

## **Covid-19 and the mental health and wellbeing of university students: An annotated bibliography**

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### **Report**

The annotated bibliography presented here was undertaken in October 2020 as universities across the UK were in the process of receiving students for the start of the 2020-21 academic year. With coronavirus (Covid-19) outbreaks already being reported largely in association with student accommodation at different Higher Education institutions throughout all four home nations, this notice is intended to provide an introduction to and snapshot survey of relevant Covid-19 literature available at the time of writing, and a starting point for further work for interested readers. Keywords searched in Google Scholar alone (Covid-19, university, college, student, mental health, wellbeing), with a review of indicated titles and abstracts, resulted in the inclusion of the 22 sources identified. The different works presented reflect an international body of research, with only one from the UK (see Savage 2020), almost all of which involved quantitative surveys using online questionnaires.

### **Source materials**

Bono, G., Kresimir, R. and Hescox, J. (2020) Stress and wellbeing in urban college students in the US during the Covid-19 pandemic: Can grit and gratitude help? *International Journal of Wellbeing*, 10(3), 39-57.

*Location: Urban university United States.*

*Sample: 86 undergraduates, mean age 19.4 years, 81.4% female, mixed socio-economic status and ethnicity.*

*Method: Questionnaires, correlational, longitudinal (short-term, two measurement intervals).*

*Findings: Students from non-graduate households reported more perceived stress and academic and financial impact than others. No significant correlation between grit and academic performance, but grit characteristics (perseverance, adaptability and consistency) improved psychological wellbeing. Gratitude (recognition of wellbeing support), no significant correlation with academic performance, but associated with decreased psychological harm.*

Cao, W. (and 6 others) (2020) The psychological impact of the Covid-19 epidemic on college students in China. *Psychiatry Research*, 287, 112934.

*Location: Changzhi medical college, Hubei Province, China.*

*Sample: 7,143 undergraduates (no ages provided), 69.6% female, 95.0% living with parents and from mixed socio-economic urban and rural backgrounds.*

*Method: Structured questionnaire.*

*Findings: 24.9% of sample experienced anxiety because of Covid-19. Living in urban areas, with parents and with a steady family income considered 'protective' factors. Having a relative or acquaintance with Covid-19 considered a negative factor.*

Capone, V. (and 3 others) (2020) University student mental well-being during Covid-19 outbreak: What are the relationships between information seeking, perceived risk and personal resources related to the academic context. *Sustainability*, 12, 7039.

*Location: Italy.*

*Sample: 1,124 Italian university students aged 18 to 63 (mean 23.8 years), 54.5% bachelor's, 30.7% magistral degrees, 14.8% other. 79.6% female. 9.5% knew about cases of Covid-19 personally.*

*Method: Questionnaire-based.*

*Findings: Pandemic not associated with significant psychological pressure (at least immediately). Mental wellbeing also within norms. University still found gratifying in most instances. Self-efficacy beliefs, satisfaction and sense of belonging appear protective suggesting need for development of adequate psychological resources and supportive environments to ensure 'flourishing'.*

Cohen, A.K., Hoyt, L.T. and Dull, B. (2020) A descriptive study of Covid-19 related experiences and perspectives of a national sample of college students in Spring 2020. *Journal of Adolescent Health* [Online: doi.org/10.1016/j.jadohealth.2020.06.009].

*Location: USA-wide.*

*Sample: 725 full-time college students aged 18-22 (mean 20.0 years). Even distribution of gender, race/ethnicity, socio-economic background, sexual orientation and political affiliation.*

*Method: Instagram generated questionnaire survey.*

*Findings: 35.0% had experienced symptoms in study period, only 5.0% of those got tested, only 46% of those self-isolated. Generally, most participants followed CDC guidance but incompletely. Participants receiving financial aid were most concerned about Covid-19's impact, with 39.0% indicated Covid-induced anxiety resulting in distraction. 9.2% reported discrimination based on race. 78.9% of participants expressed optimism seeing how hard people worked to respond to the virus.*

Ding, Y. (and 7 others) (2020) Risk perception of coronavirus disease (Covid-19) and its related factors among college students in China during quarantine. *PLOS ONE* [Online: doi.org/10.1371/journal.pone.0237626].

