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Experiential learning spaces and student wellbeing: a mixed-methods study of students at three research intensive UK universities

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ABSTRACT

There is clear evidence that university students are experiencing significant mental health difficulties, further exacerbated by the temporary closure of university campuses during the height of the COVID-19 pandemic. Against this backdrop, our study – Student Wellbeing and Experiential Learning Spaces (SWELS) – explored the role of experiential learning spaces in supporting student wellbeing. We adopted a mixed-methods approach, consisting of an online survey and interviews with students from three research intensive UK Universities. The survey results revealed that compared to the national average of 16–25-year-olds from the UK Office for National Statistics' (ONS) wellbeing questionnaire, the sampled students exhibited significantly lower levels of life satisfaction, happiness, perceived worthwhileness and higher levels of anxiety. The qualitative results further confirmed that students perceived their wellbeing to be affected by their university experience and the COVID pandemic. However, the results also suggest that experiential learning spaces (such as museums, collections, libraries, and gardens) hold strong potential to support student mental health. Accordingly, the study indicates that diversifying module content and conscientiously considering both physical and digital learning spaces can positively impact students. In short, curricula that are cognisant of the physical learning environment and embed a focus on wellbeing into their content might help to bolster student wellbeing.

Introduction

The rise in mental distress and low wellbeing among higher education students, both within the United Kingdom (UK) and internationally, is recognised as an important social and public health issue (Brown, 2018; Holm-Hadulla and Koutsoukou-Argyraki, 2015; Sharp and Theiler, 2018). Key UK initiatives have included funding the Student Mental Health Research Network (SMaRteN) (SMaRteN, 2023) and the 2018 government-initiated directive to establish a University Mental Health Charter (Student Minds, 2019). Despite these efforts to bring further attention to the issue, the wellbeing crisis in higher education institutions persists. Findings from the 2022 Student COVID-19 Insights Survey report almost two thirds (63%) of students experienced a worsening of their mental health

and wellbeing since the beginning of Autumn Term 2021. These figures illustrate the extent to which COVID-19 has accelerated the already critical mental health situation, where students are disproportionately experiencing loneliness (26%) in comparison to adult populations (8%) (Office for National Statistics, 2022) and a significant correlation between loneliness and mental health difficulties has been demonstrated (Allen et al., 2022). Although other research shows higher levels of isolation among older adults as well (Malani et al., 2020) and a substantial increase in loneliness overall during the pandemic (O'Sullivan et al., 2021). The initial results from the Student Wellbeing at Northern England Universities (SWANS) longitudinal cohort study, established at the University of York in 2019, also focus on the impact of the COVID pandemic on student wellbeing, with mixed

outcomes (Paton et al., 2023). Thus, while the figures for how loneliness, social isolation and wellbeing have been affected by the pandemic may differ across studies, many show a larger burden on young adults, including university students, compared to the wider population (Aartsen and Rothe, 2023). This is particularly prevalent in increasingly competitive academic environments where students, in pursuit of educational recognition, are more vulnerable to stress (Poots and Cassidy, 2020) and where the wellbeing aspects of learning are side-lined (Hill et al., 2021). Consequently, this suggests that the academic learning environment and culture contribute to worsening mental health and wellbeing among students. But in return, this also opens the possibility that if pedagogical approaches are adequately reformed – by integrating an explicit focus on care, compassion and wellbeing – the student learning experience at university could represent a positive influence on their health (Eaton et al., 2023).

The possibility of a wider positive effect of an enhanced student experience is supported by studies that have explored educational methodologies to wellbeing, which have found the university to be an educational space with the potential to support positive wellbeing (Hill et al., 2021; Marshall and Morris, 2011). Consequently, there is a clear opportunity for universities to be places of care which can provide space to experiment with better means to support student mental and physical health. This requires a focus on the ways in which the curriculum is organised and learning happens more broadly but also on the spaces within which learning takes place. Experiential learning theory defines learning as 'the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience' (Kolb, 1984; Kolb and Kolb, 2005; Mahatmya et al., 2018). Kolb and Kolb (2012) recognise the important contribution that the environment – or more specifically the learning spaces – make to learning.

While in an ideal world, educators and learners should be front and centre in informing learning space design (Weinstein and Park, 2018), adopting an asset-based approach (see below), allows us to focus on the spaces and resources that already exist on the university campuses and how they can be best used to support student wellbeing (Lloyd and Reynolds, 2020). Previous research has shown that taking an experiential approach to learning in a variety of on and off campus spaces can positively affect student learning and wellbeing (Hannigan et al., 2019; Kador et al., 2021). The Student Wellbeing and Experiential Learning Spaces (SWELS) project was established in order to investigate the roles these spaces have within university curricula and how students' wellbeing may be affected by them. Put differently, our research aimed to explore the potential of an asset-based approach to the relationship between learning, learning spaces and wellbeing within a UK higher education setting.

