

**An argument for more high-quality research focused on mental health in the post-secondary context.**

Dr Nicola Byrom, Department of Psychology, Institute of Psychiatry, Psychology and Neurosciences, King's College London, 16 De Crespigny Park, London, SE5 8AB, UK. [nicola.byrom@kcl.ac.uk](mailto:nicola.byrom@kcl.ac.uk) ORCID ID: 0000-0003-2104-550X

Julia Pointon-Haas, Department of Psychology, Institute of Psychiatry, Psychology and Neurosciences, King's College London, 16 De Crespigny Park, London, SE5 8AB, UK. [julia.a.pointon-haas@kcl.ac.uk](mailto:julia.a.pointon-haas@kcl.ac.uk) ORCID ID: <https://orcid.org/0000-0002-5216-2509>

Dr Rebecca Upsher, Department of Psychology, Institute of Psychiatry, Psychology and Neurosciences, King's College London, 16 De Crespigny Park, London, SE5 8AB, UK. [Rebecca.j.upsher@kcl.ac.uk](mailto:Rebecca.j.upsher@kcl.ac.uk) ORCID ID: <https://orcid.org/0000-0002-0881-8654>

Dr Frank Iorfino, Brain and Mind Centre, The University of Sydney, 94 Mallett St, Camperdown, NSW, 2600. ORCID: 0000-0003-1109-0972

Dr Sarah McKenna, Brain and Mind Centre, The University of Sydney, 94 Mallett St, Camperdown, NSW, 2600. ORCID: 0000-0002-8560-6399

Emma McCann, Bloomberg Faculty of Nursing, University of Toronto, 150 College Street, Toronto, ON, M5T1P8

Dr Michael Priestley - School of Education, Durham University, Stockton Rd, Durham, DH1 3LE <https://orcid.org/0000-0002-7071-7336>

Dr Hannah Rachael Slack - Department of Psychology, Institute of Psychiatry, Psychology and Neurosciences, King's College London. <https://orcid.org/0000-0003-2522-8717>

Dr (Prof) Kristin Cleverley, Bloomberg Faculty of Nursing, University of Toronto, 150 College Street, Toronto, ON, M5T1P8; Senior Scientist Centre for Addiction and Mental Health

## Abstract

We argue that while a substantial proportion of emerging adults are in post-secondary education, there is relatively little consideration of this context within research and policy around youth mental health. The unique challenges young adults face in post-secondary education overlay underlying risk factors experienced by emerging adults. While post-secondary education facilitates social mobility, it also introduces stressors such as academic demands, financial insecurity, and social isolation. As we increasingly appreciate the social determinants of mental health and the influence of institutional systems, understanding the post-secondary context offers promise in transforming mental health in emerging adulthood. There are pockets of great practice. However, we argue that targeted efforts are now needed to bring together students, practitioners, policymakers and researchers to drive evidence-informed improvements in mental health within the post-secondary context.

Emerging adulthood (aged 18 – 25 years) is a high-risk period for mental health problems (Arnett, 2010). Most mental health problems onset before the age of 25 (Kessler et al., 2007; Solmi et al., 2022). The prevalence of mental health problems among emerging adults is increasing, with countries around the world reporting a similar trend (Calling, 2017; Goodwin, 2020; McManus et al., 2016; Tabor et al., 2021; Tørmoen, 2020; Wiens et al., 2020).

There are concerns about a youth mental health crisis (McGorry & Mei, 2018; McGorry et al., 2022; McGorry et al., 2024; Murthy, 2023). While there are debates about the factors driving changes in youth mental health (Davis et al., 2024; Felfe et al., 2023; Foulkes & Andrews, 2023; Murthy, 2023; Schweizer et al., 2023), emerging adulthood is a time of developmental sensitivity (Arnett, 2010) rendering young adults susceptible to wider societal stressors. Significant biological and neurological changes occur throughout adolescence (Foulkes & Blakemore, 2018; Paus et al., 2008) against a backdrop of psychological and social change, characterised by occupational and financial insecurity (Buecker, 2021) and evolving social expectations and priorities (Albert & Steinberg, 2011; Arnett, 2010; Dumontheil et al., 2010; Foulkes & Blakemore, 2016; Larson & Richards, 1991; Larson, 1990; Somerville, 2013). Cultural changes in the way mental health is understood may be absorbed most readily by emerging adults, impacting how they think about their own mental health (Armstrong et al., 2023; Foulkes & Andrews, 2023).

Emerging adulthood overlaps significantly with post-secondary education (GOV.UK, 2023; HESA, 2023; Statistica, 2023; Statistics, 2023). Given the high percentage of emerging adults in post-secondary education, students tend to be grouped together with other emerging adults in mental health research, policy, and practice (*A GENERATION AT RISK:*

*THE STATE OF YOUTH MENTAL HEALTH IN CANADA*, 2024; Large et al., ND; McGorry et al., 2024; "National Action Plan for the Health of Children and Young People," 2019; "Transforming Children and Young People's Mental Health Provision: a Green Paper," 2017). Yet evidence shows that the experiences and needs of post-secondary students are specific.

