

Article

Health and Well-Being in Higher Education: Student Perception of an Australian University

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Abstract: The health and well-being of university students is a priority agenda, given the need to advance health in the university system and the United Nations Sustainability Development Goal regarding quality and inclusive education. However, current literature lacks adequate insights regarding health and well-being considerations. This study investigated students' perceptions concerning how university students experience health and well-being. The study is underpinned using the biopsychosocial model of health and was conducted via a cross-sectional student survey with quantitative and open-ended questions at an Australian university in 2021. A hierarchical regression model with 625 respondents indicated health and well-being are significantly influenced by mental (t-value = 15.7, $p < 0.001$), physical (t-value = 9.48, $p < 0.001$), university learning (t-value = 5.16, $p < 0.001$), and economic (t-value = 4.78, $p < 0.001$) domains regardless of the demographic and study characteristics of students. Students' perception of their health and well-being varied according to student age, the college of study, and whether they were an international student. Both the quantitative and qualitative findings supported that the mental, physical, university learning, and economic domains of students' health and well-being are interdependent. There is a case for a proactive, continuous, inclusive, and holistic health and well-being approach to support student success in higher education.

Keywords: biopsychosocial model of health; university student; well-being; psychological well-being; university learning; economic well-being; physical; mental; social



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1. Introduction

Pressure to achieve a high level of academic performance, manage the study load of fast-track courses or remote learning, and negotiate the cultural differences among peers, often being distant from family support, and transition to independent decision-making for the first time in their lives are just a few examples of difficulties higher education students are facing [1–4]. Student health and well-being is also a relevant agenda in the United Nation's Sustainable Development Goals (UN SDGs) to sustain quality and inclusive education (SDG 4) and development of the community (SDG 3, 10, 11, and 17) [5]. Reflecting on the significance of the agenda, ongoing research on the complexities of health and well-being of higher education students is noted globally, across countries such as the United States of America (USA), China, Australia, Canada, United Kingdom (UK), Belgium, Thailand, and India [1,6,7].

Despite the considerable momentum in the well-being literature, our understanding of the health and well-being experience of higher education students is limited. Often, universities conduct student engagement and experience surveys [8] that do not provide a comprehensive assessment of health and well-being issues. Furthermore, the literature regarding health and well-being is skewed towards the mental and physical aspects, lacking

consideration of additional educational, economic, and social aspects of well-being [6]. There are only a few exceptional practices, for example, the Canadian Campus Well-being Survey (CCWS) that assesses student well-being beyond the mental and physical aspects [9].

Conceptualisation and assessment of the health and well-being of students needs to be a regular exercise, given that the concept can evolve with continuing changes in higher education [10]. In developed countries, in line with the ethos of sustainable development goals, universities are continuing to advance health in the university system and helping students with community connectedness [11]. Initiatives to facilitate student success, that is, positive outcomes for students, such as academic learning, retention, and enhanced well-being, are being implemented to provide positive structural and psychosocial assistance for diverse cohorts of students [2,12,13]. Furthermore, the recent experience of the COVID-19 pandemic has exposed students to unprecedented levels of economic, psychological, and social adversities [14–16], highlighting how universities should be adaptive in their teaching pedagogy and student well-being arrangements [13].

There are a range of understandings of ‘health’ that are foundational to the conceptualisation of students’ health and well-being. These interpretations of health are underpinned by disciplines involving biological, economic, environmental, political, psychological, and sociological ways of constructing meaning [17]. In recent decades, ‘health’ has become more holistically positioned, extending the focus from a traditional biomedical understanding in which the physical body is dominant [18]. The UN SDGs [5] recognise health and well-being as one broad concept, in line with the wide-ranging literature that perceives health as a multidimensional and dynamic phenomenon [19,20]. The phenomenon is expected to be influenced by social structures, including housing, education, socioeconomic status, age, gender, transport, and social support [17].

Considering the significance of the health and well-being agenda and the evolving state of higher education, this study examines the research question “How do university students experience health and well-being?”. This study has conceptualised health and well-being, in line with literature on the biopsychosocial model of health [19–21]. The study context is a public university in Australia that has experienced the changing scene of higher education as explained above. The study can offer transferable insights to conceptualise health and well-being for higher education systems around the world. Moreover, the study intends to provide insights for universities to advance student success with a holistic approach and integrated solutions for students’ health and well-being.

