To be a freshman during the COVID-19 pandemic: A cross-lagged model of severity of depression, mentalizing and epistemic trust

David De Coninck[1], Koen Matthijs[1], Jan Van Bavel[1], & Patrick Luyten[2,3]

[1] *Centre for Sociological Research, KU Leuven, Belgium*

[2] *Clinical Psychology, KU Leuven, Belgium*

[3] *Psychoanalysis Unit, University College London, United Kingdom*

To be a freshman during the COVID-19 pandemic:

A cross-lagged model of severity of depression, mentalizing and epistemic trust

Abstract: Research has shown that severity of depression increase in freshmen during their first months at university due to increased social and academic pressures. Since the start of the COVID-19 pandemic, several cross-sectional studies have suggested that levels of depression in university students are higher than before the pandemic, but longitudinal data are largely lacking. This study investigated severity of depression and negative affect linked to the pandemic among freshmen during their first semester at a large university in Flanders, Belgium. We also investigated whether epistemic trust predicted severity of depression and pandemic-related negative affect, and whether problems with reflective functioning (or mentalizing) mediated these relations. Participants in this two-wave prospective study were 289 first-year students of the Faculty of Psychology and Educational Sciences of a large Belgian university. We conducted paired samples t-tests and cross-panel analysis to answer the research question. The number of students at risk of clinical depression increased by 41% between T1 (early October 2020) and T2 (late December 2020). Epistemic mistrust at T1 was prospectively associated with an increase in the prevalence and severity of depression at T2. Problems with mentalizing and negative COVID-19-related affect were positively associated with severity of depression at T2, and mediated the association between epistemic mistrust and severity of depression at T2. The findings highlight the key role of epistemic trust in the development of depression among freshmen, with the COVID-19 pandemic presenting an additional source of uncertainty.

Keywords: depression, freshmen, reflective functioning, mentalizing, cross-lagged, epistemic trust, COVID-19

Introduction

The COVID-19 pandemic, and government measures taken to reduce infection rates and hospital admissions (e.g., lockdowns and curfews) in particular, have posed significant challenges to the mental wellbeing of the general population in many countries (Kola, 2020). For instance, Généreux et al. (2021) showed that there was a significant increase in the prevalence of self-reported generalized anxiety disorder and major depressive episodes in adults in eight countries between May 2020 and November 2020. Less is known about the impact of the COVID-19 pandemic on mental health and wellbeing in specific subgroups in the population, such as university students (Debowska et al., 2020). This group represents a sizeable share of the population. In 2018, there were 17.5 million tertiary education students in the 27 countries of the European Union (Eurostat, 2020), compared with 19.6 million in the USA (National Center for Education Statistics, 2021).

Studies have amply demonstrated that the wellbeing of university students is under considerable pressure as a result of the new academic, social, and cultural environment they find themselves in, particularly during their first year (Dyson & Renk, 2006). Various studies have investigated the role of broad-bandwidth personality features, such as the Big Five (Shi et al., 2015), and more narrow-width personality dimensions (e.g., interpersonal relatedness and self-definition) (De Coninck et al., 2021; Luyten & Blatt, 2013) in explaining vulnerability to depression and related conditions in university students. There is also increasing research evidence suggesting that impairments in mentalizing (i.e., the capacity to understand oneself and others in terms of mental states, operationalized through reflective functioning) and epistemic trust (i.e., the extent to which individuals trust information provided to them by others) may explain in part these associations in the transition from adolescence to early adulthood (Badoud et al., 2015; Campbell et al., 2021; De Coninck et al., 2021).

Mentalizing may play an important role in the transition to university and university life more generally. Studies suggest that it is easier to reflect on the inevitable changes resulting from the transition to university for students with strong mentalizing abilities, and that they are also better able to understand their peers' perspectives, and therefore more readily establish new friendships and collaborate and integrate more effectively with other students (e.g., on group projects) (De Coninck et al., 2021). Yet, effective mentalizing is without real value if it is not associated with epistemic trust, particularly in an academic environment. Epistemic trust refers to the individual's capacity to trust knowledge conveyed

by others, consider it relevant to the self and generalizable to different context. University students must continuously evaluate the credibility of information from various sources to make informed decisions and succeed academically. Building epistemic trust enables students to engage critically with academic materials, seek guidance from fellow students and mentors, and participate actively in classroom discussions (Campbell et al., 2021; Kampling et al., 2022; Riedl et al., 2023). A well-developed sense of epistemic trust is a prerequisite for a supportive learning environment, encouraging knowledge sharing and cooperative learning. Hence, a focus on the role of mentalizing and epistemic trust among university students may offer a particularly strong theoretical lens through which to understand university students' wellbeing as well as their ability to thrive in an academic setting. Such an understanding may also be important for universities in order to promote an environment that is conducive to personal and academic growth.

