

mental wellbeing

and the architecture student

Melissa Kirkpatrick

MArch Architecture Dissertation 2018
Sheffield School of Architecture

preface

From my own experience at university, mental health is something that has been trivialised amongst architecture students. Wellbeing seemed like a sacrifice worth making for our studies and 'breakdowns' or panic attacks were discussed casually as though they are an essential part of architectural training. Upon stepping back from this bubble, it became clear to me that this is a problem with deep roots in the architecture profession, and to change it would be to change an entire culture. Through the Collaborative Practice Masters course I have participated in many discussions about how we can adopt a healthier approach to architectural education and experienced different ways of learning first hand, furthering my passion for this topic. I hope that this research can contribute towards the progress others have already started to make in this field, and perhaps in the future architects and architecture students will all be able to better preserve their mental health and wellbeing.

acknowledgements

With thanks to Satwinder Samra for his guidance and support, and for over the years helping me to hone my interest and understanding of some of the problems the architecture profession faces.

Thanks also to Anne Cosentino and Virginia Newman of the RIBA for their continuous support and willingness to help, to Robert Ball, Katie Vivian and the ABS for their support and keenness to make a difference and to Simeon Shtebunaev for his help and role in initiating this study.



This research has been supported by the
Architects Benevolent Society



© Melissa Kirkpatrick
170204776
University of Sheffield School of Architecture
October 2018



0

INTRODUCTION

1

PHASE 1

2

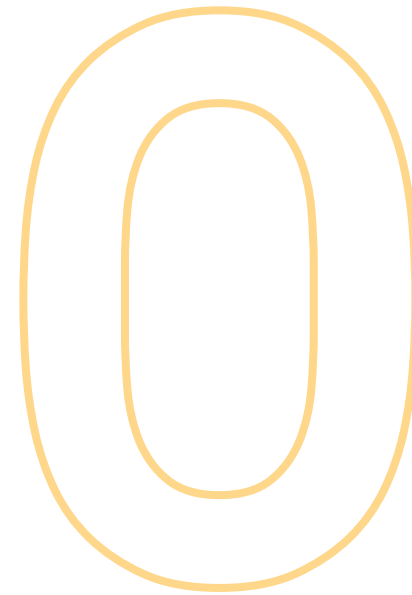
PHASE 2

3

MOVING FORWARD

4

BIBLIOGRAPHY



INTRODUCTION

Object of study	4
Research context	6
Research design overview	8

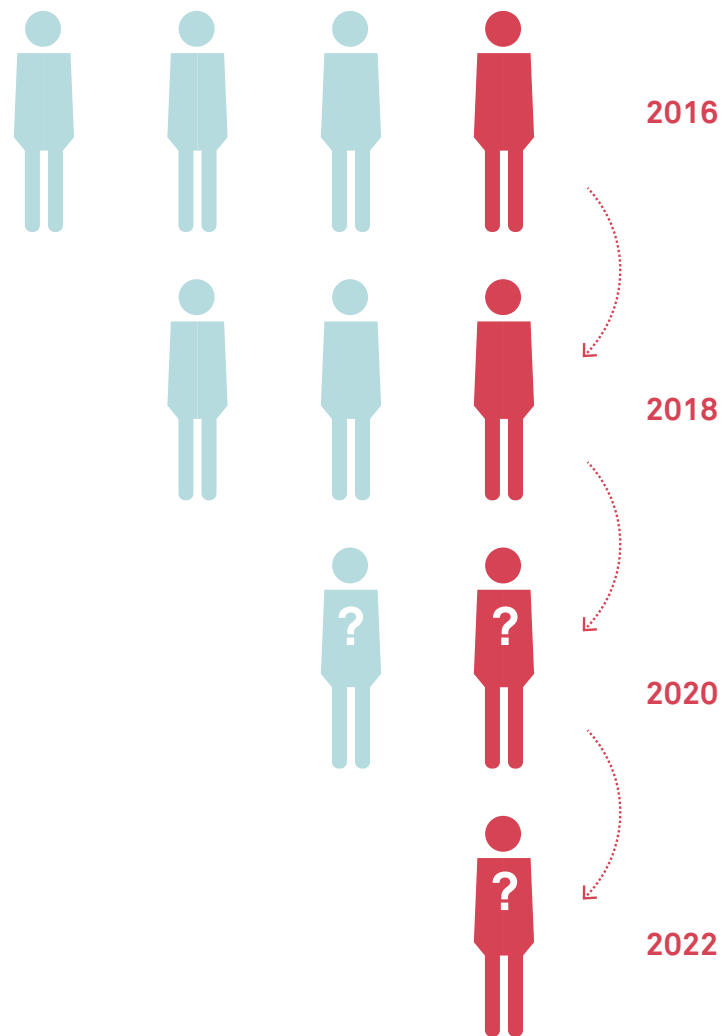


Figure 2.

‘We must collectively refuse to allow one-in-three to become one-in-two.’

-Scott McAuley, Architects Journal article 2018

RESEARCH CONTEXT

In the past, there has existed a stigma around mental health, which recently has been diminishing.⁵ In recent years, there has been a national narrative that student wellbeing and mental health in the UK is at a crisis and must be addressed, and the crisis has certainly not been improving. In 2016, five times more students disclosed a mental health condition to their university than in 2006.⁶ Due to the recent surge in research, universities and charities have been taking steps towards addressing the problem, with universities introducing new frameworks to help improve students' mental health,⁷ and Anxiety UK providing support such as discounted therapy sessions.⁸ These are, however, reactive approaches to the problem and in order to address mental health issues effectively, a preventative approach must also be developed.

A survey carried out by the Architects Journal in 2016 ‘for the first time, asked about the emotional burden of completing the seven-year course.’ The results showed that one in four architecture students in the UK had

received treatment for mental health issues, with a further 26% fearing they would need to seek medical help in the future.⁹ As an indication of the rate at which this issue is worsening, a further survey was conducted 2 years later in 2018. Now, the figure is one in three.¹⁰

This study is positioned during a time where it is becoming increasingly recognised within the architecture profession that there is an issue with mental health amongst students and professionals, and that there has been a lack of existing research surrounding this. Therefore other related research is currently being conducted as momentum builds around the subject, including a number of student research projects at the University of Sheffield such as ‘Health, Wellbeing & Architectural Education’ by David Hodgson and ‘Architectural Education: Is It Worth It?’ by Ashley Mayes, both written in 2017. This study could be considered part of a ‘movement’ towards making progress in architectural education though knowledge and subsequently action.

⁵ Wakeford, Jon, *It's Time for Universities to Put Student Mental Health First*, The Guardian, 7 September 2017 <<https://www.theguardian.com/higher-education-network/2017/sep/07/its-time-for-universities-to-put-student-mental-health-first>> [accessed 14 April 2018].

⁶ Burns, Judith, *Sharp Rise in Student Mental Illness Tests Universities*, BBC News, 4 September 2017 <<http://www.bbc.co.uk/news/education-41148704>> [accessed 14 April 2018].

⁷ UniversitiesUK, *New Framework for Universities to Help Improve Student Mental Health*, 2017 <<http://www.universitiesuk.ac.uk/news/Pages/New-framework-for-universities-to-help-improve-student-mental-health.aspx>> [accessed 14 April 2018].

⁸ AnxietyUK, *Access Therapy*, 2018 <<https://www.anxietyuk.org.uk/accessing-therapy/>> [accessed 14 April 2018].

⁹ Waite, Richard and Braidwood, Ella, *Mental Health Problems Exposed by AJ Student Survey 2016*, The Architects Journal, 2016 <<https://www.architectsjournal.co.uk/news/mental-health-problems-exposed-by-aj-student-survey-2016/10009173>> [accessed 14 April 2018].

¹⁰ Jessel, Ella, *Student Survey: Only the Rich Need Apply to Study Architecture*, Architects Journal, 26 July 2018, 10–14 (pp. 13).

WORDING

RIBA – The Royal Institute of British Architects

NUS – The National Union of Students

‘RIBA 2017 survey’ – RIBA Student Mental Health Survey, conducted in 2017 by the RIBA.

‘RIBA 2018 survey’ – RIBA Student Mental Health Survey, conducted in 2018 by the RIBA directly for this study.

‘RIBA staff survey’ – Survey conducted in 2018 by the RIBA directly to this study, issued to heads of schools, programme leaders and pastoral staff in RIBA validated architecture schools.

‘NUS survey’ – NUS Student Mental Distress Survey, conducted in 2013 independently by the NUS.

When **‘Architecture students’** are referred to with regards to survey comments or statistics, this is indicative of the respondents of one of the RIBA Student Mental Health surveys, either 2017 or 2018.

When **‘typical university students’** or **‘typical students’** are referred to, this is indicative of the respondents of the NUS Mental Distress Survey.

RESEARCH DESIGN OVERVIEW

This study will be conducted as a two-phase research design, wherein a combination of quantitative and qualitative methods has been established in order to enrich the quality of the research, as the benefits of each method ‘complement each other.’¹¹ Specific methods will be elaborated upon in the subsequent chapters, however as an overview:

Phase 1 will compare two subject groups: a) ‘typical’ higher education students in the UK and b) architecture students in the UK. Quantitative and qualitative survey data will be

used to conduct this comparative analysis. This phase of the study will also investigate what key triggers of mental distress for architecture students are.

The methodology for Phase 2 will be informed by the findings of Phase 1. It will use interpretative analysis to draw comparisons to the results of Phase 1, and ultimately to build a deeper understanding on the subject of the mental health of architecture students by gathering data from an additional subject group; staff in architectural education.

