown measures (increased MHCNs).

If we consider the resilience of the sample, evaluated by the total score of RSA (Hjemdal et al., 2001), during lockdown measures; participants from the Group 2 show less resilience competences compared to Group 0. The lack of abilities to face the adversity, such as COVID-19 pandemic and lockdown, is coherent with the help-seeking attitude during this period, reported by Group 2. Help-seeking attitude and resilience abilities have been linked together in one study, including stigma in the exploration of pathways (Crowe et al., 2016). Individuals with MHCNs, seek help with the mental health concern, feel stigmatized for it, and, thus, were viewed as less resilient.

The first factor of RSA (*Perception of self*) contains items assessing confidence in each-one own abilities, judgments, and realistic expectations (Hjemdal et al., 2011). When this factor was compared between Group 2 and 0, it suggested a lack of confidence on personal resources in Group 2 participants.

These findings question the role of their psychological distress during the lockdown period or the relationship with a possible mental health disorder, justifying the help-seeking attitude. Large-scale disasters have already been related to increases depression, anxiety disorder, and posttraumatic stress disorder (Galea et al., 2020; Neria et al., 2008). Further investigations should be continued on the COVID-19 pandemic effects on youth emerging mental health disorders.

The RSA total score and Factor 1 (*Perception of self*) are particularly sensitive to distinguish the Group 1 with constant but active MHCNs from the participants without any declared MHCNs (Group 0). Participants from Group 1 seem to have less resilience competences as well as the lack of self-appreciation, as for the Group 2. Two hypotheses might explain this result: the psychological implications of social isolation could play a negative role in the therapeutic process of participants from Group 1, or these participants' MHCNs in their life could be concerned with issues in their personal abilities to cope with difficulties.

Factor 4 (*Structured style*), that aims to assess participants' preference to have and follow routines (Hjemdal et al., 2011), was significantly different in the comparison between Group 1 and 0. Participants without any MHCNs

(Group 0) preferred clear goals and plans before starting activities than participants with MHCNs (Group 1). Further explorations on this element should be continued, as well as the link with the type of mental healthcare during the lockdown measures and their satisfaction about it.

The comparison of the RSA total score and the RSA factor *Perception of Self* between the three groups showed significantly lower scores in both group with MHCNs (Group 2 and 1) than in Group 0. This result shows that the resilience abilities and in particular perception of self seems to play a protective role to cope with mental health issues during adverse life events.

If we consider the role of loneliness during lockdown measures, even if social isolation does not always related to loneliness feelings (Loades et al., 2020), we found in our survey that the total scores in UCLA scale display a statistically significant difference between groups. Group 1 showed a higher mean score compared to Group 0, that can be interpreted as a greater loneliness feelings in this emerging adults with constant MHCNs compared to participants without MHCNs. Loneliness can be associated to many psychiatric troubles and psychosocial risk factors, such as depressive symptoms, suicidal thoughts, social anxiety, alcohol dependence, aggressive behaviors, and impulsivity (Cacioppo et al., 2015). We suppose that these greater loneliness feelings in Group 1 probably already existed before the COVID-19 pandemic and that the social isolation due to the lockdown measures had a worse impact on youth with already existing MHCNs.

Concerning the last element, "social contacts," we confirmed the importance of different types of contacts (offline and online) with friends and families during social isolation, in accordance with both an Italian study on forced social isolation effects on mental health (Pancani et al., 2020) and a French wide literature review (Mengin et al., 2020).

In particular, participants with emerging MHCNs after lockdown measures beginning (Group 2) appeared to increase online contacts with their families more than all the other participants (Group 0 and 1). Mutual concerns about health can explain these results (Mengin et al., 2020).

Concerning social contacts with friends, offline (face-to-face) contacts appeared to increase less frequently within the Group 2 in comparison with the rest of the responders (both Group 0 and 1).

Thus, subjects without any MHCNs (Group 0) or with constant MHCNs (Group 1) showed an increased time spent with their friend and face-to-face contacts during forced social isolation. This could be justified by two situations: the participants share the same housing with friends, on the other side, individuals living alone, or with their families felt that it was necessary for them to break or circumvent some lockdown rules to experience peer support. Following an Australian national survey, peers revealed to be the major source of support for youth with mental health issues, especially in first aid interventions (Yap et al., 2011).

The fundamental need to belong, conceived as the desire for interpersonal attachments (Baumeister & Leary, 1995), appeared to be a protective factor against loneliness, and potential depression in adolescents (Baskin et al., 2010).

We can suggest that these participants without any MHCNs or with constant MHCNs since before the COVID-19 period possibly allowed their selves more often to circumvent some rules to keep face-to-face contacts, because they had been able to recognize and provide their need of peer support. On the contrary, participants with emerging MHCNs maybe felt too distressed about lockdown measures to break rules and the fewer contacts with friends may have had played a role in the psychological suffering of these young adults.

Our results could suggest that peer support could be highlighted as a possible protective factor for psychological suffering during the lockdown measures. Further research on peers support dynamics on mental health need to be led in future, especially in youth.

In addition, telepsychiatry need to be considered for intervention in MHCNs during specific situations such as large-scale disasters but also extreme social isolation or underserviced countries (Stevens et al., 1999). This solution could be valid especially for youth's because they are familiar to web-based synchronous communication platforms (Poletti et al., 2020).

Despite the strengths of this study, the assessment of youth who were keen to participate to the survey could be seen as a limitation. Considering the large sample, we can assume that this study is sufficiently representative of youth's MHCNs in Italy and Belgium during COVID-19 outbreak. A future proposal is the evaluation of the change in MHCNs, resilience, and loneliness after the end of lockdown measures to better determine the role of global sanitary fears on youth mental health, persisting after the forced social isolation.

## 5 | CONCLUSION AND IMPLICATIONS

The present study presents an important assessment of emerging adults (18–25 years old) mental health status during lockdown measures in Italy and Belgium in April 2020 in the COVID-19 pandemic context.

The survey demonstrated the high increase of MHCNs for this population of youths during this period. The role of resilience and loneliness have been explored within participants with past MHCNs or not. Further investigations on these elements should be explored to evaluate how to prevent mental health suffering and to structure early intervention programs on psychological suffering during large-scale disasters. In light of a risk of second COVID-19 contagion wave, youth's mental health should be strongly considered in national and international decisions on possible forced isolation consequent measures.

Detection of psychological suffering, through online surveys, to evaluate at-risk emerging adults should be considered, in the same model as the present study. Early intervention is nowadays possible, thanks to the telemental health synchronous web-based communication. Youth are a particularly skilled generation to use web-based communication. This kind of supports should be strongly encouraged to respond to MHCNs of this specific population during social isolation.

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### CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

### PEER REVIEW

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### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

### ORCID

Simone Marchini  <http://orcid.org/0000-0002-0432-5705>

Jason Bouziotis  <http://orcid.org/0000-0001-6656-451X>

Natascia Brondino  <http://orcid.org/0000-0002-3128-1592>

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