*Location: China (various provinces).*

*Sample: 1,461 college students, mean age 20.6 years, 95.1% undergraduate, 56.2% female. 4.9% medical majors, the largest subgroup. 53.2% from Hubei province which includes Wuhan.*

*Method: Internet survey.*

*Findings: Female students, non-medical students, students located in Hubei and students with greater Covid-19 knowledge were found to have a statistically higher Covid-19 risk perception.*

Galle, F. (and 11 others) (2020) Understanding knowledge and behaviours related to Covid-19 epidemic in Italian undergraduate students: The EPICO study. *International Journal of Environmental Research and Public Health*, 17, 3481.

*Location: Universities of Rome, Naples and Bari, Aldo Moro in Italy.*

*Sample: 2,125 undergraduate students, mean age 22.5 years, 62.8% female, 49.3% in life sciences programmes.*

*Method: Open and closed-item questionnaire.*

*Findings: Overall, most students exhibited a good knowledge of the Covid-19 epidemic and its control measures, with statistically higher awareness among life sciences students and women. The majority of students showed no evidence of dietary adjustments or smoking habits but did show a decrease in physical activity level (in terms of healthier lifestyles).*

Gao, J. (and 8 others) (2020) Mental health problems and social media exposure during Covid-19 outbreak. *Plos One* [Online: doi.org/10.1371/journal.pone.0231924].

*Location: China (31 provinces and autonomous regions).*

*Sample: 4,872 participants, aged 18 to 85 (mean 32.3 years), not all students, but the subject matter warranted inclusion here.*

*Method: Cross-sectional questionnaire study.*

*Findings: Compared to national data, higher levels of depression, anxiety and combined anxiety and depression recorded from the Hubei/Wuhan area. 82% of participants obtained Covid-19 information from social media resulting in higher levels of mental health issues because of false reports or disinformation fuelling unfounded fears. Requirement to filter out false media to combat 'infodemic'.*

Gao, Z. (and 5 others) (2020) A cross-sectional study: Comparing the attitude and knowledge of medical and non-medical students towards 2019 novel coronavirus. *Journal of Infection and Public Health* [Online: doi.org/10.1016/j.jiph.2020.06.031].

*Location: China.*

*Sample: 588 students from 20 colleges and universities, 66.0% medical, 69.6% of the medical group female (64.0% non-medical female), no ages provided.*

*Method: Questionnaire survey.*

*Findings: Almost all students who participated expressed optimism that Covid-19 could be controlled even though aware of the risks. All wanted to be kept up to date and sought information. No statistical difference between medical and non-medical groups in terms of general Covid-19 knowledge, but medical students were more knowledgeable at a greater level of detail in transmission and risks. Women participants were more likely to answer cautiously if uncertain about questions.*

Islam, M.A. (and 4 others) (2020) Depression and anxiety among university students during the Covid-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLOS ONE* [Online: doi.org/10.1371/journal.pone.0238162].

*Location: Bangladesh.*

*Sample: 476 students, aged 17 to over 24 years (modal group 21-24 years, 67.0%), 32.8% female.*

*Method: Cross-sectional snowball sampling with an 'e-questionnaire'.*

*Findings: 53.7% reported moderate to severe depression, 42.9% moderate to severe anxiety during the pandemic, possibly linked to fear of unemployment and sense of fear linked to achievement, accomplishment, satisfaction and impaired psychological functioning.*

Kecojevic, A. (and 3 others) (2020) The impact of Covid-19 epidemic on mental health of undergraduate students in New Jersey: Cross-sectional study. *Plos One* [Online: doi.org/10.1371/journal.pone.0239696].

*Location: Northern New Jersey, USA.*

*Sample: 162 health science college students, aged 18 to 37 (mean 20.4 years), 71.0% female, mixed ethnicity, 30.9% health science majors.*

*Method: Cross-sectional survey distributed by email.*

*Findings: New Jersey severely affected by Covid-19. Those experiencing academic and/or personal difficulties report greatest levels of mental health disorders. High level of anxiety associated with concerns mostly over post-graduation plans. Men less likely to display high levels of stress than women. Pervasive changes to behaviours in adherence to guidelines (hands, face, space) unlike the general population.*

Khan, K.S. (and 3 others) (2020) The mental health impact of the Covid-19 Pandemic across different cohorts. *International Journal of Mental Health and Addiction*. [Online: doi.org/10.1007/s11469-020-00367-0].