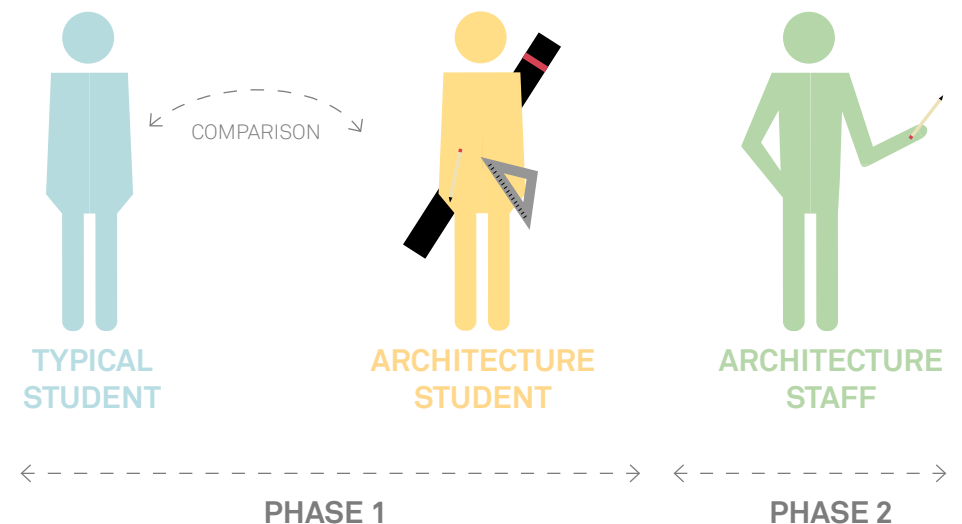


Figure 3.
Research structure

¹¹ Goat, Linda and Wang, David, *Architectural Research Methods*, 2nd edn (New Jersey: John Wiley & Sons, 2013),



PHASE 1

Methodology	12
Limitations	13
Results / Discussion	14
Conclusion	32



Figure 4

A typical scene in Sheffield School of Architecture design studios

PHASE 1 METHODOLOGY

Phase 1 includes a casual-comparative analysis of the data collected from the **RIBA 2017 Student Mental Health Survey** Report, which was distributed via email and Facebook to students, and received 1267 responses (over 8% of the UK architectural student body)¹², and the **NUS 2013 Student Mental Distress Survey** conducted by the NUS, which gained 1336 responses.¹³ The questions asked in the RIBA survey were modelled on those shown in the NUS survey report. The results for each question will be compared, and where the results diverge the most between the two groups they will be relayed and discussed in the context of architectural education.

A second RIBA survey was issued in 2018, containing the same questions again, which received 964 responses. This was distributed to the same range of students using the same methods. Given that the RIBA 2017 survey was distributed closer in time to the NUS survey, this will be used for the comparison for reliability purposes. The **RIBA 2018 Student Mental Health Survey** asked students open-endedly whether they had any further comments, to which many provided examples their own experiences with mental health and their perceived causes. Therefore, the primary use for the 2018 survey is to use these comments to support and interpret the comparative study, and the quantitative data collected will be used to establish any changes between 2017 and 2018.



¹² RIBA Education Statistics 2016-17, Mirza & Nacey Research for the RIBA, 2018 <<https://www.architecture.com/-/media/gathercontent/education-statistics/additional-documents/educationstatistics201617pdf.pdf>> [accessed 24 September 2018].

¹³ H Kerr, Mental Distress Survey Overview, National Union of Students, 2013 <<https://www.nus.org.uk/global/campaigns/20130517%20mental%20distress%20survey%20%20overview.pdf>, 22/09/2017> [accessed 6 April 2018].

LIMITATIONS

The initial RIBA survey data was conducted in 2017, four years later than the NUS survey was conducted in 2013. Therefore, if the NUS's average responses were to have changed drastically over the course of these three years, the comparison with the RIBA 2017 survey data would be at risk of being unreliable.

However, due to the fact that the two sets of RIBA questionnaire data, which were taken one year apart (2017 & 2018) showed no dramatic change in responses from architecture students (<9% change), it can be assumed for the purpose of this research that the NUS data would not change dramatically.

RESULTS / DISCUSSION

IS IT WORSE FOR ARCHITECTURE STUDENTS?

Firstly, the results of the RIBA 2018 survey show that 33% of architecture students believe they currently have a mental health problem (Fig.6). This supports the recent Architects Journal survey report, which found that one in 3 architecture students had been treated for a mental health problem during their studies. To compare this with the average person in the UK, in April 2017 Mind published a statistic showing that 'approximately 1 in 4 people in the UK will experience a mental health problem each year'.¹⁴ Therefore, the problem of mental health within architecture students is apparently more severe than the problem the country faces at a national scale.

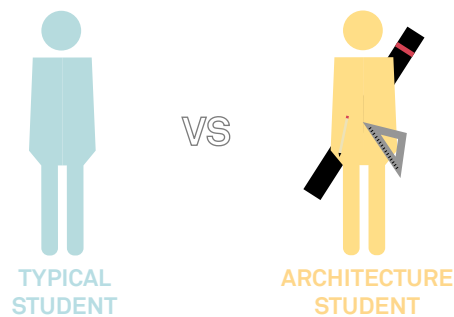


Figure 5.

¹⁴ Mental Health Facts and Statistics, Mind, 2017 <www.mind.org/information-support/types-of-mental-health-problems/statistics-and-facts-about-mental-health/how-common-are-mental-health-problems/> [accessed 14 September 2018].

A second noteworthy observation is that comparing the results of the RIBA 2017 survey with the NUS survey, for every symptom of mental distress given, a higher percentage of architecture students than typical students claimed to have experienced them. This indicates that architecture students, on average, are more likely to experience a given symptom of mental distress than the typical student. Furthermore, for certain symptoms and triggers in particular there was found a large disparity between architecture students and typical students. These will be discussed as part of this chapter.

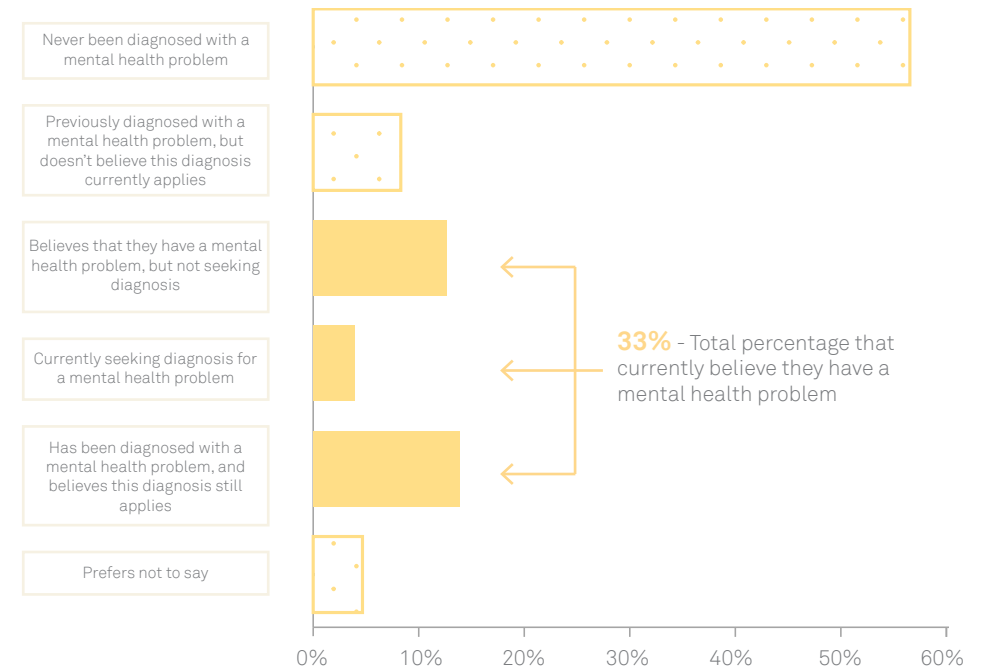


Figure 6.
Diagnosed / Self-diagnosed mental health amongst architecture students, RIBA survey 2018

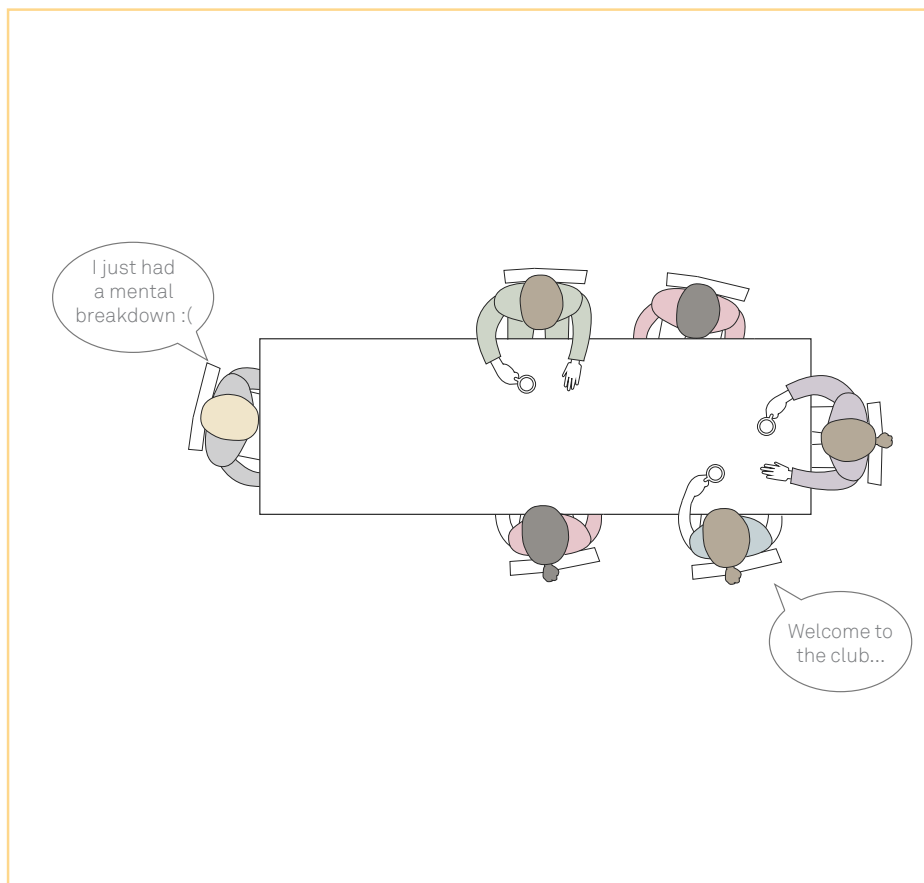
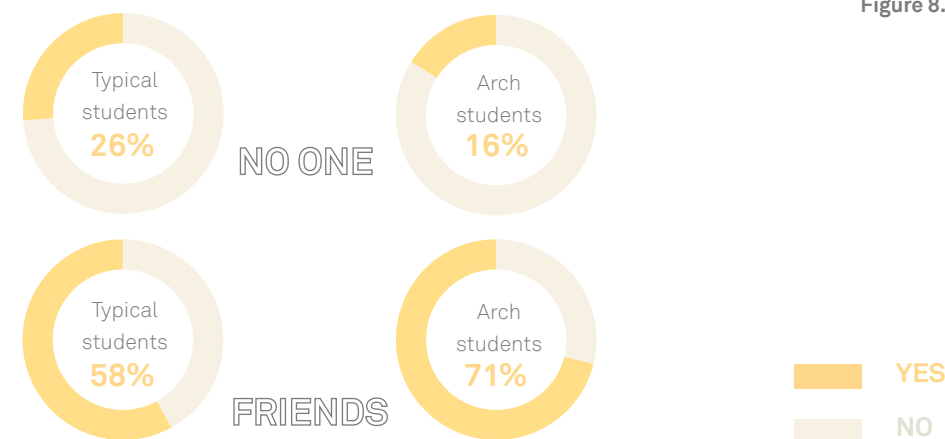


