

# MENTAL HEALTH AND WELLBEING EXPERIENCES OF HIGHER EDUCATION APPRENTICES

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## Abstract

Improved mental health and wellbeing (MHW) of students has positive implications for their engagement, performance, and satisfaction. Consequently, the MHW of higher education students has been examined; however, the MHW of higher education apprentices, who are underrepresented students, has received little or no attention. Using a university in the UK as a case study, the reported study examines the MHW experiences of higher education apprentices and improvement strategies. A questionnaire survey was adopted. Mean and standard deviation scores as well as the Mann-Whitney U test were used to analyse the data using SPSS. The study found that stress from the academic programme, poor quality of life, and apprentices worrying about the programme's worthwhileness were the top experiences. Further findings revealed that a higher demonstration of institutional commitment, understanding of their diverse circumstances to accommodate them better, and the lecturer/tutor being approachable are critical improvement strategies. Significant differences in the MHW experiences of the apprentices based on their programmes of study (construction and non-construction) were found for three indicators including stress from the academic programme, level of programme worthwhileness (apprentices' feeling), and previous day level of happiness. While interviews and digital stories are recommended to gain a deeper understanding of these issues, higher education institutions (HEIs) and scholars could conduct similar research using the current study as a framework.

Keywords: Apprentices; Underrepresented students; Student engagement and performance; Diversity, equality, and inclusion; Male and female; Mental health and wellbeing.

## 1. INTRODUCTION

The historic inclusion of mental health and wellbeing (MHW) in the Sustainable Development Goals (SDGs) by the United Nations (UN) has placed it at the forefront of global and corporate agenda [1, 2]. This stems from the poor global MHW records. According to the World Health Organisation (WHO) [3], in 2019, 15 percent of working-age adults have a mental disorder, and annually, 12 billion working days are lost to depression and anxiety, costing 1 trillion dollars due to lost productivity. A similar case is reported in industries such as construction where in the United Kingdom (UK), male workers are three times more likely to die from suicide than the national average [4]. In 2022, a survey by Mates in Mind among 300 self-employed construction workers in the UK indicated that one-third experienced high levels of anxiety each day [4]. A survey of higher education students and staff in ten countries including France, Spain, Australia, Netherlands, the UK and the United States (US) in 2022 found that 73 percent of higher education students and staff, respectively, struggled to maintain their wellbeing [5]. A Healthy Minds Network and American College Health Association survey of colleges and universities in the US showed that mental issues have a negative impact on academic performance [6]. Further, Lipson et al. [7] analysed ten-year (2007 to 2017) mental health data of undergraduate and graduate students in the US. The study surveyed the participating institutions and found that the portion of students with lifetime diagnoses increased from 22 to 36 percent, just like depression (43.3 to 55.8 percent) and suicidal ideation (5.8 to 10.8 percent). However, the rate of treatment increased, and stigma reduced.

However, despite the plethora of studies on the MHW of higher education students, there are still significant gaps. For example, construction and built environment students fall into two industries/sectors with poor MHW record as demonstrated in the preceding paragraph. However, the MHW of apprentices has received limited attention [8]. Park et al. [9] examined the MHW lived experiences of university students in a large Mid-West University in the USA using semi-structured interviews. However, the students were not apprentices. Carette et al. [10] explored the factors that

affect students' knowledge of psychological wellbeing using semi-structured interviews but not on construction students and apprentices. Using survey in Australia, Turner et al. [11] examined the resilience of built environment students regarding their wellbeing. The focus of Scott-Young et al. [8] was gender (male and female) inequality in the mental health of built environment students. Hernández-Torrano et al. [12] conducted a systematic review of literature on university students' MHW (from 1975 to 2020) while Smith et al. [13] examined the role of student peers in the MHW of higher education students with a focus on six UK universities. Mental health of international students was reported in Frampton et al. [14] and the mental and wellbeing lived experiences of university students were covered in Park et al. [9]. Other studies such Schettino et al. [15] and Okoro et al. [16] did not address the gaps stated above.

