



## Short communication

## Mental health in universities in an age of digital capitalism: The United Kingdom as exemplary case

Felicity Callard<sup>a,\*</sup>, Dimitra Kotouza<sup>b,2,3</sup>, Philip Garnett<sup>c</sup>, Leon Rocha<sup>b,4</sup><sup>a</sup> School of Geographical and Earth Sciences, University of Glasgow, Glasgow, G12 8QQ, UK<sup>b</sup> University of Lincoln, UK<sup>c</sup> University of York, Church Lane Building, Science Park, Heslington, York, YO10 5DF, UK

## ARTICLE INFO

## Keywords:

Datafication  
Digital apps  
Higher education  
Mental health  
Students  
Wellbeing

## ABSTRACT

Student mental health and wellbeing is a focus of great attention and concern. While research is increasingly investigating institutional factors that might affect mental health and wellbeing, university infrastructures and frameworks themselves are rarely considered. This Short Communication takes the United Kingdom as an exemplary case to outline the implementation and intensified use of digital technologies, infrastructures, and data, as well as the expansion of new relationships between universities and other (often corporate) entities. We outline the need for greater scrutiny and deliberation concerning: (i) gaps in evidence and evaluation; (ii) uncertainty regarding how systematically students are being consulted; and (iii) broader implications of these new markets and data uses. These approaches are influencing conceptualisations of student mental health and wellbeing, and affecting which actors and which tools are measuring and intervening in students' mental health. Many ethical, political and clinical issues are raised by such approaches: they deserve greater critical attention from all in mental health.

## 1. Introduction

Student mental health and wellbeing is increasingly discussed internationally using a language of crisis (Bolton & Hubble, 2021; Shackle, 2019). A systematic review and meta-analysis reported a pooled prevalence of 21% for depression and suicide-related outcomes in students (Sheldon et al., 2021). Very high rates of depression and anxiety have been found in graduate students in particular (Evans et al., 2018). There is growing consternation about the disparity between high levels of demand and available resources for student mental health, especially in austerity regimes installed after the 2007–8 financial crisis (Brown, 2018), and data gathered during the pandemic have indicated further pressure on students' mental health (National Academies of Sciences, Engineering, and Medicine, 2021; Office for National Statistics, 2021). Several countries – including the UK, Ireland and Australia – have developed policies to address student mental health (Brown, 2018; Hill et al., 2020; Orygen, The National Centre of Excellence in Youth Mental

Health, 2017; Universities UK, 2020). While discourse concerning poor student mental health is highly visible, there is no agreement over whether and by how much student mental health and wellbeing have declined, how best to conceptualize and measure each of these constructs (Dodd et al., 2021), whether poor mental health and wellbeing are more prevalent in students than in non-student cohorts of the same age, and what causes poor mental health and wellbeing in students.

However, growing attention has been given to features of university life that might undermine mental health and wellbeing. For example, a narrative synthesis within a systematic review of international students indicated that academic pressures, financial pressures, and sexual harassment may precipitate or worsen various mental health problems (Sheldon et al., 2021). The UK's research funding agency has funded the SMaRteN network, which aims to understand the institutional and social factors – including housing (Worsley et al., 2021) – that contribute to poor student mental health and suggest interventions (SMaRteN, 2021).

We welcome the emphasis on wider institutional and social factors,

\* Corresponding author.

E-mail addresses: [Felicity.callard@glasgow.ac.uk](mailto:Felicity.callard@glasgow.ac.uk) (F. Callard), [Philip.garnett@york.ac.uk](mailto:Philip.garnett@york.ac.uk) (P. Garnett).<sup>1</sup> Joint first author.<sup>2</sup> Joint first author.<sup>3</sup> Present address: Moray House School of Education and Sport, University of Edinburgh, Edinburgh EH8 8AQ. [d.kotouza@ed.ac.uk](mailto:d.kotouza@ed.ac.uk)<sup>4</sup> Present address: University and College Union, Carlow Street, London NW1 7LH. [leon.rocha@cantab.net](mailto:leon.rocha@cantab.net)