While post-secondary education provides many societal goods (Collini, 2012), attending post-secondary institutions can also be a transformational experience for the individual. Post-secondary education is intimately connected to social mobility (Southall, 2016); graduates are more likely to be employed, enjoy higher wages and have better job satisfaction (Milburn, 2012; Montenegro & Patrinos, 2014; Van der Berg & Van Broekhuizen, 2012). Post-secondary education also has positive impacts on mental health in the long-term and reduces health inequalities for some minoritised groups (Balloo et al., 2022; Gutiérrez-García et al., 2017). However, poor mental health persists as a barrier to accessing post-secondary education and contributes to attrition and reduced educational outcomes (Auerbach et al., 2016; Auerbach et al., 2018; Bantjes et al., 2021; Caitlin Faas, 2018; Challice et al., 2023; Lewis et al., 2021; Neves & Stevenson, 2023; Tabor et al., 2021).

To improve equitable access to post-secondary education, we need a stronger understanding of the challenges that post-secondary education presents for student mental health. With an increasing recognition of the social determinants of mental health, there is awareness of the influence of structural inequalities in our institutional systems as opposed to individual vulnerabilities (Adler et al., 2016; Alegría et al., 2018). Settings-based approaches are transformational in preventing mental health problems (Dooris et al., 2019; Fernandez et al., 2016; Whitelaw et al., 2001), and considering the local context in intervention development dramatically improves efficacy (Bonell et al., 2006; Craig et al., 2008; Oakley et al., 2006). All this, however, requires a robust understanding of the local context. Through the remainder of this paper, we highlight a few factors specific to the post-secondary context that demand further consideration in research.

While emerging adulthood is a time of transition, the post-secondary experience prolongs a period of liminality, with students preparing to start their working adult lives. In contrast to high ambitions for their future, university support for helping young people have confidence about how they will achieve their future goals is limited (Baird, 2008). For many, this presents a real challenge to the basic psychological needs for competence and relatedness (Deci & Ryan, 2008; Ryan & Deci, 2000). Post-

secondary education brings unfamiliar academic demands and expectations (Wilbraham, In Press). Students encounter difficulties in adapting to higher academic standards and managing heavy workloads (Dyrbye, 2011). Performance anxiety, fear of failure, and imposter syndrome are common challenges faced by students (Gerwing, 2015; Hu, 2019; Kaser, 2021; Sullivan, 2020; Thomas, 2020). Unlike the transition from education to the workplace, there is pressure placed on university students to succeed now and secure the grades needed for their future careers; most students worry about future employment, and such concerns predict lower wellbeing (Larcombe et al., 2022).

In the United Kingdom (UK), Canada, the United States (US) and other countries, it is common for young people to move away from home to study at university (Whyte, 2019). While emerging adulthood is characterised by separation from family, the relationship with parents can be critical for settling into university (Rice et al., 1990). This generation of students has been exposed to greater intervention by parents than previous generations (Malone, 2007), with such intervention suspected to reduce the opportunity to develop competency (Pedersen, 2017), thus making the transition away from home harder. Adjusting to a new support network and seeking help from unfamiliar sources can be difficult (Batchelor et al., 2020; Byrom, 2017). Young people prefer to access support from known sources of support (Reavley & Jorm, 2010), thus students' support network through the transition to university is severely limited. Yet, examining countries in which students do not tend to move out of home during university suggests that living on campus may also be protective against loneliness and socioemotional problems during this period of life (Dingle et al., 2022; LaMontagne et al., 2023).

The transition challenge is particularly pressing for international students (Frampton, 2022). Our universities are increasingly international, supporting young people to move from their home country to a new environment. Migration has additional challenges, including language barriers, acculturative stress, and discrimination (Lee, 2007; Smith, 2011). A recent Australian survey found that 86% of international students and 56% of domestic students would seek help from university services for mental health problems, underscoring the uniquely important role these institutions can play as a

source of support for students (LaMontagne et al., 2023). There is a balance to strike between opportunities and obligations, as governments continue to explore how they regulate the post-secondary education sector and set expectations for institutions. The legal and regulatory framework held nationally shapes the burden of responsibility and, thus, the approach adopted by institutions. Challenging questions persist around the boundaries between education and health services (Education, 2024).

The dramatic changes in social connection associated with moving to university are a risk factor for loneliness (Bosma et al., 2015; Matthews et al., 2018; Matthews et al., 2019). Students commonly experience feelings of loneliness, social isolation, and homesickness (Peltzer, 2017), which in turn predicts decreased academic performance (Kaufmann & Vallade, 2020) and decreased mental health (Alsubaie et al., 2019; McIntyre, 2018). Increasing opportunities for meaningful social connection is important for mental health; social support buffers the negative effects of stressors (Lahey & Cohen, 2000) and reduces anxiety, depression and loneliness (DuBois & Silverthorn, 2005; Zimmerman et al., 2002). While universities should play a role in cultivating social cohesion (Case et al., 2018), large classes, online learning (cost-saving and increasing flexible delivery)(Kaufmann, 2022), and single rooms in halls of residence (Brown et al., 2019), mean that young adults have minimal institutional infrastructure, material or psychological, to build relationships.

Uniquely, university students are placed under extreme financial stress, working hard but not earning a salary. Most students are worried about their finances, and a substantial proportion experience housing and food insecurity (Broton, 2018; Bruening, 2017; Haskett, 2021; *National Student Money Survey*, 2023; Nazmi, 2019). Student debt is negatively associated with wellbeing outcomes, and difficulties affording daily living expenses have consistently been associated with a range of student mental health problems (Adams, 2016; Bemel, 2016; Benson-Egglenton, 2019; Jones, 2018; Nissen, 2019; Porru, 2021; Richardson, 2013, 2015, 2018, 2017; Rogers, 2016; Walsemann, 2015; Wege, 2016). Balancing work and study commitments to alleviate financial pressures can further

contribute to mental health challenges (Potter, Jayne & Brett, 2020; Larcombe et al., 2016). Students from marginalized backgrounds may face additional financial challenges, exacerbating mental health disparities (Tran, 2018).