*Location: Global review.*

*Sample: General population, healthcare professionals, students, school children, hospitality/sports employees, vulnerable groups.*

*Method: Literature.*

*Findings: Students studying far away from parents suffer psychosocially the most in terms of fear of contracting Covid-19 and isolation. Also concerned for*

*their friends and families. Altered procedures (e.g. graduation, overseas study trips, lost employment, and so on) affects mood. Delivery from face to face for some (e.g. living remotely, access to technology) causes mental stress.*

Komer, L. (2020) Covid-19 amongst the pandemic of medical student mental health. *International Journal of Medical Students*, 8(1), 1-2.

*Location: Ireland.*

*Sample: A Canadian student's personal experience.*

*Method: Self-reported qualitative case study.*

*Findings: Mental health affected by a 'closed' university, no access to counselling services, travel restrictions, a call from the Canadian government to return home, cancelled electives and 'a toilet paper shortage'.*

Majumdar, P., Biswas, A. and Sahu, S. (2020) Covid-19 pandemic and lockdown: cause of sleep disruption, depression, somatic pain and increased screen exposure of office workers and students of India. *Chronobiology International*, 37(8), 1191-1200.

*Location: India.*

*Sample: 325 undergraduate and postgraduate students, mean age 22.1 years, 60.9% female.*

*Method: Questionnaire.*

*Findings: Student behavioural changes linked to migraine, sinusitis and anaemia. Gastrointestinal and hormonal problems (e.g. diabetes) also rose as a result of the Covid-19 crisis. Social distancing created mental health issues due isolation. Rise in sleep disorders, depression and overall body aches/strains as a result of broken daily routines compounded by mental health and anxiety disorders and increased screen time exposure (computers and phones).*

Olaimat, A.N. (and 4 others) (2020) Attitudes, anxiety and behavioural practices regarding Covid-19 among university students in Jordan: A cross-sectional study. *American Journal of Tropical Medicine and Hygiene*, 103(3), 1177-1183.

*Location: Jordan (all areas).*

*Sample: 2,083 government and private university students, aged 18 to over 25 (modal group 20-24.9 years, approx. 50.0%), 90.2% undergraduate, approx. 75.0% female.*

*Method: Cross-sectional questionnaire survey.*

*Findings: 56.5% demonstrated good Covid-19 knowledge (80.1% satisfactory at best) and in terms of the virus, symptoms, transmission, complications and risks), increasing with age (on a par with contemporary US studies but lower than among Chinese students particularly in Hubei province and Wuhan). Medical students exhibited the highest knowledge scores, humanities the lowest; postgraduates the highest, undergraduates the lowest. Most common*

*source of information was the Internet, including all forms of social media (particularly among engineering students), followed by mass media the family and friends.*

Sahu, P. (2020) Closure of universities due to Coronavirus disease 2019 (Covid-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), e7541.

*Location: Global review.*

*Sample: University students and staff.*

*Method: Literature.*

*Findings: Need for regular information flow. Health and safety top priority. Counselling service essential to support mental health. Food and accommodation requirement for international students in particular. Technology-based teaching and learning should be rich and effective.*

Savage, M.J. (and 6 others) (2020) Mental health and movement behaviour during the Covid-19 pandemic in UK university students: Prospective cohort study. *Mental Health and Physical Activity*, 19, 100357.

*Location: East Midlands, UK.*

*Sample: 214 undergraduate students in science, arts, humanities and education courses, aged 18 to 35+ (mean 20.0 years), 72.0% female, 69.2% living off-campus without parents, equally split across four years of study.*

*Method: Longitudinal cohort study, self-report questionnaire survey.*

*Findings: After five weeks of 'lockdown', decrease in mental wellbeing and physical activity (men found to exercise for mostly social and competitive reasons, women for mostly weight maintenance). Statistically significant and positive association between perceived stress and sedentary behaviour (increasing by 23 hours per week on average).*

Son, C. (and 4 others) (2020) Effects of Covid-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, 22(9), e21279.