Most studies in this area to date have relied either on retrospective assessments of depression or on cross-sectional data (Debowska et al., 2020; Ibrahim et al., 2013; Islam et al., 2020). Thus, there is a need for prospective research (Ibrahim et al., 2013). We therefore investigated the changes in the severity of depression in a two-wave longitudinal study in a large sample of psychology students at a major university in Belgium during the first term of 2020 (from September to December). As in many European countries, there was a sharp decrease in COVID-19 infection rates in July and August 2020 in Belgium. However, from the second half of August, infections began to increase again. The 2020–2021 academic year, which began in late September 2020, started off with a number of restrictions on the maximum number of students allowed in classrooms at the same time (Van Dorpe & Furlong, 2020). However, there were still some opportunities for freshmen and other students to meet with each other (e.g., in so-called study groups or other group activities). Throughout the first weeks of the academic year, the infection rate continued to climb: by October 30, 2020, Belgium had the highest COVID-19 infection rate in Europe. In response, starting from early November 2020, the country entered its second lockdown (BBC News, 2020; Peeters et al., 2021). For university students, this meant that no in-person classes were allowed, forcing universities to resort to distance teaching again. Examinations were scheduled to be conducted in-person to the extent that was possible, although they were also moved to a digital setting where possible. These restrictions remained in effect throughout the remainder of the first semester, and were not lifted until April 2021.

First, we will discuss the relationship between severity of depression and problems with mentalizing and epistemic trust. We will then outline the aims and hypotheses of the present study.

Epistemic trust, mentalizing and severity of depression

Recent research on the development of psychopathology has focused on the role of epistemic trust (Campbell et al., 2021; Wickham, 2019). Epistemic trust is the degree to which individuals are open to receive and believe information acquired through communication. This capacity is believed to develop throughout infancy and childhood, and to shape adolescent and adult relationships and interactions. It encompasses a complex process that varies based on an individual's ability to consider the reliability of the source of information, and the relevance and quality of the information. A high level of epistemic trust may be advantageous to individuals as it allows them to frequently receive information communicated from various sources, and to process it. This ability increases their capacity to adapt to their environment (Wickham, 2019). Recent studies have shown that epistemic trust encompasses three dimensions (Campbell et al., 2021). The first dimension concerns epistemic trust as such, referring to the ability to consider and trust information acquired through communication. The second dimension, epistemic mistrust, reflects a general tendency to consider any information provided by others as unreliable or even ill-intentioned. As a result, individuals with high epistemic mistrust often reject communications from others, or avoid allowing themselves to be influenced by these communications. The third dimension, epistemic credulity, concerns a lack of vigilance and awareness about information. It involves a tendency for epistemic naivety, which results in a higher liability to misinformation and a risk of exploitation (Campbell et al., 2021). Studies have shown that these three dimensions (trust, mistrust, and credulity) are distinct in both non-clinical and clinical samples (Kampling et al., 2022; Riedl et al., 2023). For example, individuals with borderline personality disorder have been shown to have high levels of both epistemic mistrust and epistemic credulity (Orme et al., 2019).

Epistemic trust might be particularly relevant to our understanding of the development of depression and negative affect related to the COVID-19 pandemic (Locati et al., 2023; Serrano et al., 2023). Students presenting with problems related to epistemic trust seem to be at risk for developing depression in the transition to university. As epistemic trust

relates to openness to positive input from the environment, these students may experience considerable difficulties establishing positive relationships with peers. They may tend to close themselves off from others and, when in need, may delay reaching out to peers and other sources of support offered by their university and other organizations (Locati et al., 2023; Orme et al., 2019). The COVID-19 pandemic is likely to have greatly increased this tendency for students with epistemic trust to isolate themselves and/or increasingly rely on a narrow and often unhelpful set of sources of information.

Problems with epistemic trust – or, rather, epistemic mistrust – are also likely to negatively affect these students' capacity for mentalizing (Locati et al., 2023). This refers to the capacity to understand oneself and others in terms of mental states, and has been shown to play an important role in explaining increased vulnerability to depression (Badoud et al., 2015). Indeed, epistemic mistrust typically leads to distorted mentalizing about both the self ("I am all alone, I do not fit in") and about others ("You cannot trust others, you should only rely on yourself"), reflecting hypomentalizing. This potentially leads to a vicious cycle characterized by increasing impairments in mentalizing, epistemic mistrust, and high levels of social isolation and loneliness, which have previously been associated with depression in students (De Coninck et al., 2021).

The present study

Although many studies have investigated the mental health consequences of the COVID-19 pandemic among the general population (Généreux et al., 2021; Kola, 2020), studies that focus on the impact of the pandemic on university students are relatively scarce. Other studies have shown that negative thoughts or affect about the pandemic were associated with more pronounced depressive feelings (Harrison et al., 2021). Based on the literature reviewed above, we formulated the following three hypotheses with regard to the impact of the COVID-19 pandemic on mental health in university students.