For young people with a history of mental health problems, the transition to adult mental health services is challenging, with only a small minority experiencing a good transition (Street, 2023; Cleverly, Lenters & McCann, 2020). The complexity of this transition is amplified when young people move to university, usually moving to a different service provider (Byrom & Hambly, 2013; Byrom et al., 2022). While the transition to adulthood reduces the role that caregivers can play in co-ordinating care and advocating for access to services, for students, the desire to demonstrate independence may be particularly acute (Cage et al., 2020).

While there are pockets of great practice across post-secondary education, practice innovations are often conducted independently from research. In the UK, the University Mental Health Charter, co-produced with thousands of staff and students across the country, provides an evidence-informed framework to support a settings-based approach to mental health and wellbeing (Hughes & Spanner, 2019). This provides a case study for bringing together researchers, practitioners and policymakers to strengthen our understanding of the needs of the post-secondary context (Brewster et al., 2022; Jones et al., 2021; Priestley et al., 2022). However, targeted research is now needed to understand what works in implementing such a settings-based approach. Reviewing interventions globally for supporting mental health in post-secondary education, Upsher et al., (under review) found substantial knowledge gaps, especially for interventions embedded in educational practice, focused on public health or operating at an institutional or systems level (see also (Upsher et al., 2022). Challenges for driving research forward also exist at the intersection between education and health, with a need for clinical and health-focused research to give greater consideration to the experiences and needs of postsecondary students as a unique, diverse, population (Sampson et al., 2022).

- Adams, D., Meyers, S., & Beidas, R. . (2016). The Relationship Between Financial Strain, Perceived Stress, Psychological Symptoms, and Academic and Social Integration in Undergraduate Students. *Journal of American College Health*, 64(5), 362–370. .  
<https://doi.org/https://doi.org/10.1080/07448481.2016.1154559>
- Adler, N. E., Glymour, M. M., & Fielding, J. (2016). Addressing social determinants of health and health inequalities. *JAMA*, 316(16), 1641-1642.
- Albert, D., & Steinberg, L. (2011). Peer influences on adolescent risk behavior. In *Inhibitory control and drug abuse prevention: From research to translation* (pp. 211-226). Springer.
- Alegría, M., NeMoyer, A., Falgàs Bagué, I., Wang, Y., & Alvarez, K. (2018). Social Determinants of Mental Health: Where We Are and Where We Need to Go. *Curr Psychiatry Rep*, 20(11), 95.  
<https://doi.org/10.1007/s11920-018-0969-9>
- Alsubaie, M., Stain, H., Webster, L., & Wadman, R. (2019). The Role of Sources of Social Support on Depression and Quality of Life for University Students. *International Journal of Adolescence and Youth*, 24(4), 484-496. <https://doi.org/https://doi.org/10.1080/02673843.2019.1568887>
- Armstrong, N., Beswick, L., & Vega, M. O. (2023). Is it Still Ok to be Ok? Mental Health Labels as a Campus Technology. *Culture, Medicine, and Psychiatry*, 47(4), 982-1004.
- Arnett, J. J. (2010). Emerging adulthood (s). *Bridging cultural and developmental approaches to psychology: New syntheses in theory, research, and policy*, 255-275.
- Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., Hwang, I., Kessler, R. C., Liu, H., & Mortier, P. (2016). Mental disorders among college students in the World Health Organization world mental health surveys. *Psychological medicine*, 46(14), 2955-2970.
- Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Green, J. G., & Hasking, P. (2018). WHO world mental health surveys international college student project: Prevalence and distribution of mental disorders. *J Abnorm Psychol*, 127(7), 623.
- Baird, B., Reynolds (2008). Absurdly Ambitious? Teenagers' Expectations for the Future and the Realities of Social Structure. . *Sociology Compass*, 2(3), 944–962.  
<https://doi.org/https://doi.org/10.1111/j.1751-9020.2008.00110.x>
- Balloo, K., Hosein, A., Byrom, N., & Essau, C. A. (2022). Differences in mental health inequalities based on university attendance: Intersectional multilevel analyses of individual heterogeneity and discriminatory accuracy. *SSM-Population Health*, 19, 101149.
- Bantjes, J., Saal, W., Gericke, F., Lochner, C., Roos, J., Auerbach, R. P., Mortier, P., Bruffaerts, R., Kessler, R. C., & Stein, D. (2021). Mental health and academic failure among first-year university students in South Africa. *South African Journal of Psychology*, 51(3), 396-408.
- Batchelor, R., Pitman, E., Sharpington, A., Stock, M., & Cage, E. (2020). Student perspectives on mental health support and services in the UK. *Journal of further and Higher Education*, 44(4), 483-497.
- Bemel, J., Brower, C., Chischillie, A., Shephard, J. . (2016). The Impact Of College Student Financial Health On Other Dimensions Of Health. *American Journal Of Health Promotion*, 30(4), 224-230. <https://doi.org/https://doi.org/10.1177/0890117116639562>
- Benson-Eggleton, J. (2019). The Financial Circumstances Associated With High And Low Wellbeing In Undergraduate Students: A Case Study Of An English Russell Group Institution. *Journal of Further and Higher Education*, 43(7), 901-913.  
<https://doi.org/https://doi.org/10.1080/0309877x.2017.1421621>
- Bonell, C., Oakley, A., Hargreaves, J., Strange, V., & Rees, R. (2006). Assessment of generalisability in trials of health interventions: suggested framework and systematic review. *bmj*, 333(7563), 346-349.