Figure 7.

MENTAL HEALTH - A CONVERSATION PIECE?

Who, if anyone, did you tell about your feelings of mental distress when you experienced them throughout your architectural education?

Figure 8.



The comparison between the RIBA 2017 and NUS survey data shows that Architecture students are 10% less likely to have told 'no-one' about their feelings of mental distress, and 13% more likely to have told friends (Fig. 8). The fact that architecture students are more likely to talk about these issues with peers than typical students could be attributed to 'studio subculture' within architecture. Jeremy Till acknowledges that some architecture students are proud of their wellbeing issues; 'far from being ashamed of these afflictions, they wear them as badges of honour. It is what sets them apart, signalling their

difference from the other students.'¹⁵ As stated by one survey respondent, students 'feel that they just have to accept mental health problems/stress because it's the price you pay to study architecture'. Anthony stated that although studio culture is recognised as having attributes that are harmful to students' mental and physical health, it is 'psychologically reinforced by practices commonly in place'.¹⁶ This was written 27 years ago, yet there are signs that there is still some reluctance within architectural education to move away from the harmful practices associated with the traditional model of studio culture.

¹⁵ Jeremy Till, *Architecture Depends* (London: MIT Press, 2013). pp.9.

¹⁶ Anthony (1991) pp.40.

'THERE IS AN UNFORTUNATE WIDESPREAD BELIEF THAT GOOD ARCHITECTURAL WORK COMES OUT OF ALL-NIGHTERS AND SPENDING ALL OF ONE'S TIME WORKING ON STUDIO'

-Student respondent, RIBA 2018 survey

It is clear that there is a pressure for architecture students to 'pull all-nighters', perpetuated by peer pressure and occasionally teachers. One student survey respondent reported that during a busy time in their course calendar, a tutor told them they were 'not supposed to be sleeping at that time of the year but keep working'. Disregard for sleep is an issue that can have a devastating effect on students' wellbeing throughout university, and this can carry on into professional working life. Vowles et al. report that this 'distortion of time' can lead to 'devaluation of scheduled time' which 'does not assist in the development of the time management skills that are required for employment'.¹⁷ 70% of respondents to the RIBA 2018 survey reported 'working overnight' to be a trigger of mental distress. This is still an alarming statistic, yet in fact an 8% decrease from the RIBA 2017 survey results (Fig.10). This could perhaps be due to an increased awareness of the negative impact of lack of sleep. In 2015,

ArchDaily published the article 'Is a 24-Hour Studio Culture a Good Thing in Universities?', which recognised that many schools had already begun 'closing their buildings overnight to try to combat what is often seen as a negative and damaging culture'.¹⁸ Sheffield School of Architecture have recently revoked their 24-hour access for this reason. Despite this having been recognised within the industry in 2015, some architecture schools still allow 24-hour access to studios, which could be seen as encouragement for students to work through the night. Students could of course work through the night elsewhere if they chose to, however the concept of the 'all-nighter' could be attributed back to Till's 'badge of honour' analogy.¹⁹ Thus, it could be assumed that part of the reason students do this could be to 'show off' and demonstrate how hard they are working, or suffering, and therefore this issue can be seen as a derivative of studio culture, rather than a direct causation of university requirements or workloads.

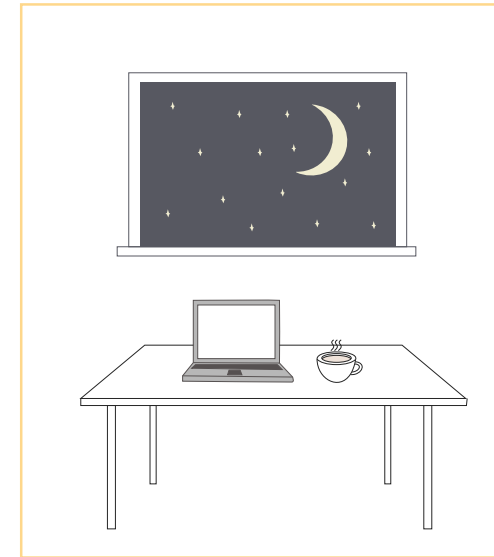


Figure 9.

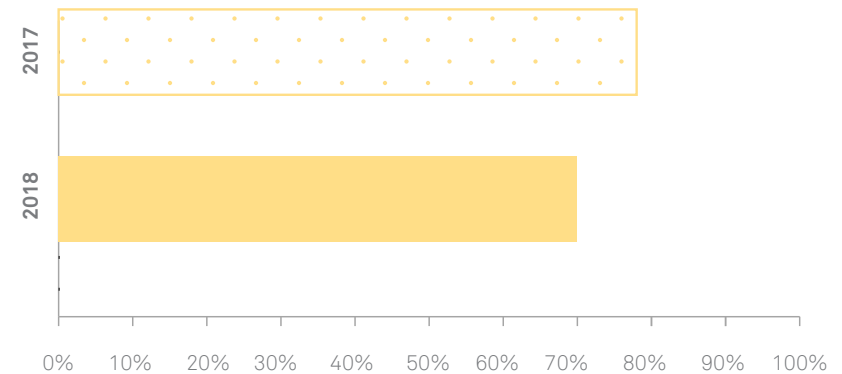


Figure 10.
Percentage of architecture students that identified 'working through the night' as a trigger of mental distress

¹⁷ Vowles, Hannah, Low, Jim and Doron, Holly Rose, *Investigating Architecture Studio Culture in the UK: A Progress Report*, Journal for Education in the Built Environment, 7.2 (2012), pp.46-47.

¹⁸ Stott, Rory, *Is a 24-Hour Studio Culture a Good Thing in Universities?*, ArchDaily, March 2015 <<https://www.archdaily.com/611433/is-a-24-hour-studio-culture-a-good-thing-in-universities/>> [accessed 14 September 2018].

¹⁹ Till (2013).

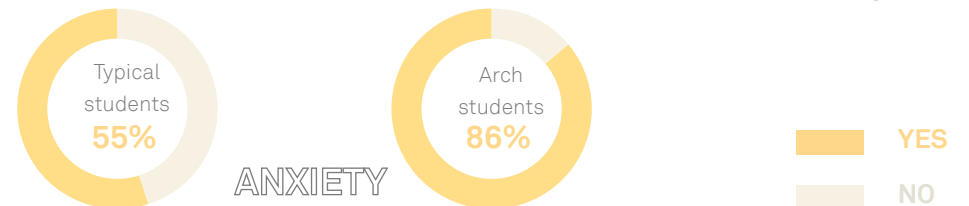


Figure 11.
A typical architecture 'crit' or 'review'

ANXIETY

Have you ever experienced any of these during the time you have spent throughout your architectural education?

Figure 12.



86% of respondents to the RIBA 2017 survey claim to have experienced feelings of anxiety during their architectural education. This is 31% higher than the proportion of NUS survey respondents who stated the same (Fig. 12), thus indicating that architecture students are more likely to experience anxiety during their studies than the typical university student. Anxiety is defined as 'feeling or showing worry, nervousness, or unease about something with an uncertain outcome';²⁰ it is a word that has the connotations of a fear of a future 'event'. Based on the percentage of architecture students experiencing this, it could be inferred from this that they are indeed likely to be worrying about a future 'event'. This could be the 'crits' or 'reviews' which are common practice in architecture schools, in the run up to and during which students are often, as Till describes, 'catatonic with tiredness and fear'.²¹ One student respondent of the RIBA 2018 survey

commented: 'deadlines of inter-crits and final crits occurred most months and the knowledge of these big deadlines alongside the smaller ones made me incredibly anxious at times.' This indicates that this particular student finds the workload required in preparation for a crit difficult to balance alongside other deadlines, likely due to time constraint, which triggers anxiety. Another future event that design students may fear is the 'unknown.' This is indicative of design work where the outcome cannot be predicted, as are outcomes that appear not to 'work,' which students may see as 'mistakes.' It could be suggested that the nature of assessment and process in architectural education that makes it different from most university courses is more likely to inflict feelings of anxiety on students than more common assessment methods likely to be experienced by the 'typical student', such as exams.

²⁰ Stevenson (2010).

²¹ Till (2013). pp.8.