An asset-based approach posits that there are resources within communities 'that increase the capacity of residents to improve their quality of life' (Green and Haines, 2008). Such assets can be natural, cultural, human, social, political, financial, and built (Flora and Flora, 2008). They may include, but are not limited to, spaces such as: gardens, museums, galleries and parks, as well as other community resources (Chatterjee et al., 2018; Gordon-Nesbitt, 2017; Kador and Chatterjee, 2021; Thomson et al., 2021). Universities, being usually well respected educational entities within their local area, represent spaces where wellbeing can be cultivated and supported (as well as weakened or undermined) (Wallace et al., 2022). There is growing interest in the role of extra-curricular and curriculum-based interventions to support student wellbeing within universities (Baik et al., 2019), including through engagement with cultural spaces. Health Professions' educators for example, are increasingly realising that cultural spaces such as museums afford a liminal arena for clinically relevant learning activities plus self and team reflection (Smyth Zahra, 2018). The recently established O-ACE online randomised control trial of a museum-based intervention for 16–24-year-olds, facilitated by the Ashmolean Museum, Oxford, seeks to systematically investigate the potential wellbeing benefits of cultural activities (Syed Sheriff et al., 2021).

Equally, there is an increasing recognition that a student-led approach is key to delivering change and improving outcomes, both at an educational and personal level. Baik et al. (Baik et al., 2019) outline, from the student perspective, the need for socially informed course designs that embed wellbeing into the process of completing modules/courses and also place emphasis on the importance of the social aspects of students' lives within the framework of learning. Correspondingly, a bespoke, embedded approach has emerged from the literature as a way of further promoting wellbeing within university spaces and through curricula (Bowman, 2010; Seifert et al., 2014; Young et al., 2022). A 2022 systematic review outlined evidence to support the impact of curriculum-embedded interventions aimed at improving student mental health and wellbeing (Upsher et al., 2022) and another study in 2018 found improvement in

($N=76$) undergraduate students' wellbeing following the integration of academic and experiential learning (Mahatmya et al., 2018). The SWELS project was conceived in the same vein and aimed to touch upon the role of universities and cultural/experiential learning spaces within them in supporting their own communities of learners and educators.

In line with the aforementioned systematic review's (Upsher et al., 2022) recommendation that future research considers inter-institutional collaborative interventions, the present study was designed to explore the role of experiential learning spaces and student wellbeing across three different institutions. Due to the impact of COVID-19 on in-person engagement, the study was re-designed to address the rising mental health challenges recorded amongst student populations, alongside exploring curriculum embedded experiential learning as a non-clinical intervention, including a focus on both physical and virtual learning spaces. In summary, the aim of this research is to better understand the wellbeing of students engaging with experiential learning spaces, activities and modules across three UK universities.

Methods

Study design

The research was conducted with students from University College London (UCL), King's College London (King's) and the University of Oxford (Oxford), adopting a mixed methods approach, following an explanatory sequential design (Creswell and Plano Clark, 2018). This means that the quantitative data was collected first followed by the qualitative data collection. Therefore, the qualitative findings are directed by, and potentially explain, the quantitative results. This included analysing quantitative data from an online survey, followed by one-hour semi-structured interviews that further explore the quantitative findings.

Participants

Survey participants ($N=139$) comprised a convenience sample of students, from the three institutions involved (Table 1), who were recruited via university modules and events.

For the interviews, quota sampling was used, thereby selecting cases based on predetermined characteristics (Rukmana, 2014). For this study, participants were chosen from those who engaged in one of the three institutions' experiential learning activities or modules. No other demographic criteria were used to select participants.

Ethical approval was granted from UCL under UCL Ethics Licence 13649/004, this was matched by similar approvals for Oxford (R70216/RE001-004) and King's (LRM-20/21-14369) and further supported by a data sharing and academic collaboration agreement between the three institutions.

Table 1. Student Wellbeing and Experiential Learning Spaces (SWELS) quantitative data demographics ($n=140$).

	UCL	King's	Oxford	Overall
	%	%	%	%
Gender				
Female	75.68	76.06	76.67	76.43
Male	18.92	23.94	20.00	21.43
Other	2.70	N/A	3.33	1.43
Prefer not to say	2.70	N/A	N/A	0.71
Age range				
18–21	45.95	77.46	70.00	66.43
22–24	27.03	9.86	6.67	13.57
25+	27.03	12.68	23.33	20.00
Uni course				
Undergraduate	59.46	100	70.00	82.14
Postgraduate Taught	35.14	N/A	10.00	11.43
Postgraduate Research	5.41	N/A	16.67	5.71
Prefer not to say	N/A	N/A	3.33	0.71
UK-based				
Yes	81.08	98.59	100	94.29
No	18.92	1.41	N/A	5.71
Ethnicity				
White	59.46	29.58	76.67	48.57
Asian or Asian British	24.32	50.70	13.33	35.00
Black, African, Caribbean	N/A	4.23	3.33	2.14
Mixed/Multiple ethnic groups	5.41	5.63	3.33	5.00
Prefer not to say	8.11	1.41	3.33	3.57
Other	2.70	8.45	3.33	5.71

NB: The sample sizes per university: UCL $N=37$, King's $N=71$, Oxford $N=30$, with other universities contributing 2. Overall $N=140$.

Figure 1. UCL MASc Creative Health students engaging in object-based learning for wellbeing at UCL's Object-based Learning Lab. (Photo: Thomas Kador).