Further, students' MHW improvement strategies are still limited or non-existent in some HEIs. For example, Pollard et al. [17] reported the limitations in the MHW improvement strategies and efforts in HEIs in England. Only 52 percent of the HEIs surveyed had specific strategies for improving student mental health and/or wellbeing. Forty-three percent combined them while one and seven percent were dedicated to wellbeing and mental health strategies, respectively. By implication, examining MHW as separate concepts is challenging [17] and as high as 48 percent had no mental health and/or wellbeing strategy.

Therefore, the current study examines the MHW experiences of underrepresented students, apprentices. The nature of apprenticeship delivery presents unique challenges which result in or exacerbate MHW challenges. Unlike full-time candidates, apprentices spend longer time working (four days); 20 percent is supposed to be for studying and lecturers [18] and some travel long distances to the university/college. The success of their programme is dependent on their success at work and HEIs. Hence, they must balance work, domestic responsibilities and study. While this has implications for their MHW, the older ones among them may have a higher domestic responsibility; hence, at a higher risk of mental health issues. It also impacts the Teaching Excellence Framework and National Student Survey [19] and the performance and satisfaction of the apprentices. As a result, there are calls to develop strategies tailored to them to improve their experiences [19] of which MHW is inclusive. However, the MHW of apprentices is influenced or impacted by the delivery and model of the programme, which is underexamined [20].

Therefore, the current study examines the MHW experiences of apprentices using a university in the UK. The objectives were to 1) evaluate the MHW experiences of apprentices, 2) Identify MHW improvement strategies for apprentices and 3) Determine the differences in MHW experiences among apprentices based on gender and programme of study.

Higher education institutions and construction workplaces will be informed about the experiences of apprentices and develop strategies to support them and reduce the impacts on their MHW. The rest of the paper presents an overview of literature on MHW of apprentices and improvement strategies, followed by the methods employed to conduct the study.

## **2. LITERATURE REVIEW**

### **2.2. Apprenticeship delivery model and MHW implications**

In addition to the time limitations resulting from the apprenticeship programme, it operates a tripartite agreement system, involving the employer, HEIs and apprentices (Quality Assurance Agency (QAA) for Higher Education [21]. The role of employer representatives, professional, statutory, and regulatory bodies are also noted by the QAA [21]. These various systems present complexities in delivering, communicating and meeting the students' needs; sometimes, students are not assigned tasks that align with their learning at a given time [20]. Given that the programme is dependent on work-based learning [23], the apprentices' learning is impacted. This is exacerbated by the limited independent individual study time they have [20] and when HEIs struggle to connect learning with work-based activities, the learning stress increases [23]. Alsubaie et al. [24] found that the lack of social support impacts on the MHW of apprentices compared to the traditional ones. Therefore, there is a need for more attention on the MHW of apprentices in higher education.

### 2.3. Mental health and wellbeing indicators in higher education students

Pollard et al. [17] and Hughes and Spanner [25] recognise the challenges in measuring the MHW of higher education students. For example, there is a lack of data on the prevalence of MHW of students and the effectiveness of the common strategies adopted [25]. The extant data mainly focuses on one university, limiting generalisation (ibid.). Further, 'many interventions ... available in universities are not evaluated in context or, where they are, the evaluations are not shared outside of the institution to support sector learning... All of which means that there is a lack of clarity about what constitutes good practice' [25:73]. Furthermore, many studies and surveys of students use different methods, measures, and samples to improve coverage and reliability, but they are flawed because of some points above and their inability to be compared to non-student population [17]. Another challenge to measuring MHW is the constant change in the MHW experience, especially those transitioning to adulthood (aged 10 to 29) [9]. Consequently, what constitutes good practice is unclear due to lack of reliable and robust data/information [17, 25]. However, Savarese et al. [26] proposed and tested indicators in three categories including psychological manifestations, family and social relations and quality-of-life indicators. Although not without limitation just like other above, it is incorporated in the framework for measuring MHW in the current study, as summarised in Table 1.