First, given the shift from (partial) in-person to distance learning during the semester, we expected students to report significantly higher levels of severity of depression at the end of the first semester than at the beginning (*Hypothesis 1*). Distance teaching often involves a significant reduction in face-to-face interactions, which are vital for creating a sense of belonging, community, and engagement among students (Harrison et al., 2021). The sudden shift from in-person classroom settings to remote learning settings can lead to a sense of

isolation and disconnection from peers and instructors, potentially exacerbating feelings of loneliness and detachment (De Coninck et al., 2022). Additionally, distance teaching might come with technical challenges, lack of immediate feedback, and a diminished ability to engage in real-time discussions. These obstacles may contribute to increased stress and a sense of isolation and loneliness in particular among students (De Coninck et al., 2022), which are known risk factors for depression.

Second, we expected to find negative associations between epistemic trust and levels of depression during the first semester (*Hypothesis 2a*) and positive associations between epistemic mistrust and severity of depression (*Hypothesis 2b*).

Third, we expected that impairments in mentalizing would mediate the association between problems with epistemic trust assessed at the start of the first semester and higher severity of depression at the end of the first semester (*Hypothesis 3*).

Methods

Participants and procedures

Participants were freshmen enrolled in a sociology course at the Faculty of Psychology and Educational Sciences at a large university in Belgium for the academic year 2020–2021. The first assessment took place during the first week of the semester (Time 1 (T1), early October). The questionnaire was programmed in Qualtrics, an online platform for developing questionnaires and collecting data. A URL linking to the questionnaire was made available on the student portal before the first class. The set-up of the study was explained, and students were invited to participate via their smartphone, tablet, or laptop. Two reminders were sent during this week, and the survey was closed after 7 days. Participants were unable to skip questions. A total of 575 students completed the assessment at T1 (response rate: 81%). In the final week of the semester, about 3 months later (Time 2 (T2), mid-December), students were asked to complete the same questionnaire; 350 students completed the assessment at T2 (response rate: 49%). In total, 289 students (response rate: 41%) provided complete data for T1 and T2. Ethical approval for this study was obtained from the Social and Societal Ethics Committee of KU Leuven (G-2017 09 934).

Measures

Severity of depressive features at T1 and T2

Severity of depressive features was assessed with the validated Dutch version of the Center for Epidemiologic Studies Depression (CES-D) eight-item scale (Radloff, 1977; Van de Velde et al., 2009). Items included questions on whether respondents have been feeling depressed, have felt like everything they had to do was too much effort, have been sleeping poorly, have been lonely, have been happy, have enjoyed life, have felt sad, and have felt like they did not want to start their day, over the past week (Cronbach's α_{T1} = .84; Cronbach's α_{T2} = .88). Answer categories range from 0 (rarely/never) to 3 (almost always). This version of the CES-D has a potential range of 0–24, with higher scores reflecting a greater number of self-reported depressive symptoms. We used a score of 9 as a cut-off for possible risk for clinical depression (Briggs et al., 2018; De Coninck et al., 2021).

Reflective Functioning at T2

We used the validated Dutch version of the Reflective Functioning Questionnaire (RFQ) (range: 1 = strongly disagree to 7 = strongly agree) to assess impairments in mentalizing (Badoud et al., 2015; Fonagy et al., 2016). Reflective functioning was assessed through six items, with high scores reflecting too much uncertainty or hypomentalizing and with low scores reflecting too much certainty or hypermentalizing (Cronbach's α = .75).

Epistemic Trust, Mistrust and Credulity at T2

The Epistemic Trust, Mistrust and Credulity Questionnaire (ETMCQ; Campbell et al., 2021) was used to measure individuals' epistemic stance. The ETMCQ is a 15-item questionnaire with responses rated on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). An example of a Trust item is "I find information easier to trust and absorb when it comes from someone who knows me well." A Mistrust item is "If you put too much faith in what people tell you, you are likely to get hurt." A Credulity item is "When I speak to different people, I find myself easily persuaded even if it is not what I believed before." Cronbach's alpha values were .70, .65 and .81 for trust, mistrust and credulity, respectively.

Negative COVID-19 affect at T2

We gauged the extent to which students felt more (1) stress, (2) tense and afraid, and (3) gloomy and sad, due to the COVID-19 pandemic. For each sentiment, answer options ranged from 1 (never) to 5 ((almost) always). The Cronbach's alpha value for the single construct underlying these three items was .81.