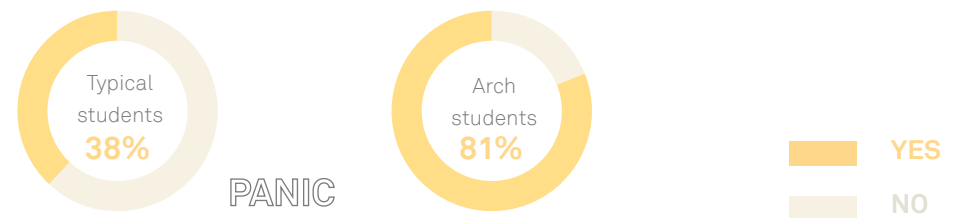
‘Since being in my third year of Architecture undergrad I have started to experience panic attacks brought on by work, workloads and crits’

-Student respondent, RIBA 2018 survey

PANIC

Have you ever experienced any of these during the time you have spent throughout your architectural education?

Figure 13.



The most dramatic comparison made was that 81% of Architecture students said they experienced panic (an anxiety disorder itself)²² – 43% more than the typical student (Fig. 13). One respondent blamed universities interfering with students’ time management for their symptoms of panic, stating that ‘in the architectural profession developing healthy time management skills is key, yet universities instead actually interrupt this process boosting feelings of panic, anxiety and depression.’ This idea that universities may hinder effective time management is reflected upon by Anthony: ‘Well-meaning professors sometimes offer criticism so late in the process that students have to stay up all night just to address their concerns’.²³ This is an argument for the fact that some architecture schools are not supporting effective

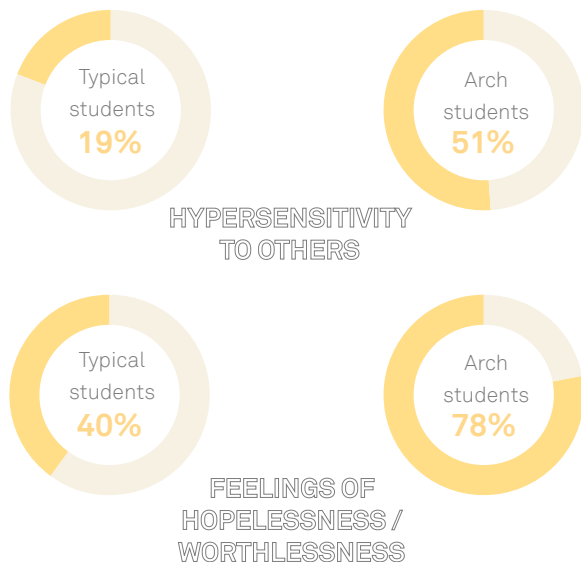
time management and realistic goal-setting, which subsequently has an impact on students’ likelihood to experience feelings of panic. However, it could also be argued that students are not necessarily arriving at university with sufficient time management skills for a course such as architecture, for which universities are not at fault. Nevertheless, this is something universities could offer support in. One respondent to the RIBA 2018 survey calls for ‘time management workshops,’ claiming that they have experienced these before and considered them to be ‘great’. Perhaps part of the issue is that there is not enough recognition and consideration within architecture schools of the importance of these skills which are essential to completing an architecture degree, and to maintaining good mental health.

²² *Panic Disorder*, NHS, 2017 <<https://www.nhs.uk/conditions/panic-disorder/>> [accessed 9 December 2018].

²³ Anthony, pp. 40.

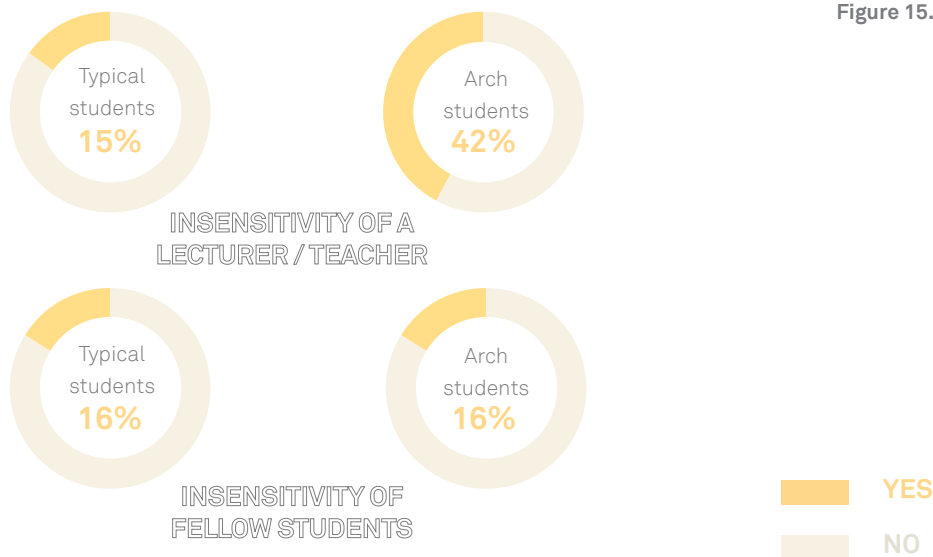
Have you ever experienced any of these during the time you have spent throughout your architectural education?

Figure 14.



Do you think any of the following elements of the student experience have contributed to your feelings of mental distress throughout your architectural education?

Figure 15.



A PROBLEM WITH INTERACTION?

The notably higher number of architecture students experiencing 'hypersensitivity to others' than typical students, 32% more (Fig. 14), suggests a problem that lies in communicating with others. When considering the groups of people students would be interacting with, teachers and classmates are undoubtedly two significant groups to consider. The results of the RIBA 2017 survey show that 42% report 'insensitivity of a lecturer or other teacher' as a trigger for their mental distress, whereas only 16% point to 'insensitivity of fellow students,' (Fig. 15) indicating that the former is more likely to play a part in interaction-triggered issues.

78% of RIBA 2017 survey respondents reported to have experienced 'feelings of hopelessness or worthlessness,' 38% more than the typical student (Fig. 14). One RIBA 2018 survey respondent elaborated

on these feelings, stating that they 'suffered with feelings of anxiety and worthlessness' due to 'repeated feedback', having to 'redo work' and 'the insistence for work to be completed to a level that the tutors deemed 'high enough.' This indicates that the opinions and perceived 'insistence' coming from design tutors can have a powerful effect on architecture students' mental health, and foster what one RIBA 2018 survey respondent describes as a 'toxic and competitive' environment.' One student reported to have been told by a design tutor after speaking up about their mental health: 'If you can't deal with this, how will you deal with clients?' They proceeded to add that this made them feel 'worthless.' This shows that expectations and personally directed criticism coming from tutors can contribute towards the feelings of worthlessness and deterioration of mental health amongst architecture students.

COMMUNICATION & CULTURE IN STUDIO



Figure 16.

A tutor communicating with students in studio

The past experiences of tutors throughout their own architectural education and careers can be an influencing factor in the way they communicate with students and what they expect from them. This could be seen as a product of the cycle of ‘studio culture,’ which Vowles et al. describe as a product of interaction between peers. They acknowledge that whilst it does have a positive effect on architectural education, it can also ‘foster a competitive, intimidating culture’.²⁴ Throughout the last century, studio culture has ‘remained the same and is resistant to change, as is typical of a culture’,²⁵ and this could be perpetuated by tutors encouraging the same culture

they experienced as students. This point is supported by the results of the RIBA 2018 survey, with one respondent reporting that there is a discourse surrounding architectural education that nurtures ‘the idea of ‘I did it and got through it, so you should’ amongst educators and professionals. Another observed active ‘encouragement by academic professionals to work all-nighters’. These comments support the idea that pedagogical practice is an influencing factor in the mental wellbeing of architecture students. Further supporting this, Yale cites the student perception of personal tutors ‘not caring’ as having ‘detrimental effects on the student experience’.²⁶

²⁴ Vowles, Low and Doron (2012).

²⁵ Koch et al., *The Redesign of Studio Culture: A Report of the AIAS Studio Culture Task Force* (Washington, DC: American Institute of Architecture Students, 2002).

²⁶ Yale, Annabel T, *The Personal Tutor–student Relationship: Student Expectations and Experiences of Personal Tutoring in Higher Education*, Journal of Further and Higher Education, 2017, DOI: 10.1080/0309877X.2017.1377164. pp.9–10.

Effective communication is an important part of architectural education and practice, so it is important that educators are able to communicate with students in a way that is beneficial to their development, rather than destructive. In Smith and Boyer's paper, they tested different methods of design tutors communicating feedback with students and note that it is 'important to understand

how the morphing of verbal assessment from direct judgement to encouraging individual thought relates to the emotional wellbeing of design students as they progress through a design curriculum.'²⁷ It can be claimed that more positive encouragement on behalf of design tutors and showing belief in the students' abilities could lead to more productivity and the improved wellbeing of architecture students.



Figure 17. Negative vs positive language that can be used by tutors when communicating with students. Design is a revealing process, rather than a series of mistakes.

²⁷ Carl A Smith and Mark E Boyer, *Adapted Verbal Feedback, Instructor Interaction and Student Emotions in the Landscape Architecture Studio*, International Journal of Art & Design Education, 34.2 (2015), pp.260–78.

THE COST OF ARCHITECTURE

Although the results of the RIBA 2017 and NUS survey comparison show that only 2% less architecture students than typical students point to financial difficulties as a trigger of their mental distress, it is still the 5th most selected trigger overall amongst architecture students. Architectural education is hugely expensive when taking into account course fees, alongside materials, printing etc.; Architects' Journal reported that architecture students spend around

£2,000 a year on these 'hidden extras', and will have to pay an average total of £24000 per year including their tuition fees, as the total cost of some architecture students' education 'stretches beyond £100,000'.²⁸ One student survey respondent commented 'the horrendous debt is a constant concern because I know it will affect my future'. This appears to be a long-term concern for students, rather than a short-term trigger of mental health issues.