Table 1: Mental health and wellbeing indicators in higher education students

Indicators	Sources
<b>Psychological manifestations</b>	
Anxiety disorders	[27- 28]
Anxiety, depression	
Negative thoughts, images, memories, and feelings (revisiting)	[26, 29]
Reactivation of a previous trauma (post-traumatic stress disorder (PTSD)) and PTSD from Covid-19	
Repercussions on self-esteem and self-efficacy	[26]
<b>Family and social relations</b>	
Stress due to forced cohabitation with family	[26, 28]
Difficulties in long-distance relationships (loss of friendships, end of romantic relationships)	[26]
Difficulties related to social and relational limitations	[26,29]
<b>Quality-of-life indicators</b>	
Feeling fit, exercising, and consuming more alcohol	[26]
Declaration of having slept well Percent	[26, 30, 31]
Declaration of having had appetite changes	[26, 32]

### 2.4. Mental health and wellbeing inequality in higher education

Studies show the influences on MHW, for example, gender [8, 27] and background [33]. Poor MHW exacerbates inequality in higher education among students [33]. For example, Robertson et al. [33] found that underrepresented and/or disadvantaged groups (who have low attainment, progression to employment/postgraduate studies, and less likelihood of completing their studies) are at a higher risk of having or experiencing poor MHW in higher education. These are students from low-income backgrounds, consisting of the care-experienced ones, those from Black, Asian and Minority Ethnic groups, mature students and LGBTQ+ students. Similarly, Liu et al. [27] found a statistical difference between male and female students in HEIs in terms of distress manifestation, emotional panic and exposure to the risk of contagion. If this is the case, it can be argued that the same may apply to apprentices. Hence, the current study also investigates if there is a difference in the MHW strategies and experiences of male and female apprentices, and between construction and non-construction students.

#### 2.4.1. Mental health and wellbeing improvement strategies for higher education students

Improvement strategies are proactive, preventive, and reactive [17]. The need for student involvement in the development of MHW strategies was stressed in the literature [10,34]. This enables a platform for them speak out, especially if the staff are approachable and discuss academic work and MHW challenges [9, 10, 34]. Given the diverse and changing nature of the students, this should be constant

with adequate time dedicated for it [9]. This will depend on the availability, awareness and promotion of a range of services including counselling, academic skills development, advisory services and greater commitment from the institutions [17, 34].

Table 2 summaries the strategies from the literature, which are refined based on the features of higher education apprenticeship delivery. For the apprentices, some strategies in the table may be unique given the nature of the programmes including delivery environment. However, one main issue is the lack of adequate consideration of the difference in the delivery of the programmes in the development and implementation of these MHW strategies in HEIs. The students on the traditional pathways (non-apprenticeship routes), especially the full-timers received more attention, with strategies/policies skewed to them [18].

Table 2: Summary of MHW improvement strategies for Higher Education students

<b>Improvement strategies</b>	<b>Sources</b>
Ensuring lecturer/tutors are approachable to students	[9, 34]
Making clear staff/learning expectations of student	[34]
Building relationships between staff and students including through pastoral care	[9, 17, 34, 35]
Increasing individual learning support e.g. providing more feedback	[34]
Improving and monitoring student engagement in learning by using a variety of activities	[17,34]
Improving awareness and availability, range, and quality of services	[17, 34, 35]
HEIs demonstrating greater understanding of students' diverse circumstances and commitments and accommodating them	[10, 34]
Fostering inclusive and caring sense of community among the student body,	[17,34]
Involving students in co-creating activities, programme, and university policies	[10, 17, 35-38]
Seeking students' views on improving their wellbeing	[9,10,34, 35]
Allocating more time for independent study	[20]