Context

UCL

Participating students from UCL took a range of modules that involve experiential learning and the use of cultural spaces (primarily museums and collections) within the curriculum. These were drawn from several undergraduate and postgraduate taught programmes, all of which include hands-on experiential learning as a central component within the curriculum. This enabled these students to compare their experiential modules with the other more traditional (didactic) modules that they take or have taken (Figure 1). Over a third of the UCL participants were students on the Masters (MASc) in Creative Health programme (see Table 1), which focuses on the role of non-clinical (including asset-based) interventions in supporting the health of the public and counteracting health inequities. Therefore, the UCL cohort contains a substantial proportion of (future) health professionals.

King's. All participating students were drawn from the Clinical Humanities & Wellbeing modules at the King's College Centre for Dental Education (Smyth Zahra, 2022) and are consequently all future health professionals. Their programme follows a context specific model of professional development aiming to facilitate and curate environments where transformative learning is most likely to occur. Students conduct object-based research in London museums, undertake close looking and drawing activities to improve their haptic skills and appreciation of different perspectives (Figure 2). They are also given curricular time to explore local green spaces and learn about parallels between stewardship and caring whilst growing plants in their residences.

Oxford. In spring 2019, Oxford University Gardens, Libraries and Museums (GLAM) organised free activities across its venues to help students take a break from the pressures of revision and exams. Activities included yoga in the Weston Library,

Figure 2. Dental students from King's College Clinical Humanities & Wellbeing module closely observing and improving their haptic skills through drawing at the Gordon Museum, London. (Photo: Flora Smyth Zahra).
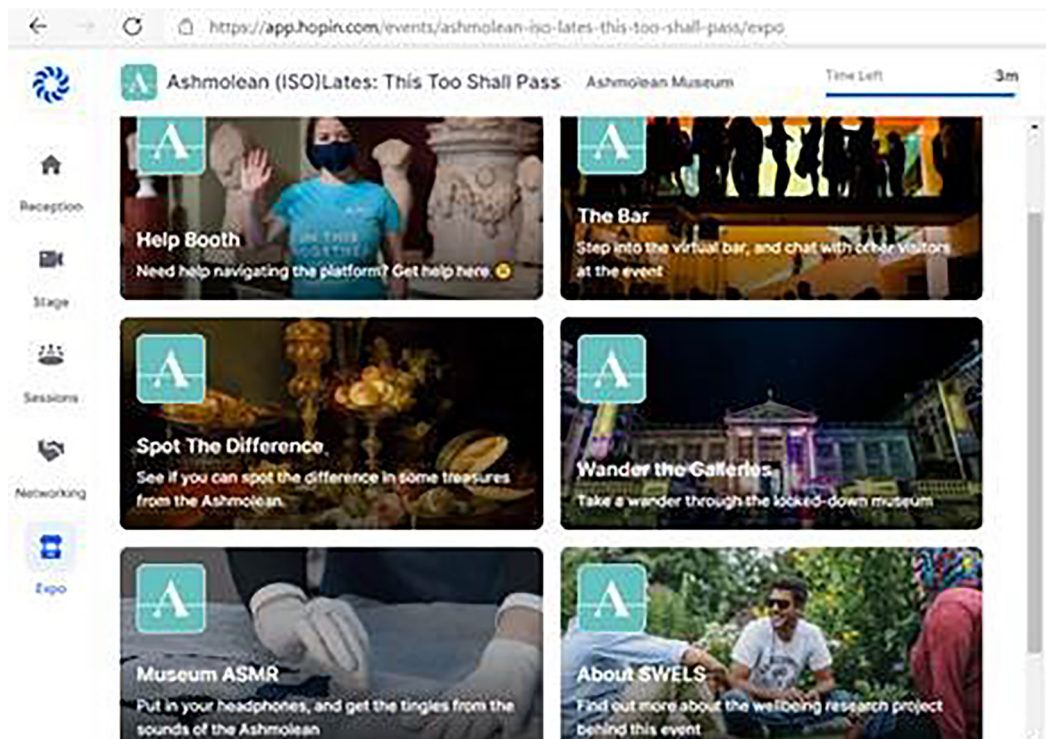
Figure 3. Expo tab on the online platform Hopin from Ashmolean Museum (ISO)Lates event, 29 April 2021 © Ashmolean Museum, University of Oxford.

mindfulness in the Ashmolean Museum and drawing in the Museum of Natural History. With GLAM venues closed due to COVID-19 in 2020, events shifted to online or hybrid provision, such as the Ashmolean Museum's virtual '(iso)Lates' events for students held in March and April 2021 (Figure 3). Since early 2022 GLAM has been collaborating with Oxford University's Counselling Service, by hosting psychoeducational and therapeutic workshops in its venues, on topics including managing sleep and insomnia, mindfulness in nature and perfectionism. The Ashmolean University Engagement Programme (Ashmolean University Engagement Programme, 2023) helps scholars develop skills in object-based learning, including a workshop series in which early career researchers explore the theme of emotions and deliver a public gallery talk on an object of their choice.

Procedures

The survey was conducted over 20 weeks (July–November 2021). Consent was obtained specifying that participants had read and consented to the participant information sheet, as per ethical approval. The survey asked 24 questions and was divided across four sections, respectively comprising questions on: (1) Creative cultural- and nature-based activities, (2) University provided experiential learning activities, (3) Wellbeing and (4) Demographics.