and argue that we must also interrogate the infrastructures, frameworks and approaches being embedded to support student mental health and wellbeing (Ahern, 2020). In the UK, which we consider here as an exemplary site, these infrastructures rely extensively on digitalisation and the involvement of corporate actors, which bring multiple political and ethical implications. However, literature and data on student mental health and well-being rarely address the systems and infrastructures used in higher education (HE) (Kotouza et al., 2021), and the fragmentation of evidence used obscures potential causes of ill health (Hernández-Torrano et al., 2020; Oman & Bull, 2021). Social theorists have addressed how the political-economic configurations of late capitalism have damaging psychosocial effects, at the same time as they magnify focus on producing and measuring subjects' 'wellbeing' (Davies, 2011). Yet dominant UK approaches to student mental health – arguably because they are embedded in a sector that has itself been highly financialised over the last quarter-century, with many deleterious consequences (McGettigan, 2015) – have largely sidestepped consideration of either. This Short Communication therefore aims to advance analysis of the roles that infrastructures, digitalisation, and corporate actors play in current approaches to university mental health and wellbeing in the UK.

## 2. Tracking UK approaches

Concerns around student mental health extend in the UK at least back to the 1940s (Crook, 2020). The changes in the HE sector under New Labour introduced new legally mandated responsibilities for universities in relation to student mental health, and helped embed individualized models that tied student mental health to employability (Baker et al., 2006). The steady stream of policy documents and grey literature regarding student mental health across the twenty-first century (Royal College of Psychiatrists, 2011; Universities UK, 2015) intensified from 2017 onwards – in part as a response to a series of student suicides (BBC, 2018). In 2017, Universities UK (UUK), the representative body for UK universities, published a framework ('step change') for addressing the mental health and well-being of university students (Universities UK, 2017); the Institute for Public Policy Research (IPPR), a think tank, published its report on improving student mental health (Thorley, 2017), which was funded by UUK (Universities UK, 2016); and Student Minds, the UK's student mental health charity, published a report on supporting mental health in university accommodation (Student Minds, 2017). Data additionally indicated that 'dropouts' owing to mental ill health trebled between 2009–10 and 2013–14 (Marsh, 2017). In 2019, the Office for Students (OfS), the new regulator for English universities, launched a competition on student mental health that explicitly encouraged digital approaches and partnerships with other kinds of organisation (including private companies) (Office for Students, 2019).

There is broad consensus in many recent policy documents on the importance of a whole system approach. UUK's refreshed 2020 'Step change' approach Universities UK (2020) pointed to the need to combine health promotion initiatives (e.g. around healthy sleep patterns) with the development of healthy cultures and environments. UUK noted that this demands working closely with accommodation providers and enabling co-production with students and staff. While many of these 'whole system' policy aspirations sit firmly within established public health approaches to community-centred health, they also entail significant rebalancing of university resources and investments. This involves implementing and intensifying use of infrastructures and data, as well as expanding new relationships between universities and other entities.

Recent years have witnessed a restructuring of mental health and counselling provision in universities, as well as the growing involvement of corporate actors (Cone & Brøgger, 2020). We have tracked ongoing outsourcing of counselling provision to private providers, and a significant shift towards the procurement of digital tools (including mental health and well-being apps) and data analytics (Fig. 1). Such approaches attempt to measure and reduce risk – not only clinical risks to students,

but the risk to university 'drop out' rates from poor student mental health, and the risk to university reputations through instances of suicide. Digital tools are not only being used to deliver online counselling, cognitive behavioural therapy and self-administered therapeutic programmes, but are being rolled out across campuses to 'nudge' students towards healthy/productive behaviours (Pollard et al., 2021; Bennett, 2019). Mental health MOOCs, delivered through private company platforms, are also in use (Savage, 2017). Little is currently known about the impacts of such tools on student and staff mental health, or on the university as a whole.

The restructuring of mental health in UK universities bears similarities with recent transformations in NHS mental health provision (Mental Health Taskforce, 2016). In response to the call for budgetary control, the NHS Long Term Plan (NHS England, 2019) proposed use of digital tools and external services. This proposal is referenced by Universities UK (2020) and the OfS (Office for Students, 2020) to favour digitisation and data analytics for student mental health. In many universities, expanding student intakes, combined with the effect of large campaigns against stigma (e.g. 'Time To Change') entail higher levels of disclosure, as well as higher demand for counselling and mental health services. Many UK universities are responding by introducing digital services, while providing mental health self-care workshops to reduce demand. The effect of these approaches is a proportionately reduced access to counselling. While it has been argued that the digital environment may offer a viable alternative to traditional counselling/psychotherapy for the 'digital native' generation (Bucci et al., 2019), the development and implementation of digital mental health services outpace their evaluation. The selection of new therapeutic technologies tends to not be assessed by independent clinicians, but instead depends on the expertise offered by product developers.