Analytic strategy

We focused on the 289 students who completed both assessments. First, paired-samples *t*-tests were conducted to investigate whether depressive feature scores differed between T1 and T2. This was followed up by a repeated-measures ANOVA to look at gender differences. Second, we ran a cross-lagged panel structural equation model (see Figure 1) to investigate whether epistemic stance at T1 prospectively predicted severity of depressive features at T2, and whether these relationships were mediated by reflective functioning and/or negative COVID-19 affect at T2. We also included potential "scarring" effects of depressive features at T1 on depression at T2. Table A1 provides an overview of Pearson correlations between key study variables. We controlled for age, gender, socioeconomic status, and type of secondary education. All analyses were conducted using SAS version 9.4.
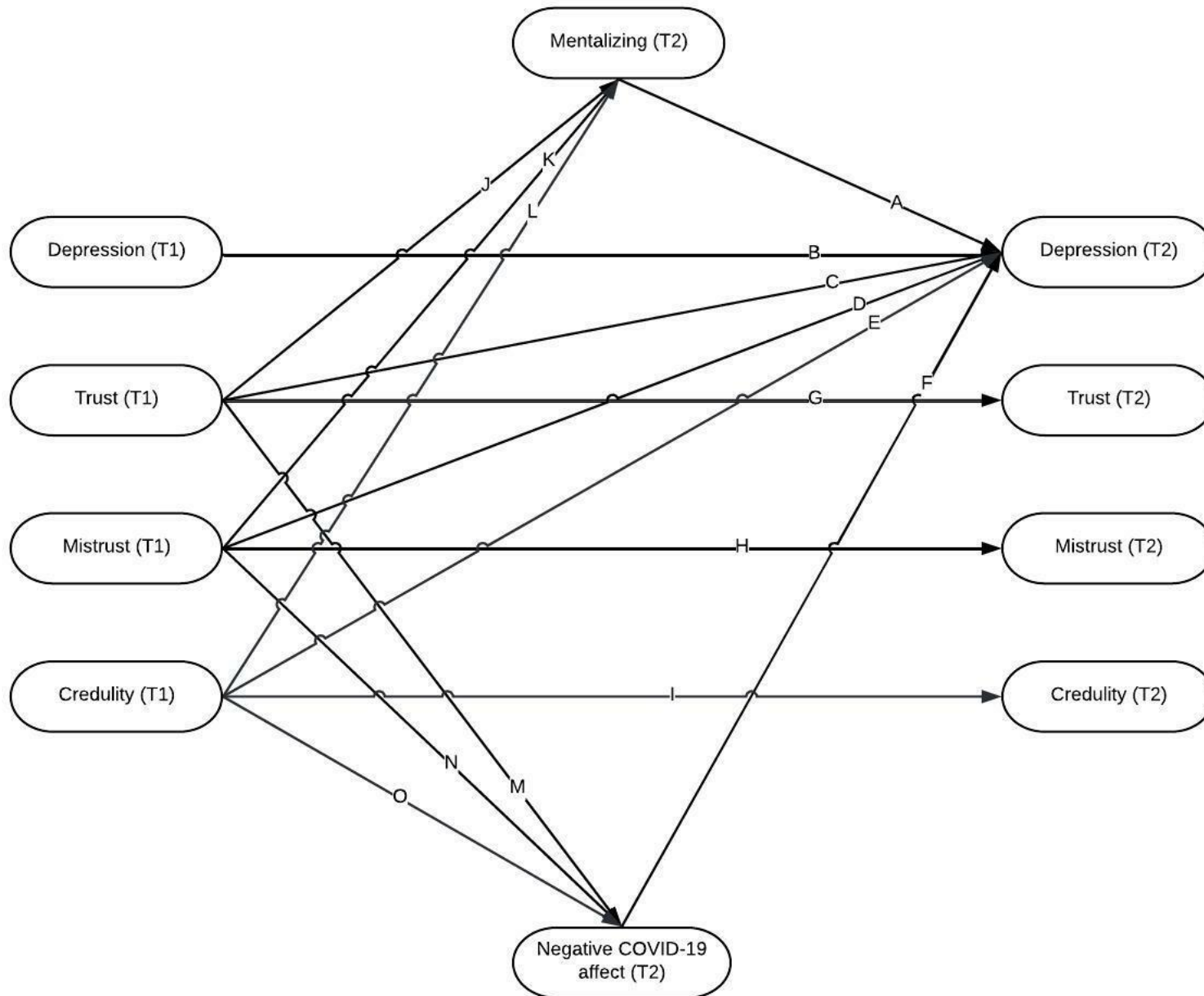
Figure 1. Proposed model between epistemic trust, reflective functioning, negative COVID-19, affect and depressive features at T1 and T2.

Results

Descriptive statistics

The sample consisted mainly of women (83%), which is typical for psychology students in Flanders. Most respondents had completed general secondary education (91%) and had highly educated parents (77% highly educated mothers, 67% highly educated fathers). Of the total sample, 91% was between 17 and 19 years old (mean age = 18.1 years).