The Office for National Statistics Four Wellbeing questions (ONS4) (Office for National Statistics, 2018; Tinkler, 2015) and the Harvard Flourishing Index (Vanderweele, 2017) were used to understand student wellbeing. The questions are outlined in Supplementary Tables 1 and 2.

Interviews were conducted between January and March 2022. Consent was obtained at the beginning of the interview, covering the interview being recorded, transcribed, anonymised and used within this project as well as the option for participants to withdraw their consent up to 6 months afterwards. However, no participants have chosen to do this. Interviews lasted circa one hour and deviations in prompts enabled a more flexible approach to interrogating answers from participants. All interviews were conducted and recorded over UCL's institutional Zoom subscription (Zoom, 2023). Interview transcripts were verbatim and downloaded from the Zoom recording. They were edited for clarity, to check cohesion with recording and remove transcription software errors, by two researchers (Elsden and Sercombe) who cross-compared

the transcripts with audio files to confirm fidelity (Ritchie, 2014). A summary of the questions asked can be found in Supplementary Table 3.

Analytical strategy

Survey design was guided by the assumption that many students experience low wellbeing and aimed to establish whether this can be alleviated by experiential learning in cultural and natural settings. Survey data was analysed with statistical software Stata 17 using both descriptive and inferential statistics (StataCorp, 2021). To examine whether participants had significant differences in wellbeing, independent t-tests were employed to compare the survey results to the national average, using ONS data from July 2021.

To inspect descriptively the difference between universities, overlapping histograms were generated for each ONS wellbeing score and Harvard Flourishing domain, followed by mean bootstrapping each outcome to 10,000 replications. The bootstrapped results helped to minimise the effect of unbalanced sample sizes between institutions.

Qualitative data, comprising both survey free-text and interviews, were analysed using framework analysis in NVivo version 12 (Gale et al., 2013; QSR International Pty Ltd, 2022).

Results

Survey findings

Participants were predominantly female (76.43%), aged 18–21 (66.43%), enrolled in undergraduate degrees (82.14%), UK-Based (94.29%) and white (48.57%), with the largest number of respondents from the King's Clinical Humanities modules (Table 1). The greater proportion of female participants is largely in line with other findings on students engaging with social science research (in the UK) (Sax et al., 2003). Participants took an average of 7.5 min to complete the survey. No participants rescinded consent nor retracted participation.

Compared to the national average of 16–25-year-olds for the ONS4 wellbeing questions (Rukmana, 2014; Smyth Zahra, 2022), the survey participants reported worse life satisfaction (3.10% versus 9.84%), lower levels of feeling life being worthwhile (4.1% versus 12.3%), lower happiness (9% versus 16.39%) and higher anxiety (23.60% versus 59.84%; Figure 4). Independent t-tests were conducted on the student sample ($N = 139$) to compare differences in
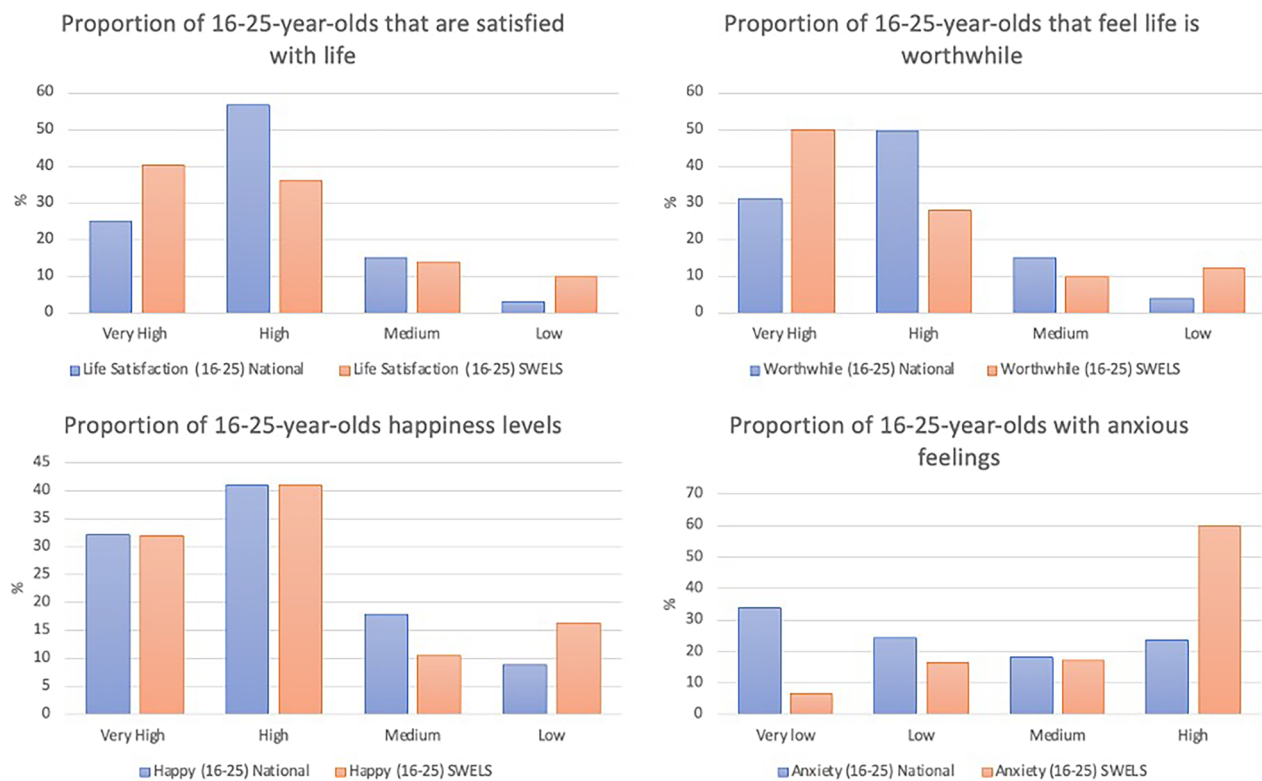
Figure 4. Proportional breakdown of SWELS survey participants ONS4 wellbeing scores compared to the national average at the same time point for the same age.