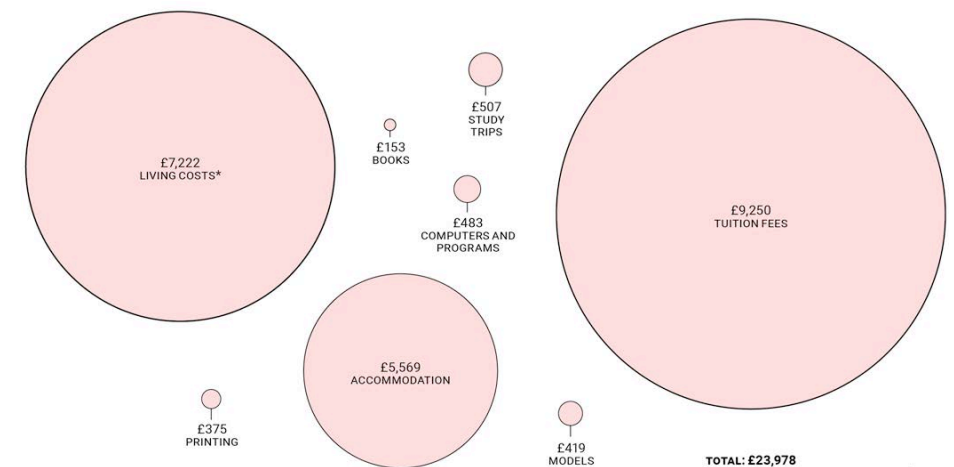


Figure 18. Architects' Journal breaks down the cost of studying architecture per year.

²⁸ Jessel (2018).

ARCHITECTURE SPECIFIC SYMPTOMS

- A SIGN OF IMPROVEMENT

When observing the data pattern between the RIBA 2017 and 2018 survey results, it is worth noting that despite most percentages not diverging drastically (all <9%), the symptoms that in the previous comparison were recorded as the most different between the ‘architecture student’ and ‘typical student,’ including ‘panic,’ and ‘hypersensitivity to others’ (Fig.19) in fact showed the most change between 2017 and 2018. Other results show that as previously stated, 8% less point to ‘working overnight’ as a trigger for mental distress, and that respondents are now more aware of their ‘place of study’ as being somewhere that can offer

support (Fig.20). Not only are some of the mental distress symptoms previously shown as attributable to architecture students in particular and that contribute to their mental distress are being experienced less, but students are more aware of support systems which are in place to help them. Working through the night, which has been identified as a product of studio culture also appears to be becoming slightly less widespread amongst architecture students. However, with 1 in 3 architecture students are claiming to have received help for mental health issues,²⁹ the overall problem is still undeniable.

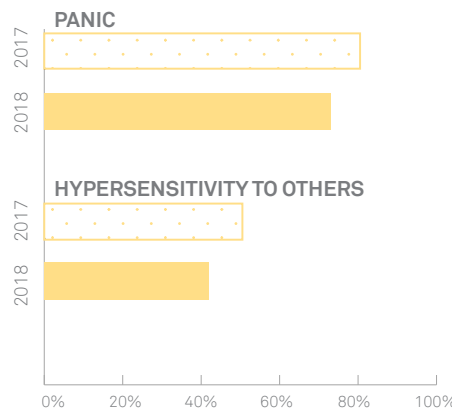


Figure 19. Have you ever experienced any of these during the time you have spent throughout your architectural education?

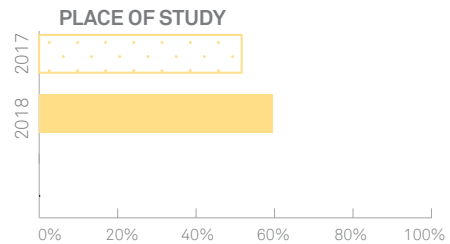


Figure 20. Are you aware of any of the below organisations, or types of organisations offering mental health advice and support services?

²⁹ Jessel (2018).

PHASE 1 CONCLUSION

Phase 1 of this study has shown that mental health and wellbeing are problematic and distinctly worse for architecture students than the typical university student, and that there are triggers and symptoms which are discernibly attributable to architecture students in particular. It has indicated that studio culture, workload and negative interaction

with university staff are key variables that can affect students’ mental distress. It has also been shown that some of the major triggers and symptoms have become somewhat less prevalent within the last year, but that further action is necessary in order to address the overall problem of mental health within architecture students.

2

PHASE 2

Introduction	35
Methodology / Limitations	36
Results	37
Conclusion	46

PHASE 2 INTRODUCTION

Following the results of the Phase 1 of this study, which showed that in the opinion of many architecture students, university staff can have a direct influence over their wellbeing, it is thought that further investigation into the opinions of university staff themselves would help to broaden understanding of these issues. Therefore, a survey was sent to UK architecture university senior and welfare staff, in order to compare their opinions with those of the students.

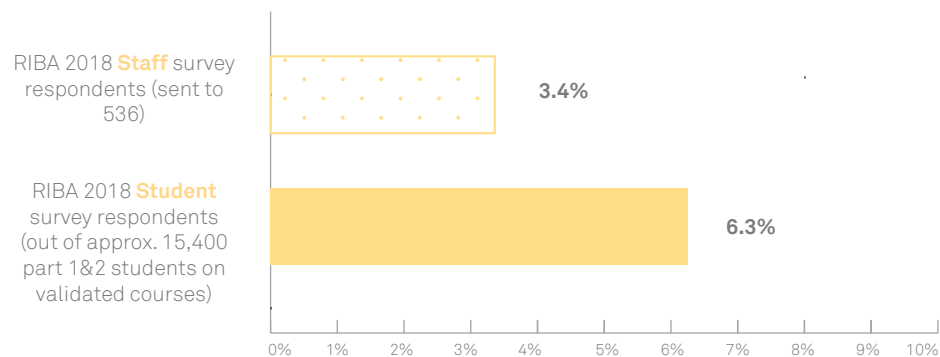


Figure 21. The proportion of the student body who responded to the survey issued to them (964 students) is almost double the proportion of staff who responded to theirs (18 staff). This could indicate that students are more eager to see change with regards to the problem of their mental health, or that not as many staff are aware of the severity of the problem.

PHASE 2 METHODOLOGY

An online survey of 13 questions that asked about the mental health and wellbeing of architecture students was distributed by the RIBA to heads and deputy heads of RIBA validated architectural schools, Part 1 & 2 Course Leaders, course directors and some student welfare/pastoral care contacts sourced through the RIBA database. This survey was left open for 24 days and received 18 responses, which were collected

anonymously. The responses will be analysed for common themes using qualitative methods, and a series of observations will be made. Using the findings of Phase 1 of the study to provide a context for the analysis, a phenomenological study will be conducted which aims to compare the Phase 1 and 2 data, and to make connections that are expected to enrich the knowledge built on the topic this study seeks to understand.

LIMITATIONS

The main limitation to the staff survey is that it is not possible to guarantee responses from every school of architecture, so views expressed by respondents may not reflect those of staff from the entire field of architectural education. Only 18 responses were gathered out of 536 surveys that were sent out, which may not be enough to accurately represent the entire cohort and perhaps indicates that many staff

may not currently take the matter as seriously as students do (Fig.21). Nevertheless, this part of the study will not be used as a method to collect statistical information, but as an interpretative phenomenological analysis used to form a general impression of architectural educators' opinions, and to gather ideas on how positive progression may be made with regards to architecture students' mental health.

RESULTS / DISCUSSION

A MUTUAL UNDERSTANDING

The first noteworthy observation is that when asked 'Do you think mental health is an issue for architecture students in the UK?' every respondent responded 'yes'. They also all responded 'yes' in response to whether their students 'typically experience stress' (Fig.22). This shows that the issue is prominent enough that staff in architecture schools are aware of it, however it could also be theorised that staff who did not respond to the survey do not acknowledge the issue, and therefore effectively replied 'no.'

The survey asked the respondents what they believe the cause of

the issue of mental health is. The answers submitted generally reflect the student responses of the RIBA 2018 student survey. Each of the main triggers pointed to by students have also been recognised by staff as a cause of stress and mental health problems, including course workload deadlines, working overnight, grades/academic performance, academic examinations/crits/reviews, financial difficulties and insensitivity of lecturers / teachers. Staff are evidently aware of some of the reasons students may be experiencing difficulty with their mental health and wellbeing.

**Do you think mental health is an issue
for architecture students in the UK?**



**Do you believe that your students
typically experience stress?**



Figure 22.
Architecture staff answer whether they think their students are under stress

A MUTUAL MISUNDERSTANDING?

Despite some respondents claiming that the pressure on students is 'not helped by demanding studio teachers and lecturers' and that 'the culture or architectural education is founded upon overwork', 71% of respondents claim that at their school of architecture, students are not expected to overwork (Fig.23). This, however, is no indication of what message they may be sending to their students, consciously or otherwise. In fact, it contradicts comments from student respondents to the RIBA 2018 survey, where one student expressed a view that 'all-nighters and overworking seem to be part of the 'culture' of studying architecture and in some universities it is encouraged' and another claimed that 'one of our

tutors told us we should be 'working a 20 hour day'. Although the staff and student respondents are not necessarily teaching/studying at the same schools of architecture so the responses cannot be directly correlated, it seems that whilst most staff that responded to this survey do not think there is an expectation from schools for students to overwork, many students believe that there is. This could be interpreted as a communication issue between staff and students, and it could be theorised that if schools made it explicitly clear to students that they aren't expected to overwork, the students would be more likely adopt healthier working habits and thus improve their wellbeing.

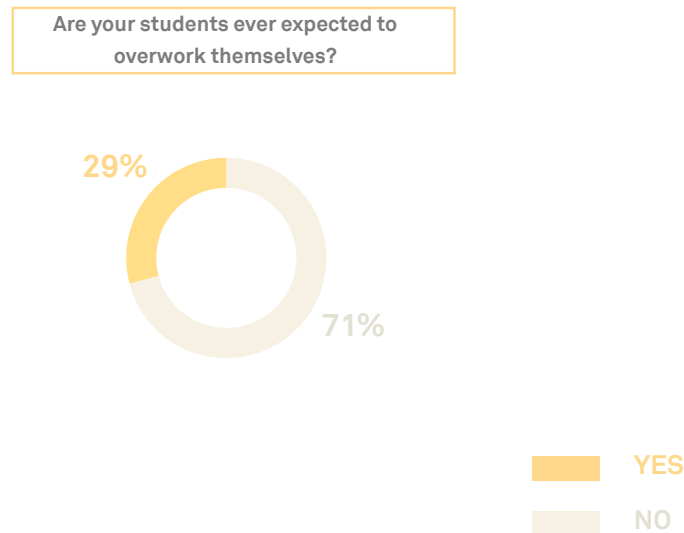


Figure 23.