Change in severity of depressive features

There was a significant increase in levels of depressive features among first-year students between T1 and T2 (t = −15.76, p < .001): students reported higher levels of depressive features at T2 (M = 12.20, SD = 4.99) than at T1 (M = 7.94, SD = 4.43), representing a large effect size (Cohen's d = 0.90), confirming our first hypothesis. Using a cut-off score of 9 on the CES-D (Briggs et al., 2018), T1 data showed that 27% (n = 77) of students had a possible risk for clinical depression; at T2 this had significantly increased to 68% (n = 195). Post-hoc analyses showed that this increase was observed in both male (t = −4.22, p < .001) and female (t = −15.59, p < .001) students. We also found significant differences in levels of depressive features at T1 and T2 between female ($T1$ = 7.91, $T2$ = 12.53) and male ($T1$ = 7.83, $T2$ = 10.47) students. There was no selective study drop-out as a function of depressive features: 29% of students who dropped out after T1 showed a possible risk for clinical depression, whereas 25% of students who completed both assessments were at risk for clinical depression; the difference in proportions was not significant. Further drop-out analyses also showed no significant differences in epistemic trust, mistrust, or credulity between students who dropped out after T1 and those who completed both waves.

Structural equation modeling

The theoretical model showed an acceptable fit to the data (RMSEA = .08, GFI = .88, CFI = .89, AIC = 732.06, χ^2 = 438.06, df = 259). After deleting non-significant paths (D, E, M, and O in Figure 1), the model showed a better fit (RMSEA = .05, GFI = .90, CFI = .93, AIC = 724.45, χ^2 = 430.05, df = 259).

Epistemic trust at T1 was negatively associated with severity of depressive features at T2 (β = −.15, p = .001), confirming hypothesis 2a. Impairments in mentalizing at T2 were positively associated with depressive features at T2 (β = .19 p < .001), confirming hypothesis 3. Negative affect due to COVID-19 at T2 was also shown to be positively associated with

severity of depressive features at T2 (β = .55, p < .001). Mentalizing and negative COVID-19-related affect at T2 mediated the association between epistemic mistrust at T1 and severity of depressive features. Findings suggest a small negative association between epistemic mistrust at T1 and subsequent depressive features at T2, but this trend was not significant. On the other hand, there was a significant positive association between epistemic mistrust at T1 and mentalizing at T2 (β = .25, p < .001). Similarly, a significant positive association was observed between epistemic mistrust at T1 and negative COVID-19 affect at T2 (β = .19, p < .001). Further, findings indicated a significant indirect effect of T1 mistrust on severity of depressive features at T2 (β = .15, p < .001). The presence of significant direct effects and indirect effects suggests the possibility of mediation through epistemic mistrust, confirming hypothesis 2b. We also found a weak indirect effect of epistemic trust (β = .07, p = .041) and epistemic credulity (β = .08, p = .031) on depressive features at T2 (Tables 1 and 2).

Table 1. Standardized direct effect estimates of the structural equation model.

	β	SE	p-value
Trust T1 > Depressive features T2	−.15	.05	.001
Mistrust T1 > Depressive features T2	−.02	.06	.742
Credulity T2 > Depressive features T2	−.04	.05	.392
Mentalizing T2 > Depressive features T2	.19	.05	.000
Depression T1 > Depressive featureson T2	.49	.08	.000
Negative affect COVID-19 T2 > Depressive features T2	.55	.06	.000
Trust T1 > Mentalizing T2	.13	.06	.042
Mistrust T1 > Mentalizing T2	.25	.06	.000
Credulity T2 > Mentalizing T2	.13	.06	.046
Trust T1 > Negative affect T2	.09	.06	.121
Mistrust T1 > Negative affect T2	.19	.06	.000
Credulity T2 > Negative affect T2	.10	.06	.096
Age > Depressive features T2	.05	.05	.321

General secondary education > Depressive features T2	−.03	.05	.571
Female > Depressive features T2	.11	.05	.029

Note: T1 = Time 1; T2 = Time 2.

Table 2. Standardized indirect effect estimates of epistemic stance at T1 on depressive features at T2.

	β	SE	p-value
Trust T1 > Depressive features T2	.07	.04	.041
Mistrust T1 > Depressive features T2	.15	.04	.000
Credulity T2 > Depressive features T2	.08	.04	.031

Note: T1 = Time 1; T2 = Time 2.

Discussion

In this study, we investigated whether levels of depressive features among freshmen changed between the start and the end of the first semester, and how epistemic trust, reflective functioning, and negative COVID-19-related affect explained possible changes in the severity of depressive features during the fall semester of 2020, during the second wave of the pandemic in Belgium. A little under one-third of students (27%) were found to be at risk for depression at the start of the semester, which is in line with previous large-scale cross-country studies among first-year university students in non-pandemic times (Auerbach et al., 2018). Previous studies on similar subgroups indicated that there is usually about a 10% increase in freshmen with a potential risk for clinical depression between the start and end of the first semester (De Coninck et al., 2019, 2021). Although we had suspected that this increase would be stronger during the pandemic, the results showed that there was a 41% increase, with 68% of students being at risk of depression at the end of the semester. This illustrates how strongly university students may be affected by the pandemic, and how the pandemic presents an extra stressor in the transition from secondary to tertiary education. In line with the dominant literature, we also found gender differences in severity of depression, with women reporting higher levels of depression and a stronger increase in depression than men from the start to

the end of the first semester at university. Previous studies have shown that young women show greater vulnerability to interpersonal concerns and reactivity to depressive feelings than young men (Ibrahim et al., 2013).