Table 2. Mean and standard deviation of ONS wellbeing questions by university.

	UCL	King's	Oxford	Overall
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Life Satisfaction	6.27 (2.58)	6.93 (2.02)	7.03 (1.54)	6.74 (2.11)
Anxiety	5.24 (2.74)	5.54 (2.88)	4.24 (2.82)	5.20 (2.84)
Happiness	5.95 (2.89)	6.13 (2.47)	6.67 (1.88)	6.18 (2.46)
Worthwhileness	6.19 (2.90)	7.20 (2.18)	7.07 (2.02)	6.87 (2.38)

Table 3. Mean and standard deviation of Harvard Flourishing Scale by university.

	UCL	King's	Oxford	Overall
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Domain 1: Happiness and Life Satisfaction	11.32 (4.64)	12.51 (3.93)	12.80 (2.68)	12.24 (3.88)
Domain 2: Physical and Mental Health	10.76 (4.57)	11.26 (4.17)	11.55 (3.92)	11.18 (4.17)
Domain 3: Meaning and Purpose	10.86 (5.29)	13.85 (4.17)	12.87 (4.07)	12.76 (4.61)
Domain 4: Character and Virtue	12.17 (4.20)	13.90 (3.95)	12.70 (2.23)	13.17 (3.74)
Domain 5: Close Social relationships	13.17 (5.79)	13.16 (4.68)	13.50 (4.07)	13.25 (4.82)
Domain 6: Financial and material stability	8.57 (6.54)	7.10 (6.42)	5.00 (4.76)	7.11 (6.23)
Flourishing Index	117.54 (47.64)	128.31 (45.58)	131.17 (22.88)	126.02 (42.09)

Sample per university: UCL = N37, King's = N70, Oxford = N30, with other universities contributing 2. Overall N = 139.

ONS Wellbeing scores, with the national average mean and standard deviation published quarterly by age group. The results showed that survey participants had statistically significantly lower life satisfaction ($t(138) = -5.08$, $p = .000$), happiness ($t(138) = -5.80$, $p = .000$), feelings that life was worthwhile ($t(138) = -4.85$, $p = .000$) and higher levels of anxiety ($t(138) = 8.20$, $p = .000$) compared to the national average.

However, these results were not evenly distributed across the three universities (Tables 2 and 3; Supplementary Figures 1–4). When comparing the absolute mean and standard deviation for each university (and combined) for the ONS4, this showed descriptively that UCL students reported the worst wellbeing amongst the three universities. Oxford students reported the highest life satisfaction, happiness, worthwhileness and the lowest levels of anxiety, with King's being in between.

Following 10,000 bootstrap replications, the distribution of mean ONS4 wellbeing scores for each university descriptively indicates Oxford University has a larger variance in wellbeing outcomes in comparison to King's and UCL (Supplementary Figure 5). King's

had a higher anxiety score mean compared to UCL and Oxford, while UCL had lower life satisfaction and worthwhileness mean scores.

The Harvard Flourishing scale further supports these findings (Table 3). Oxford has the highest absolute mean scores for domains 1 (Happiness and Life Satisfaction), 2 (Physical and Mental Health) and 5 (Close social relationships). King's has the highest scores for domains 3 (Meaning and Purpose) and 4 (Character and Virtue) while UCL has the highest mean score for domain 6 (Financial and material stability).

After 10,000 bootstrap replications, there is no relative visual difference in close social relationships between the universities (Supplementary Figure 6). UCL lags behind for students reporting higher levels of meaning and purpose and character and virtue. Similarly, in line with the ONS4 results, UCL reports lower levels of happiness and life satisfaction compared to Oxford and King's. The distribution of physical and mental health is similar across universities, however, King's shows less variability. Oxford performs the worst on financial and material stability, whereas UCL students report worrying less in these areas.

Visual inspection of Supplementary Figures 5 and 6 suggests no significant difference between the institutions due to overlapping confidence intervals, therefore no inferential statistics were performed to compare between universities.

The survey also asked participants about levels of engagement with experiential learning spaces prior to the outbreak of the COVID-19 pandemic and since the end of the lockdowns (Figure 5). This showed that most students engage with parks, gardens and online but also that there have been some shifts from before the pandemic to after the lockdowns (in 2022). There has been an increase in engaging with museums, galleries, and online activities while engagement with natural spaces (parks and gardens) decreased, albeit these, alongside online activities, still make up by far the most important forms of student engagement. These changes were not equally distributed across the three universities, with Oxford going against the overall trend, seeing an increase in nature engagement and a slight decrease in online activities (Figure 6).