The policy assemblage relating to mental health in UK HE is, concomitantly, significantly reliant on positive psychology and behavioural economics approaches (Seldon & Martin, 2017), and increasingly favours digital educational technologies and data analytics. These take the form of resilience training workshops and behaviour tracking and 'nudging' apps and platforms (typically procured from charities and private providers). Widely adopted examples are the 'Mentally Healthy Universities' programme delivered by charity Mind and funded by Goldman Sachs, the positive psychology and 'mental fitness' app Fika, and the health tracking app UniWellBeing. A project led by Northumbria University asks students to fill in the WHO Five Wellbeing Index (WHO-5), in order to build a predictive model to help identify students potentially at risk, with the aim of offering early intervention through email nudges identifying sources of service support (Newham & Francis, 2021). The use of data analytics to process data from these apps for health tracking and to assess risk of student distress and suicides is heavily promoted by JISC, the non-profit organisation which operates digital infrastructure and services for UK HE and negotiates sector-wide deals with IT companies (JISC Horizons Group, 2019). Automated risk assessments operate in a circular way, by linking mental distress to student performance, and vice versa. Positive psychology and an entrepreneurial model of 'mental health' – both of which have been aligned with intensified forms of performance management (Pykett & Enright, 2016) – are increasingly positioned as an employability asset. Student retention and employability, the assumed correlates of mental health, come to stand in for the problem of student mental health itself. These approaches not only further embed the relationship between mental health in universities and economic productivity, but could be exacerbating student anxieties about academic and economic achievement, to the detriment of their mental health.

## 3. Assessing current approaches

Greater collective deliberation over the implications of this restructuring is required, particularly as regards:

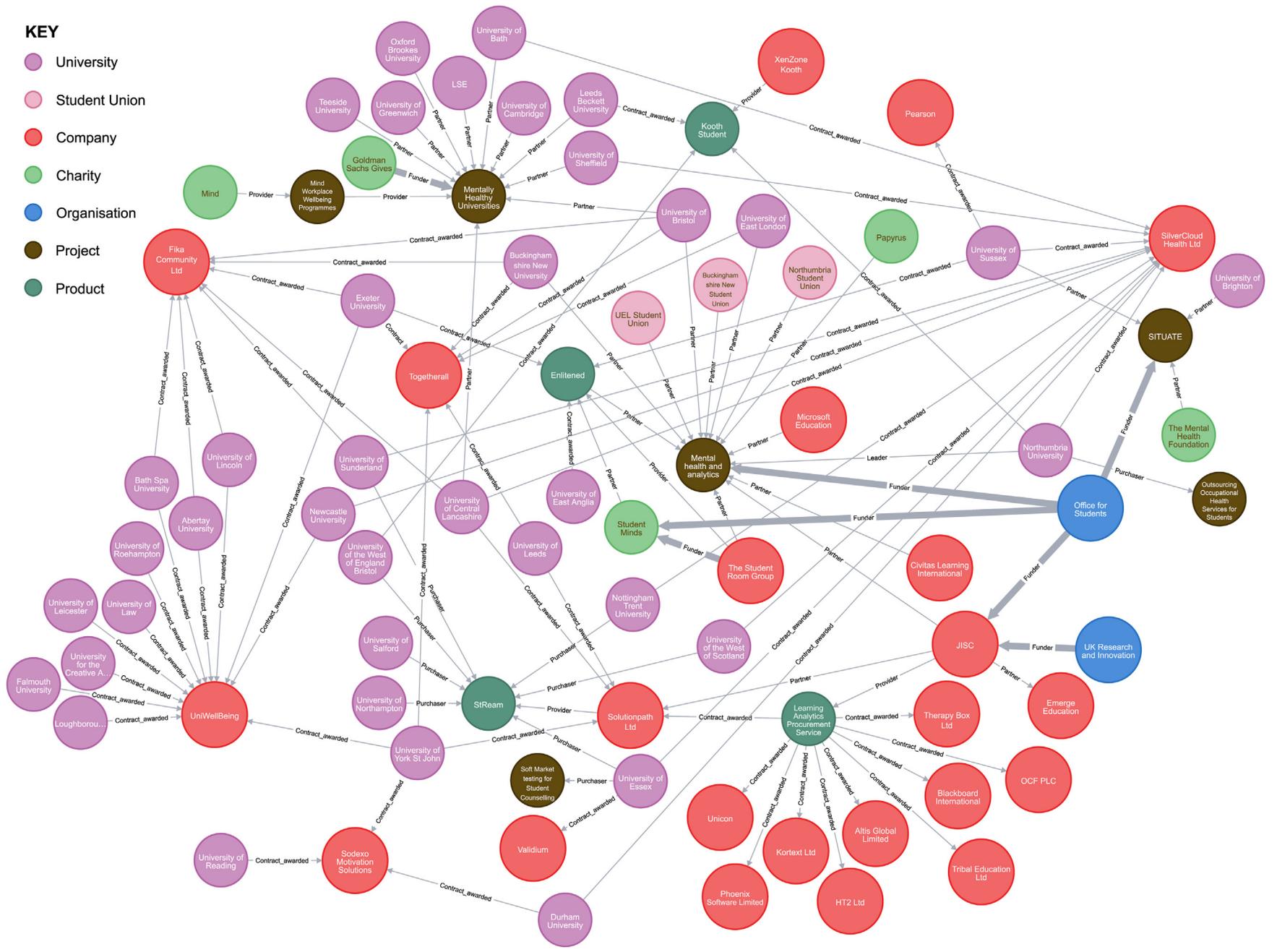


Fig. 1. Selective map of networks involving the use of digital apps and data analytics for mental health in UK higher education (see <https://mapukhe.net> for further details).

### 3.1. Gaps in evidence and evaluation

Initiatives to address student mental health in and beyond the UK frequently lack robust evidence (Barkham et al., 2019; Nunez-Mulder, 2018). A systematic review of digital mental health interventions in college students concluded that while such interventions ‘can be effective’, many studies, when assessed for quality, had a ‘moderate-to-severe risk of bias’ (Lattie et al., 2019). Another systematic review on the efficacy of learning analytics interventions in HE concluded that there ‘there is very little on the effectiveness of [learning analytics] interventions’ in general; it included no published studies that documented improvements in student well-being (Sønderlund et al., 2019). Lack of high quality evidence for these approaches not only carries the risk of ineffectiveness, but also of unknown, potentially deleterious consequences.

### 3.2. Student involvement

While universities and HE sectoral organisations emphasise the need for consultation with students (Pollard et al., 2021), assessing co-production in the design and implementation of mental health and wellbeing initiatives is difficult. How systematically students and staff are being consulted about learning analytics and other data to measure and potentially intervene in relation to mental health remains unclear, as does the extent to which students with serious and ongoing mental health problems, whose lives are likely to be most affected by these technologies and infrastructures, are involved. In 2019, students at the University of Exeter complained about the app Enlitened (which tracks student well-being and was designed by The Student Room company) giving promotional talks during lectures and app surveys that bypassed the student union (Church, 2019); the university’s trade union branch also raised concerns that Enlitened data could be used to monitor staff performance, and voted a motion against it (UCU Exeter, 2019).

### 3.3. New markets and data

New actors, such as private accommodation providers, are being drawn into the governance, surveillance, and, potentially, interpretation of data concerning student mental health and wellbeing. This raises many ethical and political questions about who will benefit, and how, from these new infrastructures and partnerships. Ongoing concern over the NHS’s data extraction ‘GP Data for Planning and Research’ programme shows how difficult it can be to maintain the trust of those whose data are being used (and potentially exploited) when processes of data-sharing are opaque and commercial interests are involved (Macdonald, 2021).

Identifying students ‘at risk’ of mental distress and suicide through the use of algorithms is at an early stage, and there remain many methodological and ethical challenges (Ahern, 2020; Birk & Samuel, 2020; Brown & Halpern, 2021). As with other methods used to determine mental health risk, algorithmic approaches will continue to be inextricably linked to questions of social and political values as much as to statistical difficulties (Szmukler & Rose, 2013). As is frequently the case with digital mental health technologies, policy recommendations and adoption appear to be preceding research and evaluation (Bucci et al., 2019). Much research on analytics in relation to student mental health is currently led by the same teams tasked with implementation (Foster & Siddle, 2020).