One plausible explanation for the negative effects of the pandemic on students is the fear of illness and infection. Several studies have demonstrated increased levels of anxiety and depression in young people during the pandemic. The uncertainty surrounding the virus' transmission, impact, and possible long-term health implications may have contributed to increased stress and depression in university students, particularly because many universities largely switched to distance learning increasing feelings of social isolation and uncertainty about the future (Généreux et al., 2021). Additionally, the pandemic-induced isolation and the implementation of social distancing measures could be a pivotal factor impacting students' mental well-being. The constraints on traditional social interactions, the shift to distance learning, reduced face-to-face interactions, and the limited scope for normal social engagements could have led to an overwhelming sense of isolation and detachment. Such emotional estrangement may have affected first-year students disproportionately, as they typically struggle to adapt to their new academic and social environment, but this time without much possibilities to learn from and share their experiences with others. Particularly those students with poor mentalizing capacities and low levels of epistemic trust seem to have been impacted, as these students are likely to increasingly struggle to make sense of their own self-experience and, because of low epistemic trust, also increasingly became isolated and cut off from the normal social co-regulation of stress, further magnifying feelings of helplessness and hopelessness..   In accordance with our expectations, greater epistemic trust was associated with lower depressive feelings. This finding is particularly important, especially in the context of the COVID-19 pandemic. During the pandemic, students received a great deal of information on potential health threats from news media and health experts, while they were also required to process information on how their education would proceed during these challenging times. Misinformation and disinformation about the health threats posed by the virus also became increasingly prevalent during the study period (Debowska et al., 2020), which also presented a potential hazard to individuals' epistemic trust. Students' epistemic trust was therefore under considerable pressure during this period. This makes it even more important to recognize that those students who were more able to trust the

information they receive from individuals and subsequently adapt their behaviour based on this information reported lower levels of depression at the end of the first semester.

Conversely, it could be expected that epistemic mistrust – the tendency to consider any information source as unreliable or ill-intentioned – was related to greater risk for depressive features. Consistent with these assumptions, higher levels of mistrust at the start of the first semester at university were indirectly related to greater depressive features the end of the semester. Moreover, epistemic mistrust was related to greater uncertainty about mental states and higher levels of negative feelings about the effect of the pandemic on mental states, which were in turn related to greater severity of depression. In previous studies it was hypothesized that students with impairments in the capacity to reflect on themselves and others "may be unable to make sense of the many changes that are associated with the transition to university" (De Coninck et al., 2021, p. 1726). This transition, along with the uncertainty brought by the COVID-19 pandemic, may exacerbate the effects of this trait and mediate the effect of epistemic mistrust.

The current study has two key strengths. First, it contributes to the growing literature that prospectively assesses levels of depressive features among freshmen during the COVID-19 pandemic. Many previous studies in this field have used mainly retrospective assessments of depression or are limited to cross-sectional data (Islam et al., 2020). Second, there have been no studies so far simultaneously investigating the (mediating) role of reflective functioning and epistemic trust on depressive features among either the general public or subgroups such as university students.

However, our study design also has some shortcomings. We cannot generalize our findings to other populations, such as socioeconomically deprived students or students from other countries, given the fact that most of the participants were young, female first-year university students, with most having parents who had completed higher education, and who were enrolled in a psychology program. Moreover, this study collected data from two time points only (the beginning and end of the first semester). It is unclear how the relationships among these variables may change over longer periods of time (e.g., the beginning and end of the first, second, or subsequent years at university). The addition of more data points over a longer period would enhance our understanding of these relationships beyond the first year of university life and throughout the pandemic. Additionally, it is important to acknowledge that all measures in our study are based on self-report measures only. Finally, the observed

increase in feelings of depression could also be (partially) attributed to factors not under investigation in this study. Given the already elevated levels of depression among almost one-third of participants at the start of the semester, it is possible that other stressors that precede the transition from secondary to tertiary education, such as a precarious socioeconomic position, parental and/or peer pressures in academic or social contexts, or parental difficulties may – perhaps in interaction with COVID-related stressors during the semester – exacerbate feelings of depression. Because of the design of this study, it is impossible to distinguish between COVID-specific effects and those stemming from the general transition to university life. The overlapping nature of pandemic-related stress and the broader challenges of adjusting to student life complicates the identification of precise causal factors. This study's two-time point data collection restricts insights into the longer-term impacts and interaction between pandemic stressors and the general university transition. This complexity emphasizes the need for further research to untangle pandemic-related stressors from broader educational adjustments and isolate their distinct contributions to the observed outcomes, including mentalizing abilities and depressive symptoms.

