

**Title** Psychological vulnerability of French university students during COVID-19 lockdown

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**Abstract:** Even before the current pandemic, university students were known to have high levels of hassles, anxiety, and depressive symptoms. In all probability, the advent of COVID-19 has substantially raised these levels. The present study measured the emotional state of university students during lockdown, and identified the relevant situational and psychological factors. To this end, 1297 French university students were assessed during lockdown, which lasted from 16 March to 11 May in France. Situational factors included the belief that lockdown was compromising their future job prospects, COVID-19 symptoms, and health concerns. Psychological factors included students' implicit theory of emotion, and the coping strategies they used during lockdown. We explored the extent to which these factors were associated with levels of hassles, anxiety, and depressive symptoms. Results indicated that students' belief that lockdown was compromising their future job prospects was positively related to hassles ( $r = .34, p < .001$ ), while concerns about their own health and that of relatives were positively associated with anxiety ( $r = .37$  and  $.34; p < .001$ ). In addition, use of the positive reframing coping strategy mediated the effect of students' implicit theory of emotion on their depressive symptoms. Even though the national lockdown is now over, the pandemic will continue to have a major impact on university students over the coming months. It is therefore essential for universities to provide them with adequate psychological support.

**Keywords:** coronavirus; university students; depression; anxiety; hassles; lockdown; pandemic

## 1. Introduction

On 12 March 2020, the French Government introduced a series of unprecedented measures designed to combat the spread of coronavirus (COVID-19), and on 16 March, the entire population of France was placed under lockdown. Universities were immediately closed, leading to urgent changes in learning habits and exams, generating considerable uncertainty, and massively reducing social contacts, especially for students living alone. Even before the pandemic, university students had been identified as having poorer mental health than their nonstudent peers (Stanley & Manthorpe, 2001). For example, a study conducted in 21 countries worldwide found that 18.5% of university students had had a least one major depressive episode, and 16.7% displayed a generalized anxiety disorder (Auerbach et al., 2018). Ibrahim et al. (2013)'s literature review including 24 studies found that the prevalence of depression among university students was 30.6%. In addition, a recent systematic review including 48 articles from different parts of the world showed a prevalence of 26.1% for depressive symptoms and 24.5% for anxiety among 56,816 students (de Paula et al., 2020). However, both reviews highlighted substantial disparities between countries and studies, in terms of education level, subject, or measures used. For example, 30% of Japanese students were found to have probable anxiety and depressive symptoms (Matsudaira et al., 2009), compared with only 13% of students in Lithuania (Bunevicius et al., 2008). Despite these disparities in prevalence, there is a consensus that university students worldwide are vulnerable to anxiety and depressive symptoms.

Ordinarily, students' poor mental health stems partly from the need to deal with an accumulation of hassles, in the shape of university pressure, schedule changes, material tasks, paid work activities, financial difficulties, and isolation (Réveillère et al., 2001). Coping strategies therefore play a central role. These strategies, and thus emotional experience, are influenced by beliefs about emotions (Tamir et al., 2007). Some individuals see emotions as the direct and uncontrollable consequences of events or contexts (i.e., static implicit theory).

Others, however, consider them to be malleable, and have a clearer sense of being able to act upon their emotional experience (i.e., dynamic implicit theory). Endorsement of a dynamic implicit theory of emotion is associated with less anxiety (De Castella et al., 2014), through better use of strategies such as cognitive reappraisal (Tamir et al., 2007). We can therefore hypothesize that implicit theory of emotion played a role in the coping strategies used by university students during COVID-19 lockdown, and thus in their emotional state. In Europe, there have only been four studies-all descriptive-of the impact of COVID-19 on students. These highlighted high levels of anxiety and depressive symptoms (Essadek & Rabeyron, 2020; Husky et al., 2020; Kaparounaki et al., 2020; Odriozola-González et al., 2020). To date, the factors involved in the expression of these symptoms during lockdown have mostly been overlooked. More specifically, no studies have evaluated the reciprocal influences of situational factors (e.g., COVID-19 symptoms, health concerns), and psychological factors (e.g., coping, implicit theory of emotions), on students' emotional states (e.g., anxiety, depression, hassles).