- Bosma, H., Jansen, M., Schefman, S., Hajema, K. J., & Feron, F. (2015). Lonely at the bottom: a cross-sectional study on being ill, poor, and lonely. *Public Health*, 129(2), 185-187.
- Brewster, L., Jones, E., Priestley, M., Wilbraham, S. J., Spanner, L., & Hughes, G. (2022). 'Look after the staff and they would look after the students' cultures of wellbeing and mental health in the university setting. *Journal of further and Higher Education*, 46(4), 548-560.
- Broton, K. G.-R., S. . (2018). Going Without: An Exploration of Food and Housing Insecurity Among Undergraduates. *Educational Researcher*, 47(2), 121-133.  
<https://doi.org/https://doi.org/10.3102/0013189X177413>
- Brown, J., Volk, F., & Spratto, E. M. (2019). The hidden structure: The influence of residence hall design on academic outcomes. *Journal of Student Affairs Research and Practice*, 56(3), 267-283.
- Bruening, M., Argo, K., Payne-Sturges, D., & Laska, M. (2017). The Struggle is Real: A Systematic Review of Food Insecurity On ~~Postsecondary~~Post-secondary Education Campuses. . *Journal of the Academy of Nutrition and Dietetics*, 117 (1), 1767–1791.  
<https://doi.org/https://doi.org/10.1016/j.jand.2017.05.022>
- Buecker, S., Mund, M., Chwastek, S., Sostmann, M., & Luhmann, M. (2021). Is loneliness in emerging adults increasing over time? A preregistered cross-temporal meta-analysis and systematic review. *Psychological Bulletin*, 147(8), 787–805.  
<https://doi.org/https://doi.org/10.1037/bul0000332>
- Byrom, N., & Hambly, E. (2013). *University Challenge: Integrating Care for Eating Disorders at Home and at University*. <http://www.studentminds.org.uk/transitions.html>
- Byrom, N. C. (2017). Supporting a friend, housemate or partner with mental health difficulties: The student experience. *Early intervention in psychiatry*.
- Byrom, N. C., Batchelor, R., Warner, H., & Stevenson, A. (2022). Seeking support for an eating disorder: a qualitative analysis of the university student experience—accessibility of support for students. *Journal of Eating Disorders*, 10(1), 1-14.
- Cage, E., Stock, M., Sharpington, A., Pitman, E., & Batchelor, R. (2020). Barriers to accessing support for mental health issues at university. *Studies in higher education*, 45(8), 1637-1649.  
<https://doi.org/10.1080/03075079.2018.1544237>
- Caitlin Faas, M. J. B., Christine E. Kaestle & Jyoti Savla. (2018). Socioeconomic success and mental health profiles of young adults who drop out of college, . *Journal of Youth Studies*, 21(5), 669-686. <https://doi.org/10.1080/13676261.2017.1406598>
- Calling, S., Midlöv, P., Johansson, S., Sundquist, K., & Sundquist, J. . (2017). Longitudinal Trends In Self-Reported Anxiety. Effects Of Age And Birth Cohort During 25 Years. *BMC Psychiatry* 17(1), 119-134. <https://doi.org/https://doi.org/10.1186/s12888-017-1277-3>
- Case, J. M., Mogashana, D., Marshall, D., & McKenna, S. (2018). *Going to university: The influence of higher education on the lives of young South Africans* (Vol. 3). African Minds Cape Town.
- Challice, G., Bolton, L., Spencer, L., Johnston, B., Kim, C., Tirdad, A., Syme, A., Hand, L., Habibeh, R., Feng, J., & Pool, K. (2023). *Student Experience Survey*. [https://www.qilt.edu.au/docs/default-source/default-document-library/2022-ses-national-report.pdf?sfvrsn=b8e30414\\_0](https://www.qilt.edu.au/docs/default-source/default-document-library/2022-ses-national-report.pdf?sfvrsn=b8e30414_0)
- Collini, S. (2012). *What Are Universities for?* . Penguin.
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *bmj*, 337.
- Davis, R., Andrews, J., & Foulkes, L. (2024). Scoping review: Potential harm from school-based group mental health interventions.
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/Psychologie canadienne*, 49(3), 182.
- Dingle, G. A., Han, R., & Carlyle, M. (2022). Loneliness, belonging, and mental health in Australian university students pre-and post-covid-19. *Behaviour Change*, 39(3), 146-156.
- Dooris, M., Powell, S., & Farrier, A. (2019). Conceptualizing the 'whole university' approach: an international qualitative study. *Health promotion international*.

- DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: Evidence from a national study. *American journal of public health*, 95(3), 518-524.
- Dumontheil, I., Apperly, I. A., & Blakemore, S. J. (2010). Online usage of theory of mind continues to develop in late adolescence. *Developmental science*, 13(2), 331-338.
- Dyrbye, L., Harper, W., Durning, S., Moutier, C., Thomas, M., Massie, F., Eacker, A., Power, D., Szydlo, D., Sloan, J. & Shanafelt, T. . (2011). Patterns of Distress in US Medical Students. *Medical Teacher*, 33(10), 834-839. <https://doi.org/https://doi.org/10.3109/0142159X.2010.531158>
- Education, D. f. (2024). *HE Mental Health Implementation Taskforce – first stage report*.
- Felfe, C., Saurer, J., Schneider, P., Vornberger, J., Erhart, M., Kaman, A., & Ravens-Sieberer, U. (2023). The youth mental health crisis: Quasi-experimental evidence on the role of school closures. *Science Advances*, 9(33), eadh4030.
- Fernandez, A., Howse, E., Rubio-Valera, M., Thorncraft, K., Noone, J., Luu, X., Veness, B., Leech, M., Llewellyn, G., & Salvador-Carulla, L. (2016). Setting-based interventions to promote mental health at the university: a systematic review. *International journal of public health*, 61(7), 797-807.
- Foulkes, L., & Andrews, J. L. (2023). Are mental health awareness efforts contributing to the rise in reported mental health problems? A call to test the prevalence inflation hypothesis. *New Ideas in Psychology*, 69, 101010.
- Foulkes, L., & Blakemore, S.-J. (2016). Is there heightened sensitivity to social reward in adolescence? *Current opinion in neurobiology*, 40, 81-85.
- Foulkes, L., & Blakemore, S.-J. (2018). Studying individual differences in human adolescent brain development. *Nat Neurosci*, 21(3), 315-323.
- Frampton, N., Smith, J. & Smithies, D. . (2022). Understanding Student Mental Health Inequalities: International Students.
- A GENERATION AT RISK:**
- THE STATE OF YOUTH MENTAL HEALTH IN CANADA.** (2024). <https://static1.squarespace.com/static/5f31a311d93d0f2e28aaf04a/t/67072798e0ad9021bcf0527c/1728522141621/EN+-+A+Generation+at+Risk+The+State+of+Youth+Mental+Health+in+Canada.pdf>
- Gerwing, T., Rash, J., Gerwing, A., Bramble, B., Landline, J. . (2015). Perceptions and Incidence of Test Anxiety. *Canadian Journal for the Scholarship of Teaching and Learning*, 6(3), 1-14. <https://doi.org/https://doi.org/10.5206/cjsotl-rcacea.2015.3.3>
- Goodwin, R., Weinberger, A., Kim, J., Wu, M., Galea, S. . (2020). Trends In Anxiety Among Adults In The United States, 2008–2018: Rapid Increases Among Young Adults. *Journal of Psychiatric Research*, 130(1), 441-446. <https://doi.org/https://doi.org/10.1016/j.jpsychires.2020.08.014>
- GOV.UK. (2023). *Widening participation in higher education*. <https://explore-education-statistics.service.gov.uk/find-statistics/widening-participation-in-higher-education>
- Gutiérrez-García, R. A., Benjet, C., Borges, G., Méndez Ríos, E., & Medina-Mora, M. E. (2017). NEET adolescents grown up: eight-year longitudinal follow-up of education, employment and mental health from adolescence to early adulthood in Mexico City. *European Child & Adolescent Psychiatry*, 26, 1459-1469.
- Haskett, M., Majumder, S., Kotter-Grühn, D. & Gutierrez, I. (2021). The Role of University Students' Wellness In Links Between Homelessness, Food Insecurity, and Academic Success. *Journal of Social Distress and Homelessness*, 30(1), 59-65. <https://doi.org/https://doi.org/10.1080/10530789.2020.1733815>
- HESA. (2023). *Higher Education Statistics Agency Student Data*. <https://www.hesa.ac.uk/data-and-analysis/students>