### 3. METHODOLOGY

Given the research questions/objectives, the positivist paradigm was deemed the most appropriate for addressing them. Hence, a questionnaire survey was adopted. This is because quantitative methods such as surveys excel in addressing 'what' questions and assessing relationships [39]. Following a literature review, the data collection instrument was developed. The first section examined the background of the apprentices. The others focused on the apprentices' experience of MHW indicators including the stressors in ordinary scale (from 1 to 5) where 1 is the 'strongly disagree' and 5 'strongly agree'. The middle scale is 'neither agree nor disagree'. For the MHW improvement strategies, the importance was measured using a scale ranging from 1 'not important' to 5 'very important'. Ethical approval for the project was obtained from the university's Research Ethics Committee. Apprentices in all the departments in the institution were approached, a total of 294. These were in construction and non-construction fields including civil engineering, surveying, nursing environmental science, and business programmes, hence the availability of data for the inferential analysis. Studies have conducted inferential statistics with a smaller number of responses, 37 [40]. The study was advertised, and invitation sent to respondents. Convenience sampling was used to include those who were willing and available to participate. The participation information sheet covered key ethical considerations, the study's purpose, and participants' rights (voluntary participation, anonymity, confidentiality, and so on). Of the questionnaires distributed, 40 (33.6 percent) were received and used for the analysis.

The collected data were analysed using the Statistical Package for Social Sciences (SPSS) where descriptive statistics (frequency, mean score (MS), standard deviation (SD), and percentages) and inferential statistics (Mann-Whitney U Test) were conducted. The Mann-Whitney U Test was conducted to see if there are significant differences in gender (male and female) and programme of study

(construction (civil engineering and surveying) and non-construction (environmental sciences and others). The Mann Whitney U test is used for ordinal or continuous data to check for significant differences between two independent groups. The test was conducted at a significance level (p-value) of 0.05. This means that for the null hypothesis (no significant difference) to be rejected, the p-value must be less than or equal to 0.05.

## 4. RESULTS AND DISCUSSION

### 4.1 Respondents' profile

Of the 40 respondents, 29 are employed by engineering organisations, five in environmental sciences, one in surveying, and the remaining in others (including nursing and business). However, their programmes of study are different: 26 are in Civil Engineering Level 6, one is in the Chartered Surveyor Level 6, 11 take the Environmental Practitioner route and the remaining are in others. The levels of study ranged from 4 to 6 and their age range from 18 to 20 (9), 21 to 24 (18) and 25 and above (13). There were 15 female, 23 were male and two selected the gender-neutral option. Their ethnicities are: White (29), mixed/multiple races (1), Asian (4), Black (4), and others (1), one respondent did not indicate the ethnicity. The respondents were diverse in the field of employment, qualification route, age and gender. Therefore, it was possible to compare the differences between the independent groups (based on gender and programme type).

### 4.2 Mental health and wellbeing of higher education apprentices

The indicators of higher education apprentices' MHW found in literature (Table 1) were analysed. The top ten are presented in Table 3. Academic programme-induced stress such as attending university ranked first (MS 3.90; SD 1.033) followed by quality-of-life indicators (MS 3.53; SD 1.012) and the value attached to the programmes (MS 3.50; SD 1.301).

These findings are consistent with Savarese et al.'s (2020) study, which identified the academic programme and quality of life (insufficient sleep) as key stressors, especially while transitioning to higher education. The findings also support concerns in literature on the features of apprenticeship delivery being a key stressor [20, 23, 24]. The first two highest ranking factors support this which may explain the value attached to the programmes (ranked 3rd) despite the financial benefits, apprentices being paid while they study, graduating with professional qualifications and no debts from students' loan [20]. This is revealing as the associated stress from the programmes has implications on the number of intake or recruitment of apprentices.