The purpose of the present study was thus to assess the emotional state of French university students during lockdown, and the psychological and situational factors involved. More specifically, the objectives of the present study were to (a) investigate the links between situational factors and students' emotional state, (b) investigate the links between psychological factors and their emotional state, and (c) explore the possible reciprocal influence of dispositional and situational factors on their emotional state.

## **2. Method**

### **2.1. Sample and procedure**

Data were collected anonymously between 23 April and 8 May (i.e., after 1 month of lockdown), via an online survey designed with Qualtrics software. A link to the survey was sent by e-mail to teachers in different faculties (Sciences, Sport Sciences, Psychology, Art, etc.) at four French universities (Nimes, Lorraine, Strasbourg, and Catholic University of the West), who forwarded it to their students, using either the university's mailing lists or the students'

social media groups. The link to the survey was also distributed via social media by the students who responded, thereby allowing students from other universities to respond. A total of 2153 people initially clicked on the link, but 11 refused to give their consent and were therefore not given access to the survey. Another 11 were excluded, because they mentioned that they were not students, while 833 people started but did not complete all the questionnaire. Finally, one person was excluded from the study by the investigators because of inconsistent responses. Our final sample therefore comprised 1297 students from different French universities, mainly in the south east, north west and north east (region particularly badly affected by COVID-19). Participants were aged 17-75 years ( $M = 21.27$ ,  $SD = 4.72$ ). Participants' characteristics are set out in Table 1. About 38.32% of students reported that, on average, more than two relatives ( $M = 2.43$ ,  $SD = 2.08$ ) in their environment had exhibited COVID-19 symptoms.

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## **2.2. Measures**

### **2.2.1. Hassles**

We measured students' level of hassles with items taken from the Revised University Student Hassles Scale (RUSHS; Pett & Johnson, 2005). We included items ( $N = 22$ ) belonging to the Time pressures, Friendships, and Physical appearance subscales in the questionnaire, as these appeared to be the most relevant in the specific context of lockdown. Participants indicated the severity of each type of hassle since lockdown on a 5-point scale ranging from 1 (*Not at all severe*) to 5 (*Extremely severe*). Higher scores reflected higher levels of hassles. Cronbach's alphas were satisfactory: .89 for Time pressures, .74 for Friendships, .80 for Physical appearance, and .88 for Total hassles.

### **2.2.2. Anxiety and depressive symptoms**

Anxiety and depressive symptoms were assessed using a French version of the Hospital Anxiety and Depression Scale (HADS; Lepine et al., 1985). This 14-item self-report questionnaire assesses anxiety symptoms (7 items) and depressive symptoms (7 items) with

labels varying from one item to the next. Scores range from 0 to 21 for each dimension, with higher scores reflecting higher levels of anxiety or depressive symptoms.

### **2.2.3. Implicit theory of emotions**

Students' implicit theory of emotion was assessed using a French translation of the Implicit Theories of Emotion Scale (Tamir et al., 2007), based on the procedure used by Vallerand (1989). This 4-item self-report measure assesses dynamic implicit theory (2 items;  $r = .50, p < .001$ ) and static implicit theory (2 items;  $r = .68, p < .001$ ). Scores on the latter were reversed to calculate a composite dynamic implicit emotion score ( $\alpha = .80$ ). Participants answered on a 6-point Likert scale ranging from 1 (*Strongly disagree*) to 6 (*Strongly agree*).

### **2.2.4. Strategies used to cope with lockdown**

Coping strategies were assessed using a French version of the situational version of the Brief-COPE (Muller & Spitz, 2003). Students were instructed to refer to a stressful situation related to lockdown. This self-report scale assesses 14 coping strategies (2 items per strategy): active coping, planning, instrumental support, use of emotional support, venting, behavioral disengagement, self-distraction, self-blame, positive reframing, humor, denial, acceptance, religion, and substance use. Participants rated each of the 28 items on a 4-point Likert scale ranging from *Never* to *Always*. Higher scores reflected higher levels of strategy use.