- Hu, K., Chibnall, J., & Slavin, S. . (2019). Maladaptive Perfectionism, Impostorism, and Cognitive Distortions: Threats to the Mental Health of Pre-clinical Medical Students. *Academic Psychiatry*, 43(4), 381–385. <https://doi.org/https://doi.org/10.1007/s40596-019-01031-z>
- Hughes, G., & Spanner, L. (2019). *The University Mental Health Charter*. Student Minds. <https://hub.studentminds.org.uk/resources/charter-framework/>
- Jones, E., Priestley, M., Brewster, L., Wilbraham, S. J., Hughes, G., & Spanner, L. (2021). Student wellbeing and assessment in higher education: The balancing act. *Assessment & Evaluation in Higher Education*, 46(3), 438-450.
- Jones, P., Park, S., Lefevor, T. . (2018). Contemporary College Student Anxiety: The Role Of Academic Distress, Financial Stress, And Support. *Journal Of College Counselling*, 21(3), 252-264. <https://doi.org/https://doi.org/10.1002/Jocc.12107>
- Kaser, A., Keddy, S. & Hill, T. . (2021). The Prevalence of Perfectionism and Mental Health in Undergraduate Students. *Healthy Population Journal*, 2(1), 1-12. <https://doi.org/https://doi.org/10.15273/hpj.v2i1.10904>
- Kaufmann, R. V., J. (2022). Exploring Connections In The Online Learning Environment: Student Perceptions Of Rapport, Climate, And Loneliness. *Interactive Learning Environments*, 30(10), 1794-1808. <https://doi.org/https://doi.org/10.1080/10494820.2020.1749670>
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustun, T. B. (2007). Age of onset of mental disorders: a review of recent literature. *Current opinion in psychiatry*, 20(4), 359.
- Lahey, B., & Cohen, S. (2000). Social support theory and measurement.
- LaMontagne, A. D., Shann, C., Lolicato, E., Newton, D., Owen, P. J., Tomin, A. J., & Reavley, N. J. (2023). Mental health-related knowledge, attitudes and behaviours in a cross-sectional sample of australian university students: a comparison of domestic and international students. *BMC public health*, 23(1), 1-12.
- Larcombe, W., Baik, C., & Finch, S. (2022). Exploring course experiences that predict psychological distress and mental wellbeing in Australian undergraduate and graduate coursework students. *Higher Education Research & Development*, 41(2), 420-435.
- Large, H., Meisner, L., & Kail, A. (ND). *The youth mental health crisis*
- How are charities coping with a rise in children and young people seeking mental health support?* <https://npproduction.wpenginepowered.com/wp-content/uploads/2024/06/Youth-mental-health-report-FINAL-1.pdf>
- Larson, R., & Richards, M. H. (1991). Daily companionship in late childhood and early adolescence: Changing developmental contexts. *Child development*, 62(2), 284-300.
- Larson, R. W. (1990). The solitary side of life: An examination of the time people spend alone from childhood to old age. *Developmental review*, 10(2), 155-183.
- Lee, J. R., C. . (2007). Welcome To America? International Student Perceptions Of Discrimination. *Higher Education*, 53(3), 381-409. <https://doi.org/https://doi.org/10.1007/s10734-005-4508-3>
- Lewis, G., McCloud, T., & Callender, C. (2021). *Higher education and mental health: analyses of the LSYPE cohorts: Research report: May 2021*. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/996975/Higher\\_education\\_and\\_mental\\_health\\_analyses\\_of\\_the\\_LSYPE\\_cohorts.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996975/Higher_education_and_mental_health_analyses_of_the_LSYPE_cohorts.pdf)
- Malone, K. (2007). The bubble-wrap generation: children growing up in walled gardens. *Environ. Educ. Res.*, 13(4), 513-527.
- Matthews, T., Danese, A., Caspi, A., Fisher, H. L., Goldman-Mellor, S., Kepa, A., Moffitt, T. E., Odgers, C. L., & Arseneault, L. (2018). Lonely young adults in modern Britain: findings from an epidemiological cohort study. *Psychological medicine*, 49(2), 268-277. <https://doi.org/https://doi.org/10.1017/S0033291718000788>

- Matthews, T., Odgers, C. L., Danese, A., Fisher, H. L., Newbury, J. B., Caspi, A., Moffitt, T. E., & Arseneault, L. (2019). Loneliness and neighborhood characteristics: a multi-informant, nationally representative study of young adults. *Psychological science*, 30(5), 765-775.
- McGorry, P. D., & Mei, C. (2018). Tackling the youth mental health crisis across adolescence and young adulthood. *BMJ: British Medical Journal (Online)*, 362.
- McGorry, P. D., Mei, C., Chanen, A., Hodges, C., Alvarez-Jimenez, M., & Killackey, E. (2022). Designing and scaling up integrated youth mental health care. *World Psychiatry*, 21(1), 61-76.
- McGorry, P. D., Mei, C., Dalal, N., Alvarez-Jimenez, M., Blakemore, S.-J., Browne, V., Dooley, B., Hickie, I. B., Jones, P. B., & McDaid, D. (2024). The Lancet Psychiatry Commission on youth mental health. *The Lancet Psychiatry*, 11(9), 731-774.
- McIntyre, J. W., J., Corcoran, R., Woods, P. & Bentall, R. (2018). Academic and Non-Academic Predictors of Student Psychological Distress: The Role of Social Identity and Loneliness. *Journal of Mental Health*, 27(3), 230-239.  
<https://doi.org/https://doi.org/10.1080/09638237.2018.1437608>
- McManus, S., Bebbington, P., Jenkins, R., & Brugha, T. (2016). *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*.  
<http://content.digital.nhs.uk/catalogue/PUB21748/apms-2014-full-rpt.pdf>
- Milburn, A. (2012). University challenge: how higher education can advance social mobility. *London: Cabinet Office*.
- Montenegro, C. E., & Patrinos, H. A. (2014). Comparable estimates of returns to schooling around the world. *World Bank policy research working paper*(7020).
- Murthy, V. (2023). *Social Media and Youth Mental Health* (The U.S. Surgeon General's Advisory, Issue. <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf>
- [Record #10808 is using a reference type undefined in this output style.]
- National Student Money Survey. (2023). <https://www.savethestudent.org/money/surveys/student-money-survey-2023-results.html>
- Nazmi, A., Martinez, S., Byrd, A., Robinson, D., Bianco, S., Maguire, J., Crutchfield, R., Condrón, K. & Ritchie, L. . (2019). A Systematic Review of Food Insecurity Among US Students In Higher Education. *Journal of Hunger & Environmental Nutrition*, 14(1), 725–740.  
<https://doi.org/https://doi.org/10.1080/19320248.2018.1484316>
- Neves, J., & Stevenson, R. (2023). *Student Academic Experience Survey 2023*. [https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/advancehe/Student%20Academic%20Experience%20Survey%202023\\_1687527247.pdf](https://s3.eu-west-2.amazonaws.com/assets.creode.advancehe-document-manager/documents/advancehe/Student%20Academic%20Experience%20Survey%202023_1687527247.pdf)
- Nissen, S., Hayward, B. & McManus, R. . (2019). Student Debt and Wellbeing: A Research Agenda, Kōtuitui. *New Zealand Journal of Social Sciences Online*, 14(2), 245-256.  
<https://doi.org/https://dx.doi.org/10.1080/1177083X.2019.1614635>
- Oakley, A., Strange, V., Bonell, C., Allen, E., & Stephenson, J. (2006). Process evaluation in randomised controlled trials of complex interventions. *bmj*, 332(7538), 413-416.
- Paus, T., Keshavan, M., & Giedd, J. N. (2008). Why do many psychiatric disorders emerge during adolescence? *Nature Reviews Neuroscience*, 9(12), 947-957.
- Pedersen, D. E. (2017). Parental autonomy support and college student academic outcomes. *J Child Fam Stud*, 26(9), 2589-2601.
- Peltzer, K. P., S. . (2017). Loneliness: Its Correlates And Associations With Health Risk Behaviours Among University Students In 25 Countries. *Journal of Psychology in Africa*, 27(3), 247-255.  
<https://doi.org/https://doi.org/10.1080/14330237.2017.1321851>
- Porru, F., Schurina, M., Bültmann , U., Portoghesi, I., Burdorf, A., Robroek, S. . (2021). Associations of University Student Life Challenges with Mental Health and Self-Rated Health: A Longitudinal Study With 6 Months Follow-Up. *Journal of Affective Disorders*, , 29(6), 250-257.  
<https://doi.org/https://doi.org/10.1016/j.jad.2021.09.057>