*Location: Texas, USA.*

*Sample: 195 students at a large public university, mean age 20.7 years, 56.9% female, 70.8% junior and senior year (3<sup>rd</sup> and 4<sup>th</sup> year), range of disciplines but 60.0% engineering.*

*Method: Semi-structured interview survey (quantitative and qualitative responses).*

*Findings: Moderate to severe change: 68.0% difficulty concentrating, 65.0% sleep disruption, 60.0% with health concerns (self and others), 50.0% worried about academic performance, 44.0% change in living arrangements, 29.0% financial difficulty, 15.0% depressive thoughts and 8.0% suicidal thoughts.*

Tanhan, A. (and 9 others) (2020) A proposed framework based on literature review of online contextual mental health services to enhance wellbeing and address psychopathology during Covid-19. *Electronic Journal of General Medicine*, 17(6), em254.

*Location: Turkey (global review).*

*Sample: Aim to inform psychosocial, spiritual and economic issues, enhance wellbeing and strengthen the mental health profession.*

*Method: Literature.*

*Findings: Turkey lacks well-structured and grounded mental health provision and research in the Covid-19 context. Mental health and wellbeing provision recognised as an essential component of the pandemic experience.*

Zhai, Y. and Du, X. (2020a) Addressing collegiate mental health amid Covid-19 pandemic. *Psychiatry Research*, 288, 113003.

*Location: Global review.*

*Sample: General sector recommendations.*

*Method: Literature.*

*Findings: Classes suspended around the world. Compounded negative emotions and other psychological consequences experienced by students (e.g. frustration, anxiety, betrayal, loneliness, isolation, disconnection). Counselling services often lost as a result of 'closures'. Increased risk of suicide and substance abuse. Disruption of academic routine including suspension of projects, internships and travel. Worries for family members and inadvertent transmission. Employment and income concerns.*

Zhai, Y. and Du, X. (2020b) Mental health care for international Chinese students affected by the Covid-19 outbreak. *The Lancet (Psychiatry)*. [Online: doi.org/10.1016/S2215-0366(20)30089-4].

*Location: Global.*

*Sample: General commentary concerning international Chinese students.*

*Method: Literature.*

*Findings: Students worry about family contraction while absent. Face discrimination and isolation as a result of perpetuated stereotypes and prejudices. Despite messages of solidarity from universities, this can lead to mental health issues including denial, stress, anxiety and fear. Need for recognition and support.*

Zhao, B. (and 5 others) (2020) Novel coronavirus (Covid-19) knowledge, precaution practice and associated depression among university students in Korea, China and Japan. *International Journal of Environmental Research and Public Health*, 17, 6671.

*Location: Korea, China and Japan.*

*Sample: 390 students from universities in Korea (mean age 23.1 years, 58.5% female), 281 in China (23.6 years, 70.5% female) and 150 in Japan (mean age 23.1 years, 60.0% female).*

*Method: Cross-sectional questionnaire survey.*

*Findings: Most respondents had a good working knowledge of Covid-19 (symptoms, transmission, risks). Information satisfaction and behavioural response highest among Chinese where self-isolation had been in place sooner. Depression symptoms greatest among women respondents because of Covid-19, and the Japanese sample as a whole, possibly for cultural reasons associated with personal interaction and a reluctance to share feelings.*

Zolotov, Y. (and 3 others) (2020) Covid-19, fear, mental health and substance use among Israeli university students. *International Journal of Mental Health and Addiction* [Online: doi.org/10.1007/s11469-020-00351-8].

*Location: Israel.*

*Sample: 370 university students, mean age 25.2 years, 78.1% female, 67.4% secular.*

*Method: Questionnaire survey.*

*Findings: Weak but non-significant correlation between age and fear. Women respondents reported significantly higher levels of fear than men. Fear differences across disciplines (e.g. social science more than medicine). No differences in secular versus religious students. Those respondents indicating greater depressive symptoms had higher fear levels than others. Greater levels of fear also associated with university studies and social and family life.*