Interview findings

Similar to the survey, interview participants were predominantly female (n = 12, 85.7%) and taking undergraduate degrees (n = 6, 42.8%) (Table 4). As with the survey, no participants rescinded consent nor retracted participation in the interviews.

The three deductive themes around which our framework analysis was built were *Activity*, *University* and *Wellbeing*. These themes were informed by the survey trends and potential patterns for further explorations using interviews to confirm or refute the quantitative results. Following the initial stage of coding, a period of open coding followed which was integrated into the original deductive themes. This resulted in four additional themes being identified: *Cultural spaces and modules, Experiential learning curricula, Diversifying content and Digital versus physical engagement*. The charted Framework Matrix can be found in Supplementary Table 5. Illustrative quotes were identified and are presented in Table 5 below.

Discussion

The quantitative results from our study support the wider picture of increasing mental distress among student in higher education across the UK and internationally, which we have outlined in the introduction. They demonstrate a trend where students from the three universities investigated have lower life satisfaction and higher anxiety levels in comparison to the national average of the same age group. When comparing quantitative data between universities, there was a disparity in wellbeing outcomes, with UCL scoring lower for wellbeing than King's and Oxford, respectively, on both wellbeing scales employed. The survey participants reported engaging with experiential learning activities at varying levels. Due to COVID-19 restraints, it was not possible to conduct a direct investigation of students' wellbeing during the engagement with experiential learning activities, which is something that the Oxford O-ACE study directly focused on [Syed Sheriff et al., 2021). However, subsequent, interviews shone a light on the wellbeing potential of experiential learning spaces and activities. In combination, the qualitative and quantitative data present a relatively complementary picture. The survey results clearly highlight the wellbeing challenges students face but also point to some of the cultural and nature-based activities they engage in to support their mental and physical health, while the interviews serve to illustrate the benefits of such activities in greater detail.