### **2.2.5. Situational factors**

We considered six situational factors: (a) the extent to which participants felt that lockdown was compromising their future job prospects (scale ranging from 0 to 100); (b) the extent to which university studies were essential to participants (scale ranging from 0 to 100); (c) the presence or absence of COVID symptoms; (d) the presence or absence of COVID symptoms in their relatives; (e) participants' level of concern about their health owing to the COVID-19 crisis (scale ranging from 0 to 100); and (f) participants' level of concern about their relatives' health owing to the COVID-19 crisis (scale ranging from 0 to 100).

### 2.3. Statistical analyses

First, correlations were calculated to examine the associations between all numerical variables (i.e., essential nature of university studies, belief that lockdown was compromising students' future job prospects, concerns about students' own health and that of their relatives, anxiety and depressive symptoms, hassles, implicit theory of emotion, and coping strategies). Second, mean comparisons (with Student's *t* tests or analyses of variance, ANOVAs) were conducted to examine differences in psychological experiences as a function of categorical variables (i.e., paid work activity, lockdown with parents, COVID-19 symptoms). Finally, a network analysis based on partial correlations was carried out to study all the relationships.

## 3. Results

### 3.1. Links between emotional state and situational factors

Our first objective was to investigate the links between the situational factors and hassles, anxiety, and depressive symptoms. Results showed that 42.48% of participants had possible depressive symptoms ( $HADS-D \geq 8$ ), and 33.38% had probable anxiety ( $HADS-A \geq 11$ ). Our correlational analyses (Table 2) showed that the more university students worried about their health, the more they worried about the health of their loved ones ( $r = .50, p < .001$ ). In addition, these two variables were positively associated with hassles, depressive symptoms, and above all anxiety ( $r = .37, p < .001$  and  $r = .34, p < .001$ ). Similarly, the more university students considered that lockdown was compromising their future job prospects, the higher their levels of hassles, anxiety, and depressive symptoms. However, the notion that university studies are essential was not related to psychological issues, and was only weakly related to the belief that lockdown was compromising students' future job prospects. Finally, university students who had symptoms of COVID-19, and/or who had relatives with COVID-19 symptoms, had higher levels of hassles, anxiety and depressive symptoms, compared with participants who had no symptoms (Table 3). However, they were no more concerned about either their own health

or that of their relatives. In addition, differences in emotional state were not explained either by paid work activity or by lockdown with parents.

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### **3.2. Links between emotional state and psychological factors**

Our second objective was to evaluate the associations between psychological factors (coping strategies and implicit theory of emotion) and students' emotional state. The first observation yielded by the descriptive data (Table 2) was that participants had quite low mean levels of use of coping strategies, except for acceptance and positive reframing. The five coping strategies most commonly used by our participants were acceptance, positive reframing, planning, self-distraction, and venting. Our correlational analyses (Table 2) showed that hassles, anxiety, and depressive symptoms were related to all the coping strategies, except for religion, venting, and self-distraction. More specifically, hassles, anxiety, and depressive symptoms were positively correlated with behavioral disengagement ( $r = .30$ ,  $r = .32$ , and  $r = .41$ ;  $ps < .001$ ), self-blame ( $r = .46$ ,  $r = .51$ , and  $r = .44$ ;  $ps < .001$ ), and were negatively correlated with acceptance ( $r = -.30$ ,  $r = -.41$ , and  $r = -.46$ ;  $ps < .001$ ), and positive reframing ( $r = -.25$ ,  $r = -.37$ , and  $r = -.50$ ;  $ps < .001$ ). Similar associations were observed between these strategies and implicit theory of emotion (behavioral disengagement:  $r = -.22$ ; self-blame:  $r = -.19$ ; acceptance:  $r = .23$ ; and positive reframing  $r = .32$ ; all  $ps < .001$ ). In other words, participants who above all endorsed an entity theory of emotion (i.e., belief that even with effort, it is impossible to change the emotions one feels), exhibited poorer adjustment to lockdown and higher levels of stress, anxiety, and depressive symptoms.

### **3.3. Reciprocal influence of dispositional and situational factors on emotional state**

Finally, our third objective was to explore the reciprocal influence of dispositional and situational factors on students' emotional state. A network analysis based on partial correlations (Fig. 1) highlighted the centrality of anxiety and depressive symptoms in the psychological

functioning of university students during lockdown. Our results indicated that the belief that lockdown was compromising their future job prospects was related to more hassles, while concerns about their own and relatives' health were related to anxiety. As expected, implicit theory of emotion was indirectly associated with depressive symptoms, via positive reframing.