## 4. Conclusion

Student mental health and wellbeing internationally have become sites for therapeutic and other markets, as well as for the development of new technological and digital interventions. The building of new markets, the privatisation of hitherto public goods, and the concomitant intensification of competition (whether between universities, corporate actors, or students) might well exacerbate students’ and university workers’ psychosocial and mental distress (Whittle et al., 2020).

Meanwhile, the significant emphasis on digital approaches in the UK, amongst a number of other countries, means that corporate entities are increasingly gaining access – or primed to gain access – to extract and valorise student data for the stated aim of mental health. Many current approaches to student mental health rely on and promulgate, in other words, the assumed benefits of digital capitalism; we also see this in discourses about mental health that extend beyond the university (Pickersgill, 2019).

It is not surprising that digital education tools, metrics, datafication and outsourcing are increasingly used in relation to mental health in UK HE, given their extensive take-up elsewhere in this sector (Williamson, 2018) as well as across the NHS. That the specific implications of these approaches have not received substantial critical attention vis-à-vis universities is concerning. In addition to the lack of evidence regarding many of these approaches, the emphasis on ‘prevention’ is opening student mental health to multiple markets and actors. Of equal concern is what becomes obscured as particular mental health and wellbeing discourses in universities become solidified. Individualized self-monitoring via apps makes meaningful attention to broader socio-economic processes, including those of digitalisation and algorithmic analysis themselves, more difficult. Other core problems that tend to disappear from view in the UK include: reduced student access to counselling services, insufficient support of students with severe and ongoing mental health problems, levels of precarity amongst university staff and their potential impact on both staff and student mental health, and the mental health and wellbeing of university staff (Morrish, 2019; Erickson et al., 2020). Additionally, many aspects of university life – such as the effects of sexual misconduct – remain inadequately researched for their potential contribution to mental ill health (Oman & Bull, 2021). A rapid review investigating the relationship between financial stress and student mental health in the UK concluded that while financial stress might be associated with mental health outcomes, most studies were small in size and limited in design (McCloud & Bann, 2019). Investigations of the impact of students’ living arrangements remains at a nascent stage, and there is little evidence that such research has adequately grappled with how their potential to be salutogenic or undermining of mental health demands understanding living environments as simultaneously physical, social and symbolic spaces (Papoulias et al., 2014).

We agree with those who call for more evidence to underpin university mental health initiatives (Barkham et al., 2019), and greater transparency in the implementation of digital approaches to mental health (Bhugra et al., 2017). But we go further. We need sustained analysis across different countries of the potential side-effects and unintended consequences of current initiatives and infrastructures – of specific mental health interventions; of how student mental health and wellbeing are being conceptualized, measured and surveilled; of the effects of constituting a distinct category of student mental health and wellbeing that is carved out from other social relations; and of how and by whom student data are being used and interpreted in the service of mental health and wellbeing. Our analysis suggests that some of the most powerful levers for current directions of travel might well derive from profit-driven economic exigencies rather than public health or clinical best practice. Our UK case study indicates how these approaches are changing what is envisaged as student mental health and wellbeing, who has access to data about student mental health and wellbeing, and the learning and research environment of the university. These are not only medical matters but matters of ethics and social justice: they demand much greater examination.

### Funding sources

This work was supported by the Wellcome Trust (219172/Z/19/Z) and The Leverhulme Trust (RF-2020-734\8). The funding sources had no involvement in the writing of the article, the underlying research, nor in the decision to submit the paper for publication.