During the survey period (while the UK was still affected by COVID restrictions), students primarily supported their wellbeing by spending time in green spaces and engaging with online activities (Figures 5 and 6). Interviews found students predominantly focused on physical movement activities: yoga, swimming and running. There was an
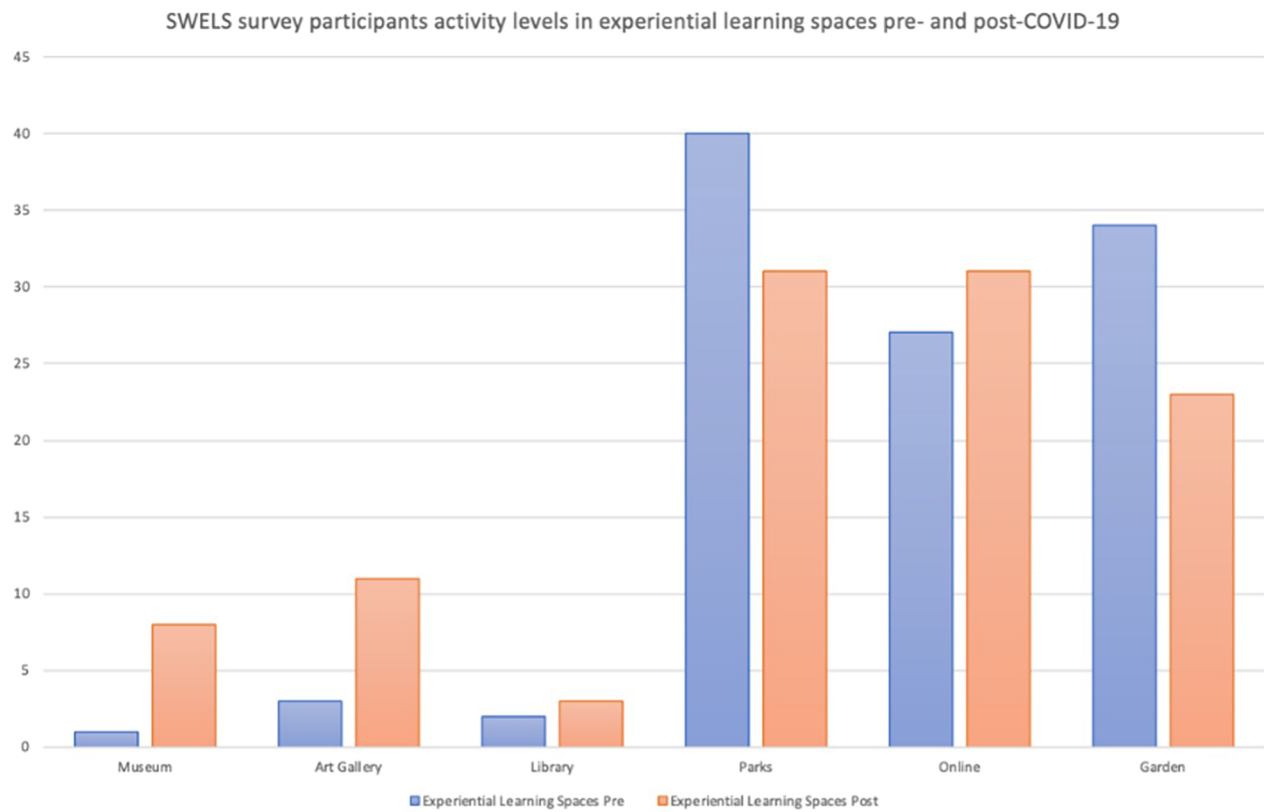
Figure 5. Survey participants activity levels in experiential learning spaces pre and post COVID-19.
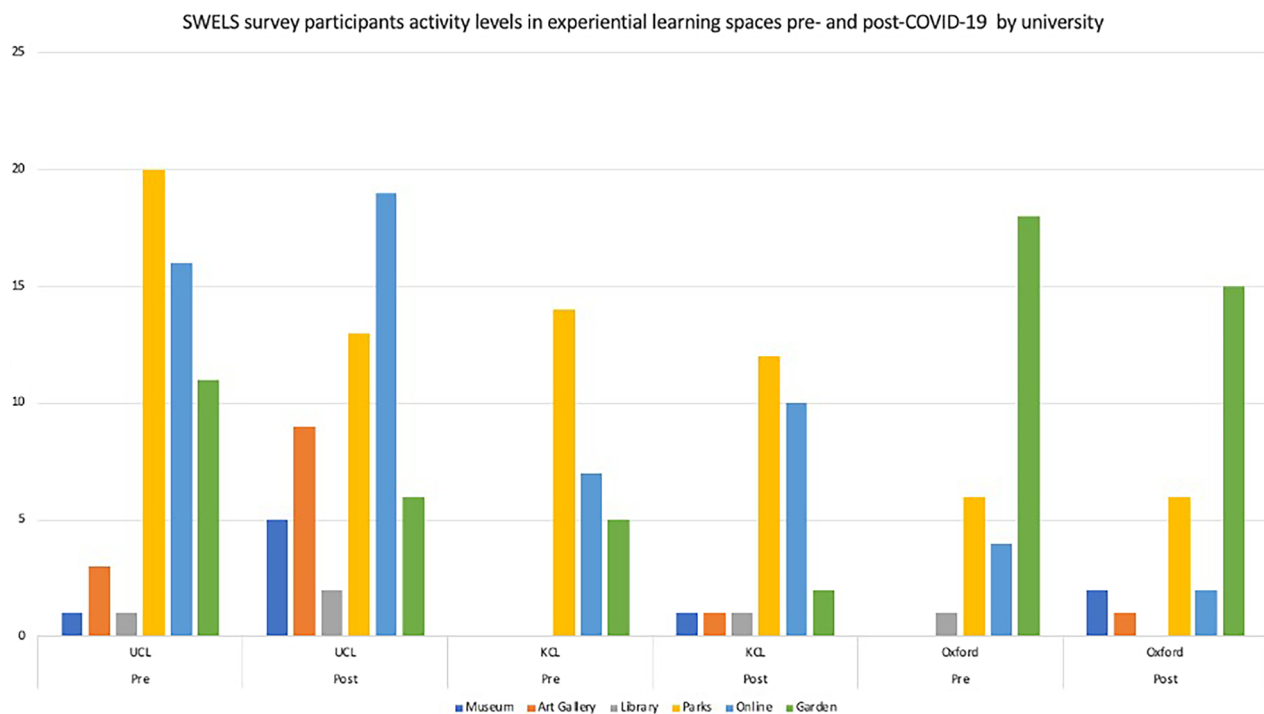

Figure 6. Survey participants activity levels in experiential learning spaces pre- and post- COVID-19 by university.

emphasis on how digital engagement versus physical engagement differed. Physical, in-person, activities enabled experiential learning trips, empowering students to meet and interact with classmates, thus encouraging the formation of wider social connections.

Table 4. Student Wellbeing and Experiential Learning Spaces qualitative data Demographics ($n = 14$).

	UCL	King's	Oxford	Overall
	%	%	%	%
Gender				
Female	100	33.3	100	85.7
Male	0	66.6	0	14.3
Uni course				
Undergraduate	40	66.6	0	42.8
Postgraduate Taught	60	0	0	42.8
Postgraduate Research	0	33.3	100	14.4

Sample size per university: UCL = 10, King's = 3, Oxford = 1.

Students described how different university natural/cultural spaces benefit them: some seek out these spaces routinely (Table 5, quote c), while others found that such spaces help to recharge and stimulate them. Research has shown that giving students permission within the formal curriculum to explore cross-disciplinary opportunities, away from lectures and seminars helps them flourish and become more tolerant of ambiguity (Smyth Zahra and Dunton, 2017). Interviews articulated how university experiential learning spaces such as museums support student wellbeing by broadening perspectives and, in turn, improving exploration of students' other local natural/cultural assets. Within seminar settings, natural and cultural spaces helped to build bridges, acting as talking points and bringing students into the present moment together (quotes b and g) (Csikszentmihalyi, 1988; Keady et al., 2022). Whether experiential learning takes place in digital or physical spaces also makes a difference to engagement, educational and wellbeing outcomes: being physically present enables students to build social connections with peers in their cohort, which may not happen as effortlessly otherwise (as evidenced by quote g). This comes in conjunction with the role of universities' natural/cultural assets enabling conversations to flow and encouraging students to build better connections more easily. Students clearly distinguished between online lectures and in-person seminars and the added value of situating these in natural/cultural spaces as opposed to 'traditional' teaching rooms. One key benefit is the social focus that in-person seminars tend to have for both curriculum and cohort building and how experiential spaces further helped to sharpen this focus.