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#### 4. Discussion

According to UNESCO, on 1 April 2020, schools and universities were closed in 185 countries around the world, affecting 1 542 412 000 learners (i.e., nearly 89.4% of the world's enrolled learners). In France, a total lockdown was imposed on 16 March, and all universities were closed. On 18 May, the lockdown started to be lifted, but French universities remained closed to students until September 2020. Unfortunately, even if the virus is partially under control, it is likely to have a lasting impact on universities. Since universities reopened, social distancing rules and the wearing of masks have led to many changes in the way they operate. To reduce the number of students on campus, hybrid learning or e-learning is being heavily promoted. In addition, the threat of a further spread of the pandemic and full closure of universities continues to hang over students. By 14 September, several French universities (e.g., Montpellier School of Medicine, Political Science Institute in Reims) had already had to close again, owing to the high prevalence of the virus (*Le Monde*<sup>1</sup>). In this context, identifying the emotional state of French university students during the spring lockdown, as well as the psychological and situational factors involved, could help the authorities anticipate potential difficulties during the 2020-2021 academic year.

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<sup>1</sup> *Le Monde* (15 September 2020). Covid-19: pour les étudiants, rentrée universitaire, premiers clusters et séances de sensibilisation.



Our results showed that during lockdown, 42.48% of our participants displayed possible depressive symptoms, whereas depressive symptoms usually affect about 30% of students in France (Boujut et al., 2009). This also seems to have been the case in other countries. For instance, a rate of 31.9% was found in Nigerian students during their lockdown (Ojewale, 2020), whereas the pre-COVID rate was 12.7% (Seun-Fadipe & Mosaku, 2017). Concerning anxiety, our results showed that during lockdown, 33.38% of our participants had probable anxiety. This is also a higher rate than the one that is usually observed for students in France (24.2%; Balayssac et al., 2018). In addition, this rate is higher than the rate (22.5%) for French nonstudent youth (18-24 years) 2 weeks after the start of lockdown (Chan-Chee et al., 2020). These results reflect the high levels of anxiety among French university students during lockdown. Taken together, our results suggest that students, known to constitute a *vulnerable* population (see systematic reviews by Ibrahim et al., 2013; de Paula et al., 2020), could become even more vulnerable during the 2020-2021 academic year, meaning that universities will have to be extremely vigilant. This vigilance will be all the more necessary, given that studies that have tracked the long-term consequences of previous pandemics suggest that psychological problems (including anxiety and depressive symptoms) may persist for months and even years after the event (e.g., Bonanno et al., 2008; Lee et al., 2007; Liu et al., 2012).

Our results showed that anxiety and depressive symptoms were strongly related to the types of coping strategies used during lockdown, especially avoidance strategies (i.e., self-distraction, denial, substance use, behavioral disengagement, venting, and self-blaming). This finding is consistent with studies conducted during the lockdown in the United Kingdom (Dawson & Golijani-Moghaddam, 2020), but also prior to the pandemic (Garnefski et al., 2002; Whatley et al., 1998). In addition, it is interesting to note that participants' mean scores were quite low for most of the coping strategies we measured. According to Dawson and Golijani-Moghaddam (2020), the isolating and restrictive pandemic context may mean that some individuals can no longer successfully use their normal ways of coping. It may be that our

participants had difficulty finding ways to cope with lockdown, and therefore resorted less to coping strategies. However, it is also important to point out that approach coping, and more specifically acceptance and positive reframing, were the strategies our participants used the most, and these strategies played a generally protective role against anxiety and depressive symptoms. In summary, our study showed that university students had difficulty diversifying their coping strategies during lockdown, but were nonetheless able to implement several effective strategies, such as positive reframing, planning, and acceptance. It is possible that those who had difficulty implementing these strategies were also those who expressed the highest levels of anxiety and depressive symptoms.