Communication is, in fact, a recurring theme discovered through analysis of both the student surveys and the staff survey. It plays an important role in the design studio; as stated by Vowles, 'communication with others is at the heart of design just as it is central to teaching and learning'.³⁰ When asked 'What do you think could be done to improve architecture students' mental health?' and about their aims going forward, many respondents to the staff survey had suggestions related to improving communication between staff and students, including 'much more talking', 'ensuring students feel supported' and 'more clarity' from staff of 'the

challenges they are expected to face' and 'how long a piece of work should take'. Many respondents also noted the importance of making students 'aware' of support mechanisms in place, suggesting that support for students is available, but this has not been clearly communicated to them. This is supported by the fact that, despite an 8% improvement between the 2017&18 surveys, only 60% of architecture students in 2018 said that they are aware they can seek support at their place of study. Communication between staff and students is further proving to be an important factor that can affect students' mental health.

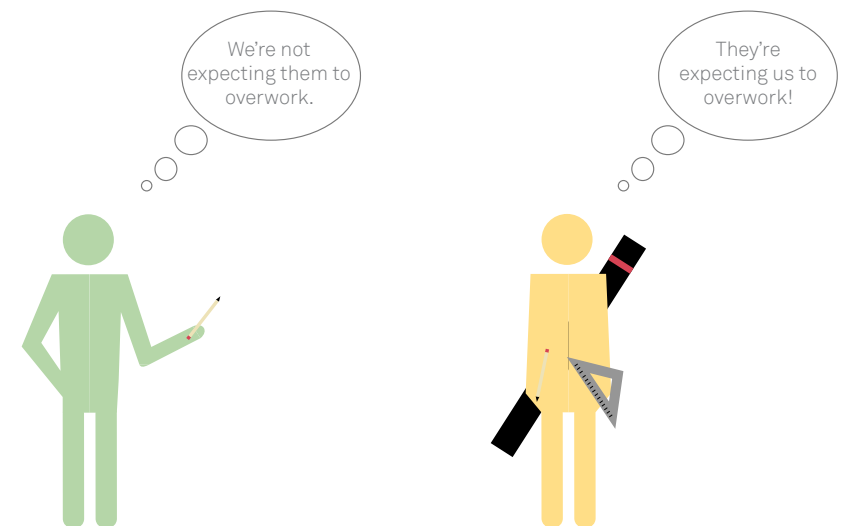


Figure 24.

³⁰ Vowles, H. (2000). *The crit as ritualised legitimisation procedure*. In: *Changing Architectural Education: Towards a New Professionalism*, by Nicol, David and Pilling, Simon (eds) (Taylor Francis, 2005). pp.259-264.

EDUCATION FOR EDUCATORS

Only half of respondents to the staff survey claim that their school of architecture provides staff training on how to communicate with students, with the other half claiming to provide very limited training or none at all (Fig.25). Whilst, as noted before, this cannot be used as a statistic to represent all UK architecture schools, this shows that some schools do not provide training in pedagogical practice to tutors. This is something that has also been commented on by student RIBA 2018 survey respondents, with one student writing ‘they (teachers) don’t seem to have the training to interact and encourage those clearly in distress’. Another acknowledges that their teachers ‘show empathy’ but ‘don’t have enough training in supporting students’. There is an acknowledgement from student respondents that many teachers are primarily ‘practitioners who teach’, and that they have ‘never undergone any sort of training to learn how

to communicate effectively with young people’. A staff respondent supported this view, suggesting that there is a need to ‘educate bought-in practitioners who teach more to understand that the world is different from the one they were educated in’. Another staff respondent noted that at their university, whilst ‘staff are required to undertake a training session every 2 years’, ‘academics do not have the time to spare, or the knowledge and skill for in-depth support for many mental health issues’. Whilst it is not the role of the academic tutor to deal with their students’ existing mental health problems, it can be argued that given that the way they communicate with students can evidently have an influence over their mental health and wellbeing, it would be beneficial for them to receive more training focused on how to interact with students as a preventative tactic for addressing mental health issues.



Figure 25. - Do staff at your school of architecture receive any sort of briefing / training on how to communicate with students?

‘MORE THAN JUST ARCHITECTURE’

Essential training for students is also called for. One staff survey respondent notes that some of their students ‘have issues with time management, prioritisation and achieving a healthy work-life balance.’ Furthermore, respondents suggest that students require training ‘in more than just architecture’ including ‘formal discussion, instruction and guidance about healthy study habits’ and encouragement to ‘take ownership of their time management’. Student respondents also supported the idea of this type of training, as previously mentioned, calling for

time-management workshops. This type of training is already offered at some universities; one respondent to the staff survey stated that they ‘recently started to include lecture content on health and wellbeing in architecture, which has attracted a lot of student attention and indirectly has the potential to help them,’ and that the initiative is now ‘growing in to a full module.’ Evidently, there is a call from students and staff to include content focused on mental health and wellbeing in the school curriculum where it is not already provided.

A HEAVY WORKLOAD

Alongside providing training that educated students on how to manage themselves throughout their studies, both staff and student respondents also call for a restructuring of the course. One staff respondent points to the fact that at their university, the 'degree is entirely weighted on the 4th year' as a cause of stress for their students. Others suggest a 'better designed workload', and to 'reduce the stress of workload by ensuring that deadlines for various components of the course do not coincide or overlap'. It does appear, however, that some schools already recognise and are making actions towards improving

the apparent issue of workload; one respondent states that 'the health and wellbeing of students' including in relation to 'studio programs' is 'high on the agenda' at their school of architecture. Another suggests that making a 'radical proposal to change the course' would be one of their aims for the future. Given that the courses run by the respondents, who work at RIBA validated schools, must fit the validation criteria, architecture schools are limited to an extent. Change on a higher level and larger scale would likely be necessary in order to achieve this.

RECOGNITION REQUIRED

A limitation for architecture schools with regards to initiating change and progression on student mental health is the financial pressure on them. Respondents express opinions that in order to deal with issues such as mental health, 'more support from universities i.e. funding is needed'. One respondent states that 'universities need to recognise that teaching architecture is not cheap and therefore need the kind of level of support that STEMM subjects command (in terms of space, equipment, support staff, 'lab' staff,

etc.)'. Respondents also indicate that staff do not receive enough support from the universities; they are often overloaded. There appears to be a staff sentiment that there is not currently the level of recognition from universities of the need of the course, that would be required to secure enough funding to act upon mental health issues. This could be a barrier in the short term, so in order to achieve progression on mental health, actions that do not demand additional funding could instead be implemented.

PHASE 2 CONCLUSION

It has been further shown that there is a miscommunication between staff and students, developing the ideas generated in Phase 1. Whilst both parties seem to fully acknowledge that there exists a problem with mental health amongst students, students seem to believe that staff expect them to overwork and adhere to unhealthy working habits, whereas the staff who responded to the survey express that this is not their expectation, although they are

aware that students do this. That said, staff are aware that there is a communication issue and are keen to strive towards a more open dialogue with students. It has been established that both parties have opinions and suggestions with regards to moving forward, so it can be assumed that further action would be supported within schools. Any immediate steps would need to be independent from the possibility of more funding from universities.

3

MOVING FORWARD

Next steps	49
Future suggestions - long-term	50
Future suggestions - short-term	55
Moving forward	58

Next steps

It has been shown that the students and staff of architecture schools both perceive three of the main pressures that contribute to poor mental health and wellbeing in students to be negative interactions with staff, expectations and workload. Program restructuring is an important aspect that must be addressed, however this would seek substantial reform in the education system in order to be achieved. Training of staff and students to enable them to deal with stress, prevent mental health problems arising and ensure effective communication and a more open dialogue between the two parties on mental health would be a more achievable course of action for the immediate future.

Although immediate steps can be taken to address these issues, to truly improve the wellbeing of architecture students would in fact require changing an entire culture, which as previously quoted, is 'resistant to change'.³² However, if measures can be taken to ensure architecture graduates are leaving university with healthy working habits, knowledge of mental health and how to take care of their own wellbeing, eventually the profession will benefit from this as a whole and the culture could start to shift towards a more positive outcome. Therefore, short and long term proposals for courses of action will now be suggested which could act as catalysts in changing the severe problem that architectural education faces.

FUTURE SUGGESTIONS: SHORT-TERM

³² Koch et al. (2002).

1. Workshops for students

As called for by staff and student survey respondents, some form of compulsory educational content delivered to architecture students about mental health and wellbeing could be beneficial to them. This type of workshop is already offered by universities as optional extra-curricular help. For example, the University of Sheffield does offer ‘several free drop-in mental wellbeing workshops’ which are ‘open to every student’³³. This, however, requires students to use their own initiative to seek support, when in reality students may feel that, if they study a demanding course such as architecture, they do not have time to attend these additional workshops, or may not even know how valuable this could be before it is too late and they are already experiencing wellbeing problems. This study proposes that alternatively, schools of

architecture should trial workshops targeted specifically at architecture students, and if successful this could develop into a full compulsory module, required as part of the curriculum for courses validated by the RIBA. Current modules that teach management, practice and law educate students on the reality of architecture practice, and part of this category of module could be where mental health and wellbeing content could be integrated into the course.

In addition to, or as part of these workshops, mindfulness classes could also be offered, which are recommended by the NHS for sufferers of anxiety or panic disorder,³⁴ which architecture students have been shown to experience more than the average student and therefore would benefit from.