## CRedit authorship contribution statement

**Felicity Callard:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing, Funding acquisition. **Dimitra Kotouza:** Conceptualization, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Visualization. **Philip Garnett:** Investigation, Supervision, Writing – review & editing, Funding acquisition. **Leon Rocha:** Investigation, Supervision, Writing – review & editing, Project administration, Funding acquisition.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## References

- Ahern, S. J. (2020). Making a #Stepchange? Investigating the alignment of learning analytics and student wellbeing in United Kingdom higher education institutions. *Frontiers in Education*, 5 [Internet] [cited 2021 Jun 16]; Available from: <https://www.frontiersin.org/articles/10.3389/feeduc.2020.531424/full>.
- Baker, S., Brown, B. J., & Fazey, J. A. (2006). Mental health and higher education: Mapping field, consciousness and legitimization. *Critical Social Policy*, 26(1), 31–56.
- Barkham, M., Broglio, E., Dufour, G., Fudge, M., Knowles, L., Percy, A., et al. (2019). Towards an evidence-base for student wellbeing and mental health: Definitions, developmental transitions and data sets. *Counselling and Psychotherapy Research*, 19(4), 351–357.
- BBC. (2018 Sep 24). Bristol university suicides spark mental health alerts. BBC News. Available from: <https://www.bbc.com/news/uk-england-bristol-45624695>.
- Bennett, N. (2019 Nov 11). The crisis in student wellbeing is about emotional fitness, not mental illness [Internet]. Wonkhe. Available from: <https://wonkhe.com/blogs/the-crisis-in-student-wellbeing-is-about-emotional-fitness-not-mental-illness/>.
- Bhugra, D., Tasman, A., Pathare, S., Priebe, S., Smith, S., Torous, J., et al. (2017). The WPA–Lancet psychiatry commission on the future of psychiatry. *The Lancet Psychiatry*, 4(10), 775–818.
- Birk, R. H., & Samuel, G. (2020). Can digital data diagnose mental health problems? A sociological exploration of ‘digital phenotyping’. *Sociology of Health & Illness*, 42(8), 1873–1887.
- Bolton, P., & Hubble, S. (2021 Jun 8). *Support for students with mental health issues in higher education in England*. Available from: <https://commonslibrary.parliament.uk/research-briefings/cbp-8593/>.
- Brown, J. E. H., & Halpern, J. (2021). AI chatbots cannot replace human interactions in the pursuit of more inclusive mental healthcare. *SSM - Mental Health*, 1, 100017.
- Brown, J. S. L. (2018). Student mental health: Some answers and more questions. *Journal of Mental Health*, 27(3), 193–196.
- Bucci, S., Schwannauer, M., & Berry, N. (2019). The digital revolution and its impact on mental health care. *Psychology and Psychotherapy: Theory, Research and Practice*, 92(2), 277–297.
- Church, E. (2019 Feb 2). *Wellbeing app pilot raises concerns*. Exposé (696):1,5.
- Cone, L., & Brogger, K. (2020). Soft privatisation: Mapping an emerging field of European education governance. *Globalisation, Societies and Education*, 18(4), 374–390.
- Crook, S. (2020). Historicising the “crisis” in undergraduate mental health: British universities and student mental illness, 1944–1968. *Journal of the History of Medicine and Allied Sciences*, 75(2), 193–220.
- Davies, W. (2011). The political economy of unhappiness. *New Left Review*, 71, 65–80.
- Dodd, A. L., Priestley, M., Tyrrell, K., Cygan, S., Newell, C., & Byrom, N. C. (2021). University student well-being in the United Kingdom: A scoping review of its conceptualisation and measurement. *Journal of Mental Health*, 30(3), 375–387.
- Erickson, M., Hanna, P., & Walker, C. (2020). The UK higher education senior management survey: A statistivist response to managerialist governance. *Studies in Higher Education*, 1–18.
- Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L. (2018). Evidence for a mental health crisis in graduate education. *Nature Biotechnology*, 36(3), 282–284.
- Foster, E., & Siddler, R. (2020). The effectiveness of learning analytics for identifying at-risk students in higher education. *Assessment & Evaluation in Higher Education*, 45(6), 842–854.
- Hernández-Torrano, D., Ibrayeva, L., Sparks, J., Lim, N., Clementi, A., Almukhambetova, A., et al. (2020). Mental health and well-being of university students: A bibliometric mapping of the literature. *Frontiers in Psychology*, 11, 1226.
- Hill, M., Farrelly, N., Clarke, C., & Cannon, M. (2020). Student mental health and well-being: Overview and future directions. *Irish Journal of Psychological Medicine*, 1–8. <https://doi.org/10.1017/ipm.2020.110>
- JISC Horizons Group. (2019). *Horizons report on emerging technologies and education*. JISC Spring. Available from: <https://www.jisc.ac.uk/reports/horizons-report-emerging-technologies-and-the-mental-health-challenge>.
- Kotouza, D., Callard, F., Garnett, P., & Rocha, L. (2021). Mapping mental health and the UK university sector: Networks, markets, data. *Critical Social Policy*. <https://journals.sagepub.com/doi/full/10.1177/02610183211024820>.
- Lattie, E. G., Adkins, E. C., Winquist, N., Stiles-Shields, C., Wafford, Q. E., & Graham, A. K. (2019). Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: Systematic review. *Journal of Medical Internet Research*, 21(7), Article e12869.
- Macdonald, H. (2021). Can the NHS successfully deliver its GP data extraction scheme? *BMJ*, 374, n2170.
- Marsh, S. (2017 May 23). Number of university dropouts due to mental health problems trebles. *The Guardian* [Internet]. Available from: <https://www.theguardian.com/society/2017/may/23/number-university-dropouts-due-to-mental-health-problems>.