Beyond the importance of selecting and using effective coping strategies for reducing the anxiety associated with the pandemic and lockdown, our study highlighted the importance of students' beliefs about the capacity for emotional regulation, and more specifically their implicit theory of emotions. Our results showed that the more students adhered to an implicit static theory of emotions (i.e. belief that even with effort, it is impossible to change the emotions they feel), the poorer their adjustment to lockdown and the higher their levels of hassles, anxiety and depressive symptoms. The links between students' adjustment and their implicit theory of emotion are consistent with previous studies (e.g., Tamir et al., 2007), and support the idea that interventions aimed at developing students' emotion regulation skills could help to prevent them developing anxiety and depressive symptoms, and improve their ability to cope with stress. To this end, it seems appropriate to encourage their adhesion to a dynamic theory of emotion.

Our results also showed that situational variables played a central role in students' emotional state during lockdown. More specifically, the belief that lockdown was compromising their future prospects was positively associated with hassles, anxiety, and depressive symptoms. This finding is consistent with a previous study (Hasan & Bao, 2020) that showed that fear of losing an academic year was the concern that most exacerbated students' psychological anxiety in Bangladesh during lockdown. In the same way, our results

showed that the more students worried about their own health than that of their loved ones, the higher their levels of hassles, anxiety and depressive symptoms. All these associations can be explained by the uncertainty (about health and the future) generated by COVID-19, a central concept in the fear of this virus (Schimmenti et al., 2020). In support of this argument, Satici et al. (2020) demonstrated that the inability to tolerate uncertainty in the COVID-19 pandemic can trigger fear of virus and impact negatively on psychological wellbeing.

COVID-19 has brought about a digital revolution in higher education (e.g., use of videoconferencing, digital open books, online exams, interaction in virtual environments; Strielkowski, 2020). Although e-learning was essential for maintaining education during lockdown, it was not without consequences (e.g., high levels of stress and strain), as illustrated by the global survey of the International Association of Universities (IAU, 2020). According to Baticulon et al. (2020), there can be a number of obstacles to e-learning, including technological, personal, family, institutional, or community barriers. In their study, only 41% of students in the Philippines thought they could physically and mentally participate in this type of education. In addition, 25% of college students in China suffered from severe anxiety due to e-learning crack-up (Cao et al., 2020), and anxiety also appears to be related to a lack of enjoyment in the classroom (Dewaele et al., 2019). Despite the reopening of most universities around the world in September 2020, social distancing rules impose the use of distance and/or hybrid learning, for which students are poorly prepared (especially first-year undergraduates). Some students may be overwhelmed by the increased flow of information and the lack of a regular schedule, which can lead to dropout and university failure. This context may well increase hassles about future job prospects, especially among students for whom university education is essential, further increasing their levels of hassles stress and anxiety. All this suggests that university students, who are already known to be a vulnerable population, may be particularly at risk during the 2020-2021 academic year.

It is therefore essential that universities' preventive medicine departments provide adequate psychological support for students. Based on the results of our partial correlation-based network analysis, psychological interventions aimed at reducing depressive symptoms could focus on promoting the use of positive reframing and acceptance, as well as discouraging the use of behavioral disengagement. To reduce hassles and anxiety, it also seems appropriate to limit the use of self-blame, and to analyze students' concerns about their future job prospects, their health, and that of their loved ones. To limit contact and improve coping strategies, *online self-help* interventions (e.g., web page, Facebook page, e-learning) could be used more. A pilot study conducted among first-year medical students showed that a stress management intervention based exclusively on Facebook (including educational, information and stress management resources based primarily on original videos) improved their coping strategies (George et al., 2013). As a precautionary measure, at the beginning of the academic year, universities should provide information about COVID-19 and its risks, hybrid education, hassles, anxiety and depressive symptoms, and how to manage it all.