Our study shows that modules, courses, and activities that enable experiential learning positively shape wellbeing outcomes for students. This finding points to the necessity of considering both the diversification of curriculum content and wellbeing together as part of curriculum development. The sentiment expressed in quote d illustrates this well, highlighting the need for university educators to consider new approaches to teaching. Developing innovative curricula is as much part of universities' purview as understanding the systemic and structural determinants of wellbeing for their students (Marmot, 2020). This is a theme which ran through the quantitative survey results and qualitative interview responses, as some interviewees called for universities to design courses with wellbeing in mind, alongside improving access to psychological services. However, some students interviewed saw the cultural engagement aspects of their learning experience as a bonus rather than a core element of the programme (quote e). These differing views serve as an important reminder of the need for choice and autonomy as students navigate curricula. The diversification of the curriculum then enables students to choose their own path that they find most beneficial to them.

Universities collaborating with cultural institutions is central to developing diverse and innovative culture/nature-based pedagogical practices. The three universities considered here, are well established and resourced institutions, boasting a significant cultural offering, in the form of museums, collections and gardens. However, as many universities do not have the same wealth of cultural and natural assets as UCL, King's and Oxford, it is essential that universities establish partnerships with other local cultural institutions and green spaces to enable these activities to flourish. It will be through these partnerships and connections that change can happen, thereby recentring the need for the diversification of curriculum content, with the aim of supporting student wellbeing.

Limitations

Focusing on three highly competitive, research-intensive universities in the southeast of England brought focus on a particular sociodemographic section of the UK student population. As we have seen, there are differences between these institutions, which could relate to their geographical settings, the level of study as well as the sociodemographic profiles of the participating students. We therefore need to be careful about generalising the findings to other UK (or international) higher education settings. There is also a sampling bias via the convenience sample alongside with a predominance of King's students for the quantitative survey and UCL students for the qualitative interviews, as well as a dominance of white female students among both the survey and interview participants. These may have skewed the wellbeing results but was partially addressed for the survey using bootstrapping to derive a single dataset from many simulated

Table 5. Themes and illustrative quotes from the qualitative analysis.

Theme	Quote
Cultural spaces and modules	a. 'Events which encourage people to step outside of what they're doing, because a university experience should be a holistic experience, you should be able to kind of engage with things outside of you and get a spirit of place, so anything which encourages you to explore places like the **Ashmolean** or the **Pitt Rivers** or the **Natural History Museum**.' b. 'These [**UCL** museum] spaces do have the power to transform individuals and they do, but they also have the power to trigger and overstimulate some people…we've got to meet people where they are and build these bridges.' c. '**Clinical humanities** was a nice time of the week, you have to be present, we would have to be there in the moment and go to a museum or the park and either way it forced us to relax and take some time off. A few hours to yourself. We have interesting people and conversations going on in the module where they were talking about mental health, we got to meet all these people talking about it and their ideas. They would come to share, which I really liked and enjoyed'.
Experiential learning curricula	d. '[Experiential learning supporting wellbeing] needs to be a conscious thought throughout the construction of modules and university campuses, across all aspects of university life because I think right now it's very obviously not considered.' e. 'I don't know if I completely believe in [curricula experiential learning] being like a solution. But I can see it being something really nice, like the cherry on top it's just not the Sundae'
Diversifying content	f. 'I think the whole idea of diversifying content…just makes it more enjoyable as a student…if these modules expecting us to think creatively and they want us to come up with really original ideas with essays. But they're not being particularly original or creative with the way they're giving these modules which I think limits, how many are outside of the box. I just think there's, like, a certain expectation on us as students to like break barriers and that there's always an assessment criterion to check.'
Digital versus Physical	g. Without this module and the trips to the museum, I wouldn't have met people from the course, as nothing really was in-person. I was able to make friends regardless of the pandemic through this module.

samples. From a convenience sample this restricts these findings from being generalisable to a wider population, as does the nature of the context from which the data was collected.

Conclusion

Our sample of students from three research intensive UK universities, indicates that university student wellbeing – as represented by life satisfaction, anxiety, and happiness – is statistically below the national average, with some inter-institutional differences. Interviews clearly highlight the potential positive impact of embedding more experiential learning opportunities into the curriculum and the benefits that working in diverse learning spaces can bring for students. More work is needed to compare these results more widely across the UK and internationally. Nevertheless, the data already available – including from this study, the SWANS study (Paton et al., 2023) and ongoing work by TASO (2023) – strongly highlights the need for a debate on how we, as university educators, should structure curricula and the spaces in which learning takes place as a means to support, rather than worsen, the wellbeing of students while they are at university. This calls for a transformative approach to curriculum design, through prioritising student wellbeing, diversifying content, and utilising experiential learning spaces as well as working in partnership with local cultural institutions and green spaces to enact change.

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Authors contributions

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Data availability statement

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