- McCloud, T., & Bann, D. (2019). Financial stress and mental health among higher education students in the UK up to 2018: Rapid review of evidence. *Journal of Epidemiology & Community Health*, 73(10), 977–984.
- McGettigan, A. (2015). *The great university gamble: Money, markets and the future of higher education*. Pluto Press.
- Mental Health Taskforce. (2016). *The five year forward view for mental health*. NHS England. <https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf>.
- Morrish, L. (2019 May 23). *Pressure Vessels: The epidemic of poor mental health among higher education staff*. HEPI. Report No. 20. Available from: <https://www.hepi.ac.uk/2019/05/23/pressure-vessels-the-epidemic-of-poor-mental-health-among-higher-education-staff/>.
- National Academies of Sciences, Engineering, and Medicine. (2021). *Mental Health, Substance Use, and Wellbeing in Higher Education: Supporting the Whole Student*. Washington, DC: The National Academies Press.
- Newham, J., & Francis, P. (2021). *Suicide prevention and data analytics - Office for Students*. Office for Students. Available from: <https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/effective-practice/suicide-prevention-and-data-analytics/>.
- NHS England. (2019). *The NHS long term plan*. Available from: <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf>.
- Nunez-Mulder, L. (2018 Sep 19). Researcher cautions against initiatives to reduce student suicide that lack evidence. *BMJ*, 362, k3969.
- Office for National Statistics. *Coronavirus and higher education students*. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandhighereducationstudents/19februaryto1march2021>.
- Office for Students. (2019). *OFS Challenge Competition: Achieving a step change in mental health outcomes for all students*. Available from: <https://www.officeforstudents.org.uk/advice-and-guidance/student-wellbeing-and-protection/student-mental-health/improving-mental-health-outcomes/>.
- Office for Students. (2020). *Mental health funding competition*. Office for Students. Available from: <https://www.officeforstudents.org.uk/advice-and-guidance/funding-for-providers/mental-health-funding-competition/>.
- Oman, S., & Bull, A. (2021). Joining up well-being and sexual misconduct data and policy in HE: ‘To stand in the gap’ as a feminist approach. *The Sociological Review*, Article 00380261211049024.
- Orygen, The National Centre of Excellence in Youth Mental Health. Under the radar. (2017). *The mental health of Australian university students*. Melbourne: Orygen. The National Centre of Excellence in Youth Mental Health.
- Papoulias, C., Cispke, E., Rose, D., McKellar, S., & Wykes, T. (2014 Sep). The psychiatric ward as a therapeutic space: Systematic review. *British Journal of Psychiatry*, 205(3), 171–176.
- Pickersgill, M. (2019). Digitising psychiatry? Sociotechnical expectations, performative nominalism and biomedical virtue in (digital) psychiatric praxis. *Sociology of Health & Illness*, 41(S1), 16–30.
- Pollard, E., Vanderlayden, J., Alexander, K., Borkin, H., & O’Mahony, J. (2021). *Student mental health and wellbeing*. Department for Education. Available from: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/996478/Survey\\_of\\_HE\\_Providers\\_Student\\_Mental\\_Health.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996478/Survey_of_HE_Providers_Student_Mental_Health.pdf).
- Pykett, J., & Enright, B. (2016). Geographies of brain culture: Optimism and optimisation in workplace training programmes. *Cultural Geographies*, 23(1), 51–68.
- Royal College of Psychiatrists. (2011). *Mental health of students in higher education*. Available from: [https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr166.pdf?sfvrsn=d5fa2c24\\_2](https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/college-reports/college-report-cr166.pdf?sfvrsn=d5fa2c24_2).
- Savage, A. (2017 May 12). *Mental health MOOCs launched at Reading and Monash*. University Business [Internet]. Available from: <https://universitybusiness.co.uk/news/mental-health-moocs-launched-at-reading-and-monash/>.
- Seldon, A., & Martin, A. (2017 Sep). *The Positive and Mindful University*. HEPI. Report No. 18. Available from: <https://www.hepi.ac.uk/2017/09/21/positive-mindful-university/>.
- Shackle, S. (2019 Sep 27). *The way universities are run is making us ill: Inside the student mental health crisis*. *The Guardian*. Available from: <https://www.theguardian.com/society/2019/sep/27/anxiety-mental-breakdowns-depression-uk-students>.
- Sheldon, E., Simmonds-Buckley, M., Bone, C., Mascarenhas, T., Chan, N., Wincott, M., et al. (2021). Prevalence and risk factors for mental health problems in university undergraduate students: A systematic review with meta-analysis. *Journal of Affective Disorders*, 287, 282–292.
- SMArteN. About SMArteN [Internet], SMARTEN. n.d. Available from: <https://www.smartern.org.uk/about.html>.
- Sønderlund, A. L., Hughes, E., & Smith, J. (2019). The efficacy of learning analytics interventions in higher education: A systematic review. *British Journal of Educational Technology*, 50(5), 2594–2618.
- Student Minds. (2017). *Student living: Collaborating to support mental health in university accommodation*. UPP Foundation. Available from: [http://www.studentminds.org.uk/uploads/3/7/8/4/3784584/student\\_living\\_collaborating\\_to\\_support\\_mental\\_health\\_in\\_university\\_accommodation.pdf](http://www.studentminds.org.uk/uploads/3/7/8/4/3784584/student_living_collaborating_to_support_mental_health_in_university_accommodation.pdf).