The present results need to be interpreted with caution. First, although our sample size was large, we cannot be sure that it was representative of all students in France. Although our survey was made available to students in several universities, there was a low response rate-possibly because students were more interested in learning about their courses, and less available to take part in a survey. Nevertheless, students from different subjects and different levels of education were included, leading us to believe that our results reflect French students' emotional state during lockdown rather well. Second, these results exclusively concerned French university students, thus limiting their generalizability. However, the few studies conducted in other countries thus far have also reported increased anxiety and depressive symptoms among university students during lockdown. The impact of fear of COVID-19, academic failure and coping strategies on these symptoms has also been highlighted in research

in other countries. These data suggest that our results could also inform the dynamics in other countries, although further research is warranted at this stage. Third, the cross-sectional design of our study did not allow us to state that our participants' symptoms were lower before lockdown. Based on previous studies demonstrating that the psychological consequences of pandemics can last for several months, it is essential for future studies to conduct longitudinal assessments of students' emotional state throughout the 2020-2021 academic year.

## 5. Conclusion

In conclusion, our study highlighted high levels of hassle, probable anxiety, and/or probable depressive symptoms among university students during France's COVID-19 lockdown. Results showed that the students most at risk were those who thought that lockdown would have a detrimental effect on their future job prospects, worried about their health and that of their loved ones, believed that emotions are fixed, favored the use of avoidance strategies (e.g., behavioral disengagement, denial), and made little use of positive reframing or acceptance. These results are all the more important given that the threat of a so-called *second wave* and closure of the universities, and even a new lockdown, may maintain or even increase students' concerns for their health and that of their loved ones, as well as their anxiety.

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451 **Table 1 Characteristics of survey respondents (*N* = 1297)**

Characteristics	Number	%
<b>Sex</b>		
Female	1009	77.79
Male	268	20.66
Other	20	1.54
<b>University</b>		
Nîmes	560	43.14
Lorraine	370	28.51
Strasbourg	212	16.33
UCO Angers	86	6.63
Others	70	5.39
<b>Level</b>		
Undergraduate	1130	86.86
First year	488	37.51
Second year	314	24.14
Third year	328	25.21
Master's	156	11.99
Fourth year	82	6.30
Fifth year	74	5.69
PhD	11	0.85
Undefined	4	0.31
<b>Subject</b>		
Psychology	473	36.84
Sports science	203	15.81
Languages	159	12.38
History/Geography	99	7.71
Sciences	82	6.39
Art/Design	56	4.36
Law/Economics/Management	48	3.74
French Literature	39	3.04
<b>Lockdown with parents</b>		
Yes	914	70.25
No	387	29.75
<b>Paid work activity during lockdown</b>		
Yes	219	16.86
Contact with the public	45	13.42
No contact with the public	174	3.47
No	1078	83.11
<b>Positive COVID-19 test or symptoms</b>		
Yes	177	13.60
No	1124	86.40
<b>Relative with positive COVID-19 test or symptoms</b>		
Yes	497	38.20
No	804	61.80
<b>Anxiety</b>		
No symptoms ( $\leq 7$ )	596	45.95
Possible anxiety (8-10)	268	20.66
Probable anxiety ( $\geq 11$ )	433	33.38
<b>Depression</b>		
No symptoms ( $\leq 7$ )	759	58.52
Possible depression (8-10)	275	21.20
Probable depression ( $\geq 11$ )	263	20.28

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**Table 2 Descriptive data (mean, standard deviation, minimum and maximum) and correlations between variables of interest**