- Priestley, M., Hall, A., Wilbraham, S. J., Mistry, V., Hughes, G., & Spanner, L. (2022). Student perceptions and proposals for promoting wellbeing through social relationships at university. *Journal of further and Higher Education*, 46(9), 1243-1256.
- Reavley, N. J., & Jorm, A. F. (2010). Prevention and early intervention to improve mental health in higher education students: a review. *Early intervention in psychiatry*, 4(2), 132-142.
- Rice, K. G., Cole, D. A., & Lapsley, D. K. (1990). Separation-individuation, family cohesion, and adjustment to college: Measurement validation and test of a theoretical model. *J. Couns. Psychol*, 37(2), 195.
- Richardson, T., Elliott, P., & Roberts, R. . (2013). The Relationship Between Personal Unsecured Debt And Mental And Physical Health: A Systematic Review And Meta-Analysis. *Clinical Psychology Review*, 33(8), 1148–1162.  
<https://doi.org/https://doi.org/10.1016/j.cpr.2013.08.009>
- Richardson, T., Elliott, P., & Roberts, R. . (2015). The Impact Of Tuition Fees Amount On Mental Health Over Time In British Students. *Journal Of Public Health*, 37(3), 412–418  
<https://doi.org/https://doi.org/10.1093/Pubmed/Fdv003>
- Richardson, T., Elliott, P., Roberts, R. . (2018). Relationship Between Loneliness and Mental Health in Students. *Journal of Public Mental Health*, 16(2), 48-54.  
<https://doi.org/https://doi.org/10.1108/JPMH-03-2016-0013>
- Richardson, T., Elliott, P., Roberts, R., & Jansen, M. . (2017). A Longitudinal Study of Financial Difficulties and Mental Health in a National Sample of British Undergraduate Students. *Community Mental Health Journal*, 53(3), 344-352.  
<https://doi.org/https://doi.org/10.1007/s10597-016-0052-0>
- Rogers, M., Creed, P., Searle, J. & Nicholls, S. . (2016). Coping With Medical Training Demands: Thinking Of Dropping Out, Or In It For The Long Haul. *Studies in Higher Education*, 41(9), 1715-1732.
- Ryan, R. M., & Deci, E. L. (2000). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological inquiry*, 11(4), 319-338.
- Sampson, K., Priestley, M., Dodd, A. L., Broglia, E., Wykes, T., Robotham, D., Tyrrell, K., Vega, M. O., & Byrom, N. C. (2022). Key questions: research priorities for student mental health. *BJPsych Open*, 8(3).
- Schweizer, S., Lawson, R. P., & Blakemore, S.-J. (2023). Uncertainty as a driver of the youth mental health crisis. *Current Opinion in Psychology*, 53, 101657.
- Smith, R. K., N. . (2011). A Review Of The Acculturation Experiences Of International Students. *International Journal Of Intercultural Relations*, 35(6), 699- 713.  
<https://doi.org/https://doi.org/10.1016/j.ijintrel.2011.08.004>
- Solmi, M., Radua, J., Olivola, M., Croce, E., Soardo, L., Salazar de Pablo, G., Il Shin, J., Kirkbride, J. B., Jones, P., & Kim, J. H. (2022). Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. *Molecular psychiatry*, 27(1), 281-295.
- Somerville, L. H. (2013). The teenage brain: Sensitivity to social evaluation. *Current directions in psychological science*, 22(2), 121-127.
- Southall, R. (2016). *The new black middle class in South Africa*. Boydell & Brewer.
- Statistica. (2023). Number of students enrolled in ~~postsecondary~~post-secondary institutions in Canada in 2021/22, by age and gender.  
<https://www.statista.com/statistics/450253/enrollment-of-postsecondarypost-secondary-students-in-canada-by-age-and-gender/>
- Statistics, N. C. f. E. (2023). College Navigator. <https://nces.ed.gov/>
- Street, C., Chinseallaigh, E., Holme, I., Appleton, R., Tah, P., Tuomainen, H., Leijesdorff, S., van Bodegom, L., van Amelsvoort, T., Franic, T., Tomljenovic, H. & McNicholas, F. . (2023). "Leaving Child And Adolescent Mental Health Services (CAMHS): The Impact Of Diagnosis And Medication Management On Optimal Discharge Or Transition", . *Mental Health Review Journal*, 1(1), 1-10. <https://doi.org/https://doi.org/10.1108/MHRJ-10-2022-0066>