- Szmukler, G., & Rose, N. (2013). Risk assessment in mental health care: Values and costs. *Behavioral Sciences & the Law*, 31(1), 125–140.
- Thorley, C. (2017). *Not by degrees: Improving student mental health in the UK's universities*. London: Institute for Public Policy Research. Available from: [https://www.ippr.org/files/2017-09/1504645674\\_not-by-degrees-170905.pdf](https://www.ippr.org/files/2017-09/1504645674_not-by-degrees-170905.pdf).
- Universities UK. (2015). *Student mental wellbeing in higher education: Good practice guide*. Universities UK [Internet]. Available from: <https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2015/student-mental-wellbeing-in-he.pdf>.
- UCU Exeter. (2019 May 21). Branch Motion: Use of 'Enlitened' app at University of Exeter [Internet]. Available from: <https://exeterucu.wordpress.com/2019/05/21/use-of-enlitened-app-at-university-of-exeter/>.
- Universities UK. (2016). *New programme to address mental health and wellbeing in universities*. Universities UK. Available from: <https://web.archive.org/web/20161208161638/http://www.universitiesuk.ac.uk/news/Pages/New-programme-to-address-mental-health-and-wellbeing-in-universities.aspx>.
- Universities UK. (2020). *Stepchange: Mentally healthy universities* [Internet]. London: Universities UK. Available from: <https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2020/uuk-stepchange-mhu.pdf>.
- Universities UK. (2017 Sep 4). *#Stepchange: Framework*. Universities UK. Available from: <https://web.archive.org/web/20170909175755/http://www.universitiesuk.ac.uk/policy-and-analysis/stepchange/Pages/framework.aspx>.
- Whittle, R., Brewster, L., Medd, W., Simmons, H., Young, R., & Graham, E. (2020). The 'present-tense' experience of failure in the university: Reflections from an action research project. *Emotion, Space and Society*, 37, 100719.
- Williamson, B. (2018). The hidden architecture of higher education: Building a big data infrastructure for the 'smarter university'. *International Journal of Education Technology High Education*, 15(1), 12.
- Worsley, J. D., Harrison, P., & Corcoran, R. (2021). The role of accommodation environments in student mental health and wellbeing. *BMC Public Health*, 21(1), 573.