	Mean (SD)	Min-Max	1		2		3		4		5		6		7		8	
			<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
1. Essential nature of university studies	79.50 (20.60)	0-100	—															
2. Belief that lockdown is compromising future job prospects	55.77 (30.28)	0-100	.09	.002	—	—												
3. Concerns about own health	32.14 (27.92)	0-100	.17	< .001	.18	< .001	—	—										
4. Concerns about relatives' health	67.84 (27.15)	0-100	.17	< .001	.21	< .001	.50	< .001	—	—								
5. Anxiety	8.76 (4.69)	0-21	.08	.003	.27	< .001	.37	< .001	.34	< .001	—	—						
6. Depressive symptoms	7.01 (4.02)	0-19	.00	.892	.31	< .001	.19	< .001	.15	< .001	.60	< .001	—	—				
7. Hassles	3.09 (.77)	1-5	.08	.006	.34	< .001	.24	< .001	.25	< .001	.57	< .001	.54	< .001	—	—		
8. Implicit theories of emotions	15.08 (4.46)	4-24	.06	.021	-.05	.09	-.03	.33	-.06	.024	-.21	< .001	-.30	< .001	-.17	< .001	—	—
Coping																		
9. Venting	4.24 (1.74)	2-8	.04	.157	.01	.72	.12	< .001	.08	.004	.08	.006	-.08	.005	.05	.065	.10	< .001
10. Using emotional support	4.02 (1.81)	2-8	.06	.04	.13	< .001	.23	< .001	.19	< .001	.37	< .001	.19	< .001	.26	< .001	-.05	.06
11. Using instrumental support	3.77 (1.68)	2-8	.06	.038	.06	.044	.23	< .001	.18	< .001	.22	< .001	.05	.087	.16	< .001	.02	.502
12. Planning	4.48 (1.78)	2-8	.14	< .001	-.09	< .001	.04	.168	.03	.358	-.05	.076	-.20	< .001	-.06	.04	.18	< .001
13. Active coping	3.75 (1.51)	2-8	.16	< .001	-.08	.004	.08	.006	.06	.031	-.05	.071	-.25	< .001	-.09	< .001	.19	< .001
14. Positive reframing	5.23 (1.81)	2-8	.04	.137	-.21	< .001	-.16	< .001	-.09	.001	-.37	< .001	-.50	< .001	-.25	< .001	.32	< .001
15. Humor	3.69 (1.72)	2-8	-.09	.002	-.12	< .001	-.24	< .001	-.20	< .001	-.31	< .001	-.25	< .001	-.16	< .001	.19	< .001
16. Acceptance	6.13 (1.65)	2-8	.01	.709	-.26	< .001	-.21	< .001	-.16	< .001	-.41	< .001	-.46	< .001	-.30	< .001	.23	< .001
17. Denial	3.02 (1.37)	2-8	.05	.099	.17	< .001	.16	< .001	.13	< .001	.27	< .001	.28	< .001	.27	< .001	-.12	< .001
18. Self-blame	3.85 (1.71)	2-8	.00	.958	.23	< .001	.16	< .001	.17	< .001	.51	< .001	.44	< .001	.46	< .001	-.19	< .001
19. Behavioral disengagement	3.76 (1.59)	2-8	-.08	.002	.15	< .001	.08	.004	.04	.112	.32	< .001	.41	< .001	.30	< .001	-.22	< .001
20. Substance use	2.62 (1.39)	2-8	-.07	.011	.17	< .001	.07	.008	.04	.15	.24	< .001	.23	< .001	.21	< .001	-.04	.162
21. Self-distraction	4.82 (1.60)	2-8	.10	< .001	.00	.972	.11	< .001	.13	< .001	.10	< .001	-.06	.04	.07	.013	.05	.083
22. Religion	2.82 (1.52)	2-8	-.02	.428	-.03	.324	.02	.387	.00	.928	.03	.26	-.02	.398	.03	.215	.15	< .001

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**Table 3. Means comparisons (standard deviation) of psychological experience of lockdown as a function of living conditions (paid work**

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**activity, lockdown with parents, symptoms and university)**