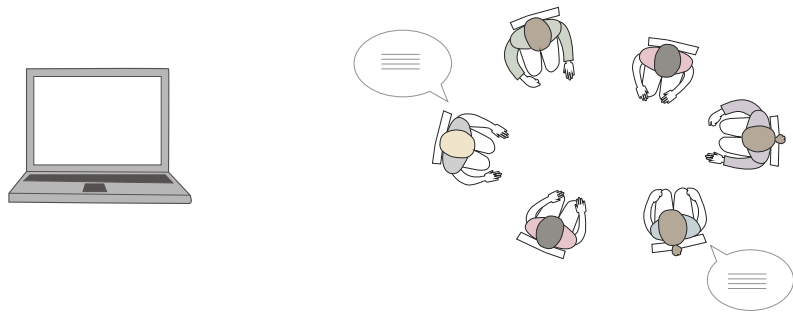


Figure 26. Training could take the form of an online module and/ or group workshops

³³ University of Sheffield, *Counselling Service - Workshops and Events Calendar* <<https://www.sheffield.ac.uk/ssid/counselling/services/workshops>> [accessed 9 October 2018].
³⁴ NHS (2017).

2. Training for teachers

In addition to educating students on their own mental health and wellbeing, it is evident that staff of architecture schools could also benefit from compulsory training focused on how to communicate with and support students, as called for by student and staff survey respondents. As half of respondents to the staff survey claimed that their school of architecture either does not provide compulsory training or very little of it, making this a requirement could be an important step towards ensuring all architecture schools are equal in this respect, and ensuring that all staff who interact

with students are prepared to do so in a way which demonstrates respect for students’ mental health. This training could aim to inform staff of the severity of the issues faced by students, and reinforce a ‘positive’ pedagogical approach to communication. Topics to focus on could include: being clear about their expectations of students and the amount of time that should be spent on tasks, use of positive language in tutorials, crits or reviews rather than destructive, ensuring that students are aware of support mechanisms in place, and not advocating unhealthy habits such as all-nighters.

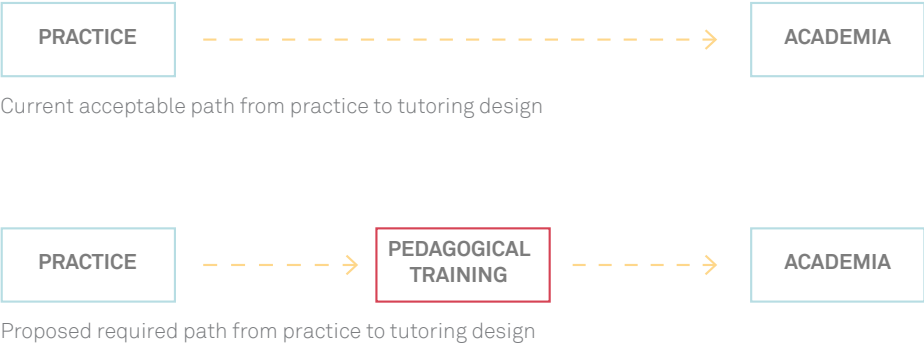


Figure 27.

3. Revoke 24-hour access



Figure 28.

Sheffield School of Architecture recently revoked 24-hour access to its 'Arts Tower' studios.

As previously discussed, working through the night is a key trigger of architecture students' stress, and schools of architecture allowing 24-hour access to studios may encourage this. A proposal for the immediate future is for all architecture schools to revoke this access. If all schools were required to revoke this access at the same time, there would be

no scope for competitiveness between schools or the need to offer the same 'services' as other schools. The 'all-nighter' is an aspect which is deeply embedded into 'studio subculture' and therefore it can be assumed that this will not stop overnight amongst students, however revoking 24-hour access across the board could start to encourage this change to happen.

FUTURE SUGGESTIONS:
LONG-TERM

4. Restructure workload

A restructuring of the architecture course could benefit students' wellbeing, although it must be noted that it would likely require a reform of the architectural education system. This restructuring to increase the efficiency of workload could in fact have a knock-on effect on the whole route to qualification, changing the current 7-year model route to qualification, which is considered by many to be too long. For instance, the content of some modules could be

converted to a more practice-based learning approach as part of the Part 1 year in practice (Fig.29), which could then reduce stress due to overlapping of subjects from the years at full time university. This could be part of a model such as Collaborative Practice, currently practiced at Sheffield School of Architecture, or a newer reform of the PEDR system which could also maximise the potential of this year in practice.

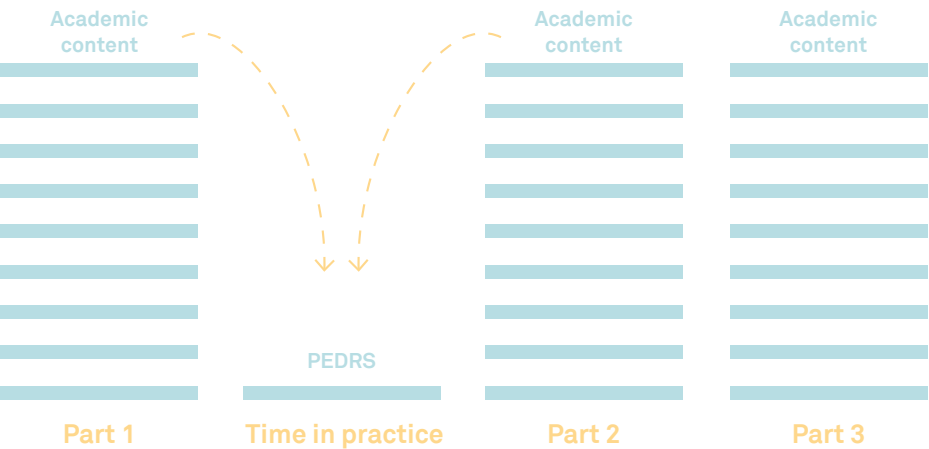


Figure 29. New versions of the route to architectural qualification, such as Collaborative Practice, combine practice and academia in order to optimise the process and manage workload, amongst other benefits.

5. Change the fee system

Instead of universities charging £9000 in fees for 5 years of study, fees should be lowered or scrapped, and for architecture students a portion of the student loan used previously to pay tuition fees could be invested directly into the materials, services and equipment that are necessary to study architecture, either to be redeemed as credit directly from a university shop, or as an addition to the current maintenance loan (Fig.30).

Another suggestion is to have a sponsorship model, similar to those used by lawyers where practices sponsor students throughout their studies to enable them to progress without accumulating any extra debt.

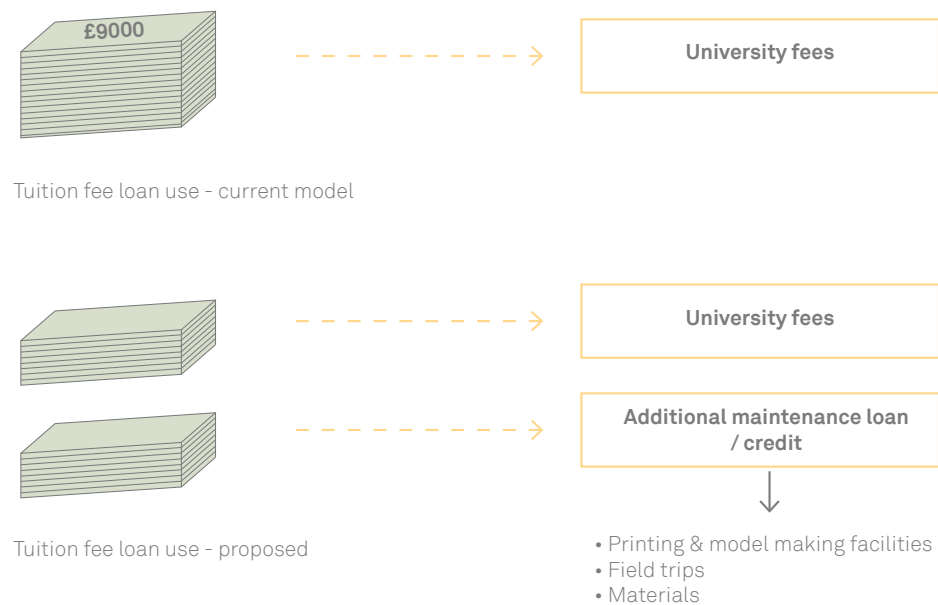


Figure 30.

MOVING FORWARD...

This study has successfully helped to clarify how severe the issue of mental health and wellbeing is for architecture students in comparison with the typical university student, has started to establish what some of the main contributing factors to this problem are and has suggested

ideas for future progression. It is hoped that this study will contribute towards the initial steps in solving the epidemic that the architectural education, and indeed the profession faces, and start to enable a shift towards better mental health and wellbeing for architecture students.

This study has been part of a collaboration between the ABS and RIBA, who are striving towards better mental health and wellbeing within the architecture profession, and through improving students' mental health we hope to bring a change in the profession. This piece of research has helped generate attention in the media towards the mental health of architecture students through articles published by RIBA and the Architects Journal, and I will be presenting the results at an event held at the University of Sheffield, coordinated by the RIBA, in Autumn 2018. Embarking on this study has allowed me to become

an active participant in the national conversation about mental health within the profession. It has led me to further endeavours that will allow me to build on the work I have done through Collaborative Practice at Sheffield School of Architecture and continue contributing to the on-going effort, including recently becoming an ambassador for the ABS, becoming a student representative at the Architects Mental Wellbeing Forum and working closely alongside the RIBA to raise awareness and gain momentum. I hope that this study will provoke further research towards this perpetually important subject.





BIBLIOGRAPHY

Surveys

Kerr, H. 'Mental Distress Survey Overview, National Union of Students'. NUS. (2013).

Kirkpatrick, Melissa. 'Architecture Staff Mental Health Survey'. RIBA. University of Sheffield. (2018).

'RIBA Student Mental Health Survey 2017'. RIBA. (2017).

'RIBA Student Mental Health Survey 2018'. RIBA. (2018).

Books & Journals

Aherne, D. 'Understanding Student Stress: A Qualitative Approach'. The Irish Journal of Psychology 22, no. 3 (2001): 176–87.

Anthony, Kathryn H. 'Design Juries on Trial: The Renaissance of the Design Studio'. New York: Van Nostrand Reinhold (1991).