- Sullivan, J. R., N. . (2020). Prevalence of Impostor Phenomenon and Assessment of Wellbeing in Pharmacy Residents. *American Journal of Health-System Pharmacy*, 77(9), 690–696.  
<https://doi.org/https://doi.org/10.1093/ajhp/zxaa041>
- Tabor, E., Patalay, P., & Bann, D. (2021). Mental health in higher education students and non-students: evidence from a nationally representative panel study. *Social psychiatry and psychiatric epidemiology*, 56(5), 879-882.
- Thomas, M., & Bigatti, S. . (2020). Perfectionism, Impostor Phenomenon, and Mental Health in Medicine: A Literature Review. *International Journal of Medical Education*, 11(1), 201–213.  
<https://doi.org/https://doi.org/10.5116/ijme.5f54.c8f8>
- Tørmoen, A., Myhre, M., Walby, F., Grøholt, B., Rossow, I. . (2020). Change In Prevalence Of Self-Harm From 2002 To 2018 Among Norwegian Adolescents. *European Journal of Public Health*, 30(4), 688-692. <https://doi.org/https://doi.org/10.1093/eurpub/ckaa042>
- Tran, A., Lam, C., Legg, L. (2018). Financial Stress, Social Supports, Gender, And Anxiety During College: A Stress-Buffering Perspective. *The Counselling Psychologist*, 46(7), 846-869. .  
<https://doi.org/https://doi.org/10.1177/0011000018806687>
- [Record #10806 is using a reference type undefined in this output style.]
- Upsher, R., Nobili, A., Hughes, G., & Byrom, N. (2022). A systematic review of interventions embedded in curriculum to improve university student wellbeing. *Educational Research Review*, 37, 100464.
- Van der Berg, S., & Van Broekhuizen, H. (2012). Graduate unemployment in South Africa: A much exaggerated problem. *Centre for Development and Enterprise, Stellenbosch University*.
- Walsemann, K., Gee, G. & Gentile, D. . (2015). Sick Of Our Loans: Student Borrowing And The Mental Health Of Young Adults In The United States. *Social Science & Medicine* 124(1), 85–93.  
<https://doi.org/https://doi.org/10.1016/J.Socscimed.2014.11.027>
- Wege, N., Muth, T., Li, J., & Angerer, P. . (2016). Mental Health Among Currently Enrolled Medical Students In Germany. *Public Health*, 132(1), 92-100.  
<https://doi.org/https://doi.org/10.1016/J.Puhe.2015.12.014>
- Whitelaw, S., Baxendale, A., Bryce, C., Machardy, L., Young, I., & Witney, E. (2001). ‘Settings’ based health promotion: a review. *Health promotion international*, 16(4), 339-353.
- Whyte, W. (2019). Somewhere To Live: Why British Students Study Away From Home – And Why It Matters. . *HEPI*. [https://doi.org/https://www.hepi.ac.uk/wp-content/uploads/2019/11/HEPI\\_Somewhere-to-live\\_Report-121-FINAL.pdf](https://doi.org/https://www.hepi.ac.uk/wp-content/uploads/2019/11/HEPI_Somewhere-to-live_Report-121-FINAL.pdf)
- Wiens, K., Bhattarai, A., Pedram, P., Dores, A., Williams, J., Bulloch, A., & Patten, S. (2020). A growing need for youth mental health services in Canada: examining trends in youth mental health from 2011 to 2018. *Epidemiology and psychiatric sciences*, 29, e115.
- Wilbraham, S., Priestley, M., Jones, E., Broglia, E., Brewster, L., Hughes, G., Spanner, L. (In Press). "Inclusion or isolation? Differential student experiences of independent learning and wellbeing in higher education. *Journal of Further and Higher Education*.
- Zimmerman, M. A., Bingenheimer, J. B., & Notaro, P. C. (2002). Natural mentors and adolescent resiliency: A study with urban youth. *American Journal of Community Psychology*, 30(2), 221-243.

a.



**Citation on deposit:** Byrom, N., Pointon-Haas, J., Upsher, R., Iorfino, F., McKenna, S., McCann, E., Priestley, M., Slack, H. R., & Cleverley, K. (2025). An Argument for More High-Quality Research Focused on Mental Health in the Post-Secondary Context. *Early Intervention in Psychiatry*, 19(2),

Article e70002. <https://doi.org/10.1111/eip.70002>

**For final citation and metadata, visit Durham Research Online URL:**

<https://durham-repository.worktribe.com/output/3487643>

**Copyright statement:** This accepted manuscript is licensed under the Creative Commons Attribution 4.0 licence.

<https://creativecommons.org/licenses/by/4.0/>