	Professional activity				Lockdown with parents				COVID-19 symptoms								University					
	Yes	No	<i>t</i>	<i>p</i>	Yes	No	<i>t</i>	<i>p</i>	Student				Relative				Strasbourg	Lorraine	Nîmes	UCO Angers	<i>F</i>	<i>p</i>
									Yes	No	<i>t</i>	<i>p</i>	Yes	No	<i>t</i>	<i>p</i>						
Lockdown is compromising my future job prospects	57.76 (28.11)	55.36 (3.70)	1.07	.285	55.55 (29.55)	56.28 (31.98)	-.39	.695	60.85 (32.54)	54.96 (29.84)	-2.41	.016	57.22 (30.62)	54.86 (30.05)	-1.37	.172	56.18 (29.11)	55.19 (31.44)	55.41 (3.54)	57.44 (25.9)	.16	.922
Concerns about personal health	31.71 (26.60)	32.22 (28.20)	-.25	.805	31.9 (27.64)	32.69 (28.62)	-.47	.642	32.43 (29.53)	32.09 (27.68)	-.15	.881	30.67 (28.31)	33.05 (27.66)	1.49	.137	31.08 (27.13)	31.97 (29.47)	33.39 (28.23)	28.14 (23.22)	1.05	.368
Concerns about relatives' health	69.97 (25.39)	67.40 (27.49)	1.28	.203	68.17 (26.74)	67.04 (28.13)	.68	.495	68.80 (28.98)	67.68 (26.86)	-.51	.611	69.13 (27.31)	67.03 (27.04)	-1.36	.175	67.5 (25.45)	69.17 (27.79)	68.59 (27.72)	60.86 (24.42)	2.32	.073
Anxiety	8.75 (4.83)	8.76 (4.66)	-.03	.979	8.63 (4.61)	9.06 (4.86)	-1.5	.133	9.72 (4.91)	8.61 (4.64)	-2.95	.003	9.31 (4.87)	8.42 (4.54)	-3.31	<.001	8.36 (4.57)	8.85 (4.98)	9.02 (4.69)	7.29 (3.18)	3.97	.008
Depressive symptoms	7.05 (4.03)	7 (4.02)	.16	.876	6.97 (3.93)	7.09 (4.24)	-.46	.646	8.01 (4.38)	6.85 (3.94)	-3.59	<.001	7.44 (4.28)	6.74 (3.83)	-3.06	.002	6.39 (3.93)	7.38 (4.33)	7.01 (.88)	6.69 (3.51)	2.94	.032
Hassles	3.14 (.77)	3.08 (.77)	1.16	.248	3.07 (.77)	3.12 (.78)	-1.15	.252	3.20 (.75)	3.07 (.77)	-2.19	.028	3.17 (.77)	3.03 (.76)	-3.2	.001	2.97 (.77)	3.07 (.80)	3.16 (.75)	2.92 (.71)	4.49	.004

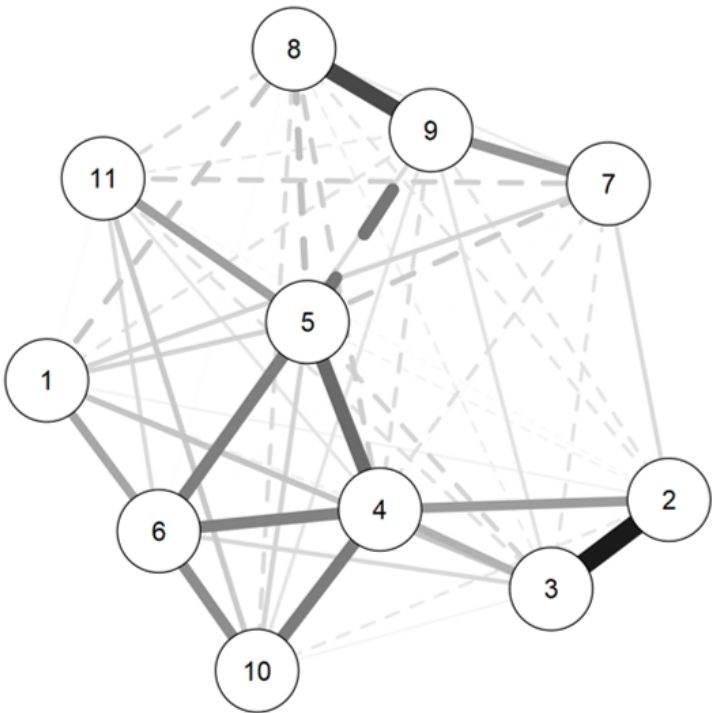
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Note. For the dichotomous variables, we ran Student's *t* tests for independent groups. For the university variable including four modalities, we ran an ANOVA.

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460 **Figure 1: Partial correlations network**



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- 1 Lockdown is compromising my future job prospects
  - 2 Concerns about personal health
  - 3 Concerns about relatives' health
  - 4 Anxiety symptoms
  - 5 Depressive symptom
  - 6 Hassles
  - 7 Implicit theories dynamics of emotion
  - 8 Coping: Acceptance
  - 9 Coping: Positive reframing
  - 10 Coping: Self-blame
  - 11 Coping: Behavioural disengagement

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463  
464 Note. Solid lines correspond to positive partial correlations, and dashed lines to negative  
465 partial correlations. The thicker the line, the stronger the partial correlation.  
466