Regarding the low-ranking factors, the level of anxiety from the previous day ranked low, whereas in Polland et al. [17], there were high levels of stress and anxiety among non-apprenticeship students in several higher institutions. However, stress is also ranked the highest in Table 3. A possible explanation is the characteristics of apprenticeship delivery which are different from the traditional students. Nevertheless, the implication is the need to examine this in detail.

The top ten factors were subjected to inferential statistics. The Mann-Whitney U test results for gender and study programme are presented in Table 3. The results showed that for gender, the p-value for all the factors is not equal or less than 0.05. Hence, the null hypothesis for gender cannot be rejected. Therefore, there is evidence to conclude that there are no differences in the MHW experiences of male and female apprentices. For the programme of study, the null hypothesis is rejected for three indicators (Stress from academic programme; Level of programme worthwhileness: Apprentices' feeling; and previous day level of happiness) as the p-values are less or equal to 0.05. Hence, the evidence suggests statistically significant differences in three indicators.

Table 3: An assessment of the MHW indicators of higher education apprentices

Indicators	Gender						Programme of study		
	Mean	SD	R	U	Sig	Z	U	Sig	Z
Stress from academic programme	3.90	1.033	1	117.5	.085	-1.723	91.5	0.15*	-2.424
Quality-of-life — comfortable & affordable; sport, fitness	3.53	1.012	2	125	.139	-1.480	129	.215	-1.241
The feeling of apprenticeship worthwhileness	3.50	1.301	3	143	.361	-.914	85	.010*	-2.590
Consequences of self-esteem and self-efficacy	3.35	0.893	4	131.5	.194	-1.298	167	.950	-.063
Previous day level of happiness	3.05	1.260	5	120.5	.108	-1.606	85.5	.010*	-2.569
Involving apprentice in decision-making	3.05	1.108	6	165.00	.813	-.237	157.5	.716	-.364
Negative feelings, memories, and thoughts	3.05	1.339	7	134.5	.246	-1.160	153.5	.188	-.472
Extent of satisfaction recently	3.03	1.165	8	138.5	.284	-1.071	143	.415	-.815
Feeling of depression in the past two weeks: The extent	3.05	1.261	9	147	.434	-.783	125	.188	-1.318
Level of anxiety the previous day	2.98	1.4234	10	123	.123	-1.541	140.5	.377	-.883

**Keys:** Standard deviation (SD); Mann-Whitney U (U); Asymp. Sig 2-tailed (Sig); Relative importance index (R); Z-Score (Z); \*significance at  $\leq 0.05$

### 4.3 Mental health and wellbeing strategies for higher education apprentices

Table 4 contains the ten highest ranked MHW strategies based on the importance to the apprentices. It shows that the first three high-ranking factors are dependent on the educational institutions where they must ensure that lecturers are approachable to apprentices (MS 4.54; SD 0.913), seek to understand and accommodate the diverse circumstances of apprentices in curriculum development and delivery (MS 4.54; SD 1.022), and ensure that the lecturers improve the communication of their expectations of apprentices (MS 4.28; SD 1.099).

Further, Table 4 presents the results of the Mann-Whitney U Test on the MHW strategies to see if there are differences due to gender and programme of study. As no p-value is less than or equal to 0.05, the null hypothesis cannot be rejected for all. Hence there is no evidence to conclude that there are statistically significant differences on the level of importance of the MHW improvement strategies to apprentices.