Clinical implications

Feelings of epistemic trust, that is, mistrust in others as a potential source of information and help, were associated with increases in feelings of depression and isolation over the first term in first-year university students, a negative vicious cycle that was reinforced by the emotional impact of the COVID-19 pandemic. If further replicated, these findings stress the need to address epistemic mistrust and distrust in university students, particularly in relation to help-seeking behaviour. This could be achieved by offering online support and treatment, which have been shown to lower barriers to treatment-seeking among university students with mental health problems (Auerbach et al., 2018). Online self-help may be more effective for students with high levels of epistemic mistrust, as it does not involve a relationship with a mental health professional. Moreover, peer-led initiatives may be equally, if not more, effective in reaching the "hardest to reach" university students (i.e., those students who close themselves off from social contacts, including contacts with mental health services).

Declaration of conflicting interests

The authors declare no conflicts of interest.

Data availability statement

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

References

Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Green, J. G., Hasking, P., Murray, E., Nock, M. K., Pinder-Amaker, S., Sampson, N. A., Stein, D. J., Vilagut, G., Zaslavsky, A. M., Kessler, R. C., & WHO WMH-ICS Collaborators. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. *Journal of Abnormal Psychology, 127*(7), 623–638. doi:10.1037/abn0000362.

Badoud, D., Luyten, P., Fonseca-Pedrero, E., Eliez, S., Fonagy, P., & Debbané, M. (2015). The French version of the Reflective Functioning Questionnaire: Validity data for adolescents and adults and its association with non-suicidal self-injury. *PLoS ONE, 10*(12), e0145892. doi:journal.pone.0145892.

BBC News. (2020). Covid: Belgium announces return to national lockdown. *BBC News*. Retrieved from https://www.bbc.com/news/world-europe-54752194

Briggs, R., Carey, D., O'Halloran, A. M., Kenny, R. A., & Kennelly, S. P. (2018). Validation of the 8-item Centre for Epidemiological Studies Depression Scale in a cohort of community-dwelling older people: Data from the Irish Longitudinal Study on Ageing (TILDA). *European Geriatric Medicine*, *9*, 121-126. doi:10.1007/s41999-017-0016-0.

Campbell, C., Tanzer, M., Saunders, R., Booker, T., Allison, E., Li, E., O'Dowda, C., Luyten, P., & Fonagy, P. (2021). Development and validation of a self-report measure of epistemic trust. *PLoS ONE*, *16*(4), e0250264. doi:10.1371/journal.pone.0250264.

Debowska, A., Horeczy, B., Boduszek, D., & Dolinski, D. (2020). A repeated cross-sectional survey assessing university students' stress, depression, anxiety, and suicidality in the early stages of the COVID-19 pandemic in Poland. *Psychological Medicine*, 1-4. Online early publication. doi:10.1017/S003329172000392X.

De Coninck, D., Matthijs, K., & Luyten, P. (2019). Subjective well-being among first-year university students: A two-wave prospective study in Flanders, Belgium. *Student Success*, *10*(1), 33–45. doi:10.5204/ssj.v10i1.642.

De Coninck, D., Matthijs, K, & Luyten, P. (2021). Depression in Belgian first-year university students: A longitudinal study of self-definition, interpersonal relatedness, mentalizing, and integration. *Journal of Clinical Psychology*, *77*(7), 1715–1731. doi:10.1002/jclp.23149.

De Coninck, D., Matthijs, K., & Van Lancker, W. (2022). Distance learning and school-related stress among Belgian adolescents during the COVID-19 pandemic. *Frontiers in Education*, *7*, 836123. doi:10.3389/feduc.2022.836123.

Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology*, *62*(10), 1231–1244. doi:10.1002/jclp.20295.

Eurostat. (2020). Tertiary education statistics. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tertiary_education_statistics

Fonagy, P., Luyten, P., Moulton-Perkins, A., Lee, Y-W., Warren, F., Howard, S., Ghinai, R., Fearon, P., & Lowyck, B. (2016). Development and validation of a self-report measure of mentalizing: The Reflective Functioning Questionnaire. *PLoS ONE*, *11*(7), e0158678. doi:10.1371/journal.pone.0158678.

Généreux, M., Schluter, P. J., Landaverde, E., Hung, K. K. C., Wong, C. S., Mok, C. P. Y., Blouin-Genest, G., O'Sullivan, T., David, M. D., Carignan, M.-E., Champagne-Poirier, O., Pignard-Cheynel, N., Salerno, S., Lits, G., d'Haenens, L., De Coninck, D., Matthijs, K., Champagne, E., Burlone, N., Qadar, Z., Herbosa, T., Ribeiro-Alves, G., Law, R., Murray, V., Chan, E. Y. Y., & Roy, M. (2021). The evolution in anxiety and depression with the progression of the pandemic in adult populations from eight countries and four continents. *International Journal of Environmental Research and Public Health*, *18*(9), 4845. doi:10.3390/ijerph18094845.