Bachman, Leonard. 'Students Perceptions of Academic Workload in Architectural Education'. Journal of Architectural and Planning Research 23, no. 4 (2006): 271–304.

Ciravoglu, Aysen. 'Notes on Architectural Education: An Experimental Approach to Design Studio'. Procedia - Social and Behavioural Sciences 152 (7 October 2014): 7–12.

Seniz, Çıkisa and Çila, Ela. 'Problematization of Assessment in the Architectural Design Education: First Year as a Case Study'. Procedia Social and Behavioural Sciences. (2009). 2103–10.

Denzin, Norman K, and Lincoln, Yvonna S. 'The SAGE Handbook of Qualitative Research'. 5th ed. Los Angeles: SAGE Publications. (2018).

Groat, Linda, and Wang, David. 'Architectural Research Methods'. New Jersey: John Wiley & Sons. (2002).

Creswell, John W and Poth, Cheryl N. 'Qualitative Inquiry and Research Design: Choosing Among Five Approaches'. Vol. 1. Los Angeles: SAGE Publications. (2016).

Manthorpe, Jill, and Stanley, Nicky (eds). 'Students' Mental Health Needs: Problems and Responses'. London: Jessica Kingsley Publishers. (2002).

Maryam, Ashkan. 'The Phenomenological Evaluation of Teaching Professionalism in the Architecture Design Studio Culture: A Case at the University of Kansas'. ArchNet-IJAR : International Journal of Architectural Research 10, no. 1 (March 2016): 41–61.

Nicol, David, and Pilling, Simon (eds). 'Changing Architectural Education: Towards a New Professionalism'. Taylor Francis. (2005).

Robotham, D. 'Stress among Higher Education Students: Towards a Research Agenda'. Higher Education 56, no. 735 (2008).

Smith, Carl A, and Boyer, Mark E. 'Adapted Verbal Feedback, Instructor Interaction and Student Emotions in the Landscape Architecture Studio'. International Journal of Art & Design Education 34, no. 2 (2015): 260–78.

Stevenson, Angus (ed). 'Oxford Dictionary of English'. Oxford University Press. (2010).

Till, Jeremy. 'Architecture Depends'. London: MIT Press. (2013).

Utaberta, Nangkula, Hassanpour, Badiossadat, Handryant, Aisyah Nur and Ani, Adi Irfan Che. 'Upgrading Education Architecture by Redefining Critique Session in Design Studio'. Procedia - Social and Behavioral Sciences 102 (2013): 42–47.

Vowles, Hannah, Low, Jim and Doron, Holly Rose. 'Investigating Architecture Studio Culture in the UK: A Progress Report'. Journal for Education in the Built Environment 7, no. 2 (2012).

Yale, Annabel T. 'The Personal Tutor–student Relationship: Student Expectations and Experiences of Personal Tutoring in Higher Education'. Journal of Further and Higher Education. (2017).

Studies / Reports

Brown, Poppy. 'The Invisible Problem? Improving Students' Mental Health'. Oxford: Higher Education Policy Institute. (September 2016).

Corcoran, Erin. 'Architecture: An Introspective Look at the Pedagogical Culture'. University of Waterloo. (2008).

Hodgson, David. 'Health, Wellbeing and Architectural Education'. Masters dissertation. University of Sheffield. (2017).

Karklins, L, and Mendoza, J. 'Literature Review Architects and Mental Health. A Report Prepared for the NSW Architects Registration Board'. Queensland: ConNetica. (June 2016).

Kerr, H. 'Mental Distress Survey Overview, National Union of Students'. NUS. (2013).

Koch, Aaron, Schwennsen, Katherine, Dutton, Thomas A and Smith, Deanna. 'The Redesign of Studio Culture: A Report of the AIAS Studio Culture Task Force'. Washington, DC: American Institute of Architecture Students. (2002).

Kodz, J, Harper, H and Dench, S. 'Work-Life Balance: Beyond the Rhetoric'. Brighton: The Institute for Employment Studies. (2002).

Leon, Joel, Linova, Roxanna, Squires, Jocelyn and Daros, Alex. 'GALDSU Mental Health Report'. Toronto: Graduate Architecture Landscape and Design Student Union. (2014).

Mayes, Ashley. 'Architectural Education: Is It Worth It?'. Masters dissertation. University of Sheffield. (2017).

'RIBA Education Statistics 2016-17'. Mirza & Nacey Research for the RIBA. (2018). <<https://www.architecture.com/-/media/gathercontent/education-statistics/additional-documents/educationstatistics201617pdf.pdf>> [accessed 24 September 2018].

News articles

Bhardwa, Seeta. 'UK's Biggest Student Mental Health Study Launched'. Times Higher Education. <<https://www.timeshighereducation.com/student/news/uks-biggest-student-mental-health-study-launched>> [accessed 31.07.2018].

Burns, Judith. "'Sharp Rise" in Student Mental Illness Tests Universities'. BBC News. (4 September 2017). <<http://www.bbc.co.uk/news/education-41148704>> [accessed 14.04.2018].

Dunton, Jim. 'Architects' Willingness to Work Long Hours Blamed for Overtime Culture'. The Architects Journal. (20 November 2014). <<https://www.architectsjournal.co.uk/news/architects-willingness-to-work-long-hours-blamed-for-overtime-culture/8672875.article>>.

Jessel, Ella. 'Student Survey: Only the Rich Need Apply to Study Architecture'. Architects Journal. (26 July 2018).

Monaghan, Peter. 'The "Insane Little Bubble of Nonreality" That Is Life for Architecture Students'. The Chronicle of Higher Education, Washington 47, no. 42 (29 June 2001).

Newman, Virginia. 'Coming Out of the Darkness'. RIBA J. (8 May 2017). <<https://www.ribaj.com/culture/mentalhealthforarchitectsvirginianewmanculture>> [accessed 06.04.2018].

Stott, Rory. 'For and Against All-Nighter Culture: ArchDaily Readers Respond'. ArchDaily. (April 2015). <<https://www.archdaily.com/616567/for-and-against-all-nighter-culture-archdaily-readers-respond>> [accessed 14.09.2018].

Stott, Rory. 'Is a 24-Hour Studio Culture a Good Thing in Universities?'. ArchDaily. (March 2015). <<https://www.archdaily.com/611433/is-a-24-hour-studio-culture-a-good-thing-in-universities/>> [accessed 14.09.2018].

Waite, Richard, and Braidwood, Ella. 'Mental Health Problems Exposed by AJ Student Survey 2016'. The Architects Journal. (28 July 2016).

Wakeford, Jon. 'It's Time for Universities to Put Student Mental Health First'. The Guardian. (7 September 2017). <<https://www.theguardian.com/higher-education-network/2017/sep/07/its-time-for-universities-to-put-student-mental-health-first>> [accessed 14.04.2018].

Whelan, Jennifer. 'Mental Health in Architecture School: Can the Culture Change?'. ArchDaily. (21 April 2014). <<https://www.archdaily.com/498397/mental-health-in-architecture-school-can-the-culture-change>> [accessed 21.04.2018].

'New Framework for Universities to Help Improve Student Mental Health'. (1 September 2017). UniversitiesUK. <<http://www.universitiesuk.ac.uk/news/Pages/New-framework-for-universities-to-help-improve-student-mental-health.aspx>> [accessed 14.04.2018].

Web pages

AnxietyUK. 'Access Therapy', (2018). <<https://www.anxietyuk.org.uk/accessing-therapy/>> [accessed 14.04.2018].

Architects Benevolent Society. 'Mental Health Support', (2018). <<http://absnet.org.uk/need-help/how-we-help/mental-health-support>> [accessed 14.04.2018].

Hamer, Sophie. 'Mental Health and Wellbeing for Architecture Students'. Portico (blog). (11 September 2016). <<http://portico.space/journal//mental-health-wellbeing-while-studying-architecture>> [accessed 06.04.2018].

'Mental Health Facts and Statistics'. Mind. (April 2017). <www.mind.org/information-support/types-of-mental-health-problems/statistics-and-facts-about-mental-health/how-common-are-mental-health-problems/> [accessed 14.09.2018].

'Panic Disorder'. NHS. (15 July 2017). <<https://www.nhs.uk/conditions/panic-disorder/>> [accessed 12.09.2018].

'Mental Health and Architects'. Royal Institute of British Architects. <<https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/mental-health>> [accessed 06.04.2018].

'Counselling Service - Workshops and Events Calendar'. University of Sheffield. <<https://www.sheffield.ac.uk/ssid/counselling/services/workshops>> [accessed 10.9.2018].

Images

Fig.1 - Illustration by the author

Fig.2 - Illustration by the author

Fig.3 - Illustration by the author

Fig.4 - Samra, Satwinder. (Jan 2015) Photograph.

Fig.5 - Illustration by the author

Fig.6 - Illustration by the author

Fig.7 - Illustration by the author

Fig.8 - Illustration by the author

Fig.9 - Illustration by the author

Fig.10 - Illustration by the author

Fig.11 - Samra, Satwinder. (Feb 2017) Photograph.

Fig.12 - Illustration by the author

Fig.13 - Illustration by the author

Fig.14 - Illustration by the author

Fig.15 - Illustration by the author

Fig.16 - Samra, Satwinder. (Sept 2015) Photograph.

Fig.17 - Illustration by the author

Fig.18 - Jessel, Ella. From: 'Student Survey: Only the Rich Need Apply to Study Architecture'. Architects Journal. Illustration. (26 July 2018).

Fig.19 - Illustration by the author

Fig.20 - Illustration by the author

Fig.21 - Illustration by the author

Fig.22 - Illustration by the author

Fig.23 - Illustration by the author

Fig.24 - Illustration by the author

Fig.25 - Illustration by the author

Fig.26 - Illustration by the author

Fig.27 - Illustration by the author

Fig.28 - Sparkione. (2007). Photograph. <<https://www.geograph.org.uk/photo/714658>> [accessed 24.09.2018].

Fig.29 - Illustration by the author

Fig.30 - Illustration by the author