MHW concerns are evidenced in the literature review section (for example, Liu et al. [27], Scott-Young et al. [8]; and Robertson et al. [33]) as a major concern. The apprentices viewed the inclusion of their circumstances in curriculum design and delivery to improve their MHW as the most important way to improve their MHW (MS 4.54; SD 1.022). This is supported by the findings of the Mann-Whitney U Test where three of the ten factors indicate differences in the experiences of the apprentices in terms of the programme of study (Table 3). In contrast, no differences in the MHW experiences of the apprentices were found in seven MHW indicators (Table 3) and all the strategies (Table 4). The lack of agreement between the finding of the current study and previous studies can be explained by the small sample size of the current study, and the characteristics of the apprenticeship programme delivery. However, as supported by Liu et al. [27], Scott-Young et al. [8] and Robertson et al. [33] any MHW policies and strategies in HEIs must be inclusive to be effective and efficient. Further, this is supported by 'HEIs accommodating the diverse circumstances of apprentices in curriculum design and delivery' (a high-ranking strategy based on apprentices' perception of importance). This suggests perceived discrimination in learning among the apprentices. However, it is unclear how effective and efficient the

strategies in Table 4 will be until tested. Nevertheless, their views have implications for the MHW, learning experience and satisfaction [20, 23] hence should not be taken for granted. By implication, addressing equality, diversity and inclusion issues in curriculum design and delivery will likely improve apprentices' learning experience, satisfaction and MHW.

Table 4: An assessment of the importance of MHW improvement strategies for the higher education apprentices

Strategies	Gender					Programme of study			
	Mean	SD	R	U	Sig	Z	U	Sig	Z
Ensuring lecturers are approachable	4.54	0.913	1	167	.837	-.206	132	.169	-1.376
HEIs accommodating the diverse circumstances of apprentices in curriculum design & delivery	4.54	1.022	1	141.5	.214	-1.244	165	.872	-.162
Improved clarity on lecturers' expectations of apprentices	4.28	1.099	2	169.5	.919	-.102	145	.478	-.718
Increase apprentices independent study times	4.28	1.050	2	149.5	.433	-.784	139	.304	-1.027
Increase individual learning support for apprentices	4.15	1.065	3	151	-.691	.490	138	.318	-.988
Employers and HEIs establishing culture of speaking out for apprentices.	4.15	0.875	3	159.5	.677	-.416	159	.750	-.318
Employers and HEIs committing to apprentices' MHW	4.08	0.882	4	145.5	.606	.515	132	.424	-.799
Improvement is educational institutions services (range, availability and quality)	4.03	0.959	5	114.5	.068	-1.802	121.5	.135	-1.494
Improve apprentice engagement through various activities	3.92	0.900	9	115.5	.071	-1.802	124	.154	-1.424
Improving interactions between lecturer and line managers of the apprentices	3.90	1.095	10	145	.390	-.859	145	.463	-.734

**Keys:** Standard deviation (SD); Mann-Whitney U (U); Asymp. Sig 2-tailed (Sig); Relative importance index (R); Z-Score (Z); \*significance at  $\leq 0.05$

## 5. CONCLUSION AND RECOMMENDATIONS

The current study examined the MHW of underrepresented students using apprentices in a HEI in the UK. It found that 'stress from the apprenticeship programme' is the highest stressed followed by the 'poor quality-of-life' which can be explained by the structure of the programme. Despite the benefits and incentives for apprenticeship, the challenges encountered in the programme result in the apprentices questioning its worthwhileness which ranked third as a stressor. The implications of this on the intake/recruitment into the programmes is poorly understood; hence, further research is recommended. The study supports findings in the extant literature on the differences in MHW experiences regarding three indicators including stress from academic programme, level of programme worthwhileness (apprentices' feeling), and previous day level of happiness. No differences in the perceptions of the apprentices on the MHW strategies was found.

To improve the MHW experiences of the apprentices surveyed, more opportunities to communicate with the lectures/tutors should be provided. In addition, the inclusion of their diverse circumstances in curriculum design and delivery is recommended. Higher education institutions, construction

stakeholders and researchers could use the current study as a framework to develop strategies to support apprentices and reduce the impacts on their MHW.

A major limitation of the study is the single source of data (one HEI), which limits generalisation. Further research using more universities is recommended. Qualitative research such as interviews and digital stories are recommended to gain a deeper understanding of these concerns and strategies and to explain the apparent inconclusive findings.

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