Harrison, V., Moulds, M. L., & Jones, K. (2021). Perceived social support and prenatal wellbeing; The mediating effects of loneliness and repetitive negative thinking on anxiety and depression during the COVID-19 pandemic. *Women and Birth*. Online early publication. doi:10.1016/j.wombi.2020.12.014.

Ibrahim, A. K., Kelly, S. J., Adams, C. E., & Glazebrook, C. (2013). A systematic review of studies of depression prevalence in university students. *Journal of Psychiatric Research*, *47*(3), 391–400. doi:10.1016/j.jpsychires.2012.11.015.

Islam, A., Barna, S. D., Raihan, H., Khan, N. A., & Hossain, T. (2020). Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLoS ONE*, *15*(8), e0238162. doi:10.1371/journal.pone.0238162.

Kola, L. (2020). Global mental health and COVID-19. *The Lancet*, *7*(8), 655–657. doi:10.1016/S2215-0366(20)30235-2.

Kampling, H., Kruse, J., Lampe, A., Nolte, T., Hettich, N., Brähler, E., ... & Riedl, D. (2022). Epistemic trust and personality functioning mediate the association between adverse childhood experiences and posttraumatic stress disorder and complex posttraumatic stress disorder in adulthood. *Frontiers in Psychiatry*, *13*, 919191. doi:10.3389/fpsyt.2023.1150422.

Locati, F., Milesi, A., Conte, F., Campbell, C., Fonagy, P., Ensink, K., & Parolin, L. (2023). Adolescence in lockdown: The protective role of mentalizing and epistemic trust. *Journal of Clinical Psychology*, *79*, 969–984. doi:10.1002/jclp.23453.

Luyten, P., & Blatt, S. J. (2013). Interpersonal relatedness and self-definition in normal and disrupted personality development: Retrospect and prospect. *American Psychologist*, *68*(3), 172–183. doi:10.1037/a0032243.

National Center for Education Statistics. (2021). *Number and percentage distribution of students enrolled at Title IV institutions, by control of institution, student level, level of institution, enrollment status, and other selected characteristics: United States, fall 2018*. Retrieved from https://nces.ed.gov/ipeds/search/ViewTable?tableId=26392

Orme, W., Bowersox, L., Vanwoerden, S., Fonagy, P., & Sharp, C. (2019). The relation between epistemic trust and borderline pathology in an adolescent inpatient sample. *Borderline Personality Disorder and Emotion Dysregulation*, *6*(1), 1–9. doi:10.1186/s40479-019-0110-7.

Peeters, I., Vermeulen, M., Bustos Sierra, N., Renard, F., Van der Heyden, J., Scohy, A., Braeye, T., Bossuyt, N., Haarhuis, F., Proesmans, K., Vernemmen, C., & Vanhaverbeke, M. (2021). *Surveillance van COVID-19 gerelateerde mortaliteit in België, epidemiologie en methodologie tijdens 1e en 2e golf (maart 2020-14 februari 2021)* [Surveillance of COVID-19 related mortality in Belgium, epidemiology and methodology during 1st and 2nd wave (March 2020-14 February 2021)]. Sciensano.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, *1*(3), 385–401. doi:10.1177/014662167700100306.

Riedl, D., Rothmund, M. S., Grote, V., Fischer, M. J., Kampling, H., Kruse, J., ... & Lampe, A. (2023). Mentalizing and epistemic trust as critical success factors in psychosomatic rehabilitation: results of a single center longitudinal observational study. *Frontiers in Psychiatry*, *14*, 1150422. doi:10.3389/fpsyt.2023.1150422.

Serrano, D. M., Crone, T., & Williams, P. S. (2023). Exploring the role of multiplist epistemic beliefs on COVID-19 conspiracies and prevention among undergraduates. *Science & Education*. Online early. doi:10.1007/s11191-023-00447-2.

Shi, M., Liu, L., Yang, Y.-L., & Wang, L. (2015). The mediating role of self-esteem in the relationship between big five personality traits and depressive symptoms among Chinese undergraduate medical students. *Personality and Individual Differences*, *83*, 55–59. doi:10.1016/j.paid.2015.03.050.

Van de Velde, S., Levecque, K., & Bracke, P. (2009). Measurement equivalence of the CES-D 8 in the general population in Belgium: A gender perspective. *Archives of Public Health*, *67*(1), 15–29. doi:10.1186/0778-7367-67-1-15.

Van Dorpe, S., & Furlong, A. (2020). Belgium tightens restrictions amid fears of a second coronavirus wave. *Politico*. Retrieved from https://www.politico.eu/article/belgium-coronavirus-restrictions-fear-of-second-wave/

Wickham, A. L. (2019). *The role of epistemic trust in the treatment of major depressive disorder*. Unpublished doctoral dissertation. University College London.