2. Theoretical Background

The biopsychosocial model of health [19–21] provides a holistic approach to health and well-being that is necessary for higher education students. The task involves not only understanding the mental and physical state of students but also other factors relevant to students’ university journey. The biopsychosocial model divides health into a biological aspect, for example, the biological functioning of the body and its organs; a psychological aspect, for example, the subjective mental health experience; and finally, a social aspect, for example, the interpersonal experiences that operate between individuals, family, and community [19]. According to this model, this study has the premise of equal importance of biological, psychological, and social aspects in defining the health and well-being of higher education students [20]. The other premise of the study, underpinned by the biopsychosocial model and literature on student well-being, is that biological, psychological, and social aspects of health and well-being are interdependent, to the extent that the three aspects can influence each other and change the original state of an aspect [22]. The following sections apply the biopsychosocial model to identify certain dominant domains of student well-being in higher education, for example, mental, physical, university learning, and economic.

Mental well-being reflects the subjective mental state of students [23,24]. The rationale of this domain is founded on the psychological aspect of the biopsychosocial model, which evidences a positive mental state, for example, when student satisfaction contributes to the

well-being of school students [25]. Physical well-being sits in the biological aspect of the biopsychosocial model and portrays a student's biological state of the presence or absence of physical discomfort [19,25]. It is expected that a student who suffers less from physical discomforts and has an active physical lifestyle will enjoy better satisfaction and positive subjective well-being in life [26,27].

The social aspect of the biopsychosocial model hosts the domain of university learning well-being. This domain is justified by the notion that the quality of life of a student is dependent on how well supported they are by the education system and social interactions at the university [26]. Further support for this domain is the evidence of how a student's social interaction with fellow students contributes to positive engagement in university learning [28]. The final domain, economic well-being, mainly falls into the social aspect of the biopsychosocial model. The domain is supported by the notion that economic resources, for example, financial security for food, accommodation, and digital resources, are crucial to accessing an improved lifestyle and education in the community [26,27].

3. Materials and Methods

3.1. Setting

The setting of this study, a long-established higher education institute, consists of three main campuses, with four small and specialised satellite facilities. The university offers several disciplines of undergraduate and postgraduate coursework programs across six colleges and research courses. Currently, close to 25,000 national and 7000 international students from 147 countries are studying at this university in a variety of fee-paying structures, for example, scholarships and student loans. The university has a five-year strategic plan in place, addressing goals aligned with the UN SDGs.

3.2. Sample Selection and Survey Procedure

The study applied a cross-sectional survey, within a convergent parallel mixed-methods research design [29]. Participants were enrolled university students at any of the campuses at the selected university for a minimum of 18 months. The university survey team invited all eligible students to take part in an online, voluntary, and anonymous survey that took place in April 2021. The inclusion criteria ensured participants were exposed to health and well-being experiences both in the pre- and post-COVID-19 university environment. Prior to the survey in April 2021, one-to-one interviews with seven students were conducted to test face validity of the self-constructed health and well-being experience survey instrument. Approval for the study was given by the University's Ethics Committee (Project ID 24186).

3.3. Survey Instrument

To the knowledge of the authors, a validated survey instrument for health and well-being of higher education students that is embedded in the biopsychosocial model of health [19–21] does not exist. Accordingly, this study has merged relevant tools from the literatures and arrived at a survey instrument with eight sections. The first two sections captured student socio-demographics, for example, age, gender, parents' education, and study characteristics, for example, mode of study (face-to-face, online, or blended), type of study (part-time or full-time study) and study status (international or local student).

The next five sections of the instrument captured quantitative data for overall student health and well-being (the outcome variable) and independent well-being domains of: mental well-being, which had five questions of WHO-5 [23,24]; physical well-being, which had six questions [25]; university learning well-being, which had nine questions [9,25,27]; and economic well-being, which had six questions [9,25,27]. The overall health and well-being section had five questions [27]: one question each to summarise the overall opinion of the four independent well-being domains, plus a single-item life satisfaction question.

Students' socio-demographic and study characteristics were coded on a nominal scale. For example, gender was coded as "1" for females and "2" for males. The questions on

the independent well-being domains of physical, university learning, and economic, and overall opinion of each domain were rated on a scale of 1 to 5, with 1 = strongly dissatisfied, 3 = neutral, and 5 = strongly satisfied. An exception was the question about students' life satisfaction in overall health and well-being (the outcome variable), which had a scale of 0 to 10, with 0 = extremely dissatisfied, 5 = neutral, and 10 = extremely satisfied [27]. Also, the questions on mental well-being were rated on a scale of 0 to 5, with 0 = at no time, 2 = less than half the time, and 5 = all the time [23,24]. Lastly, the survey covered an open-ended question for qualitative comments on well-being issues (physical, economic, mental, university learning, or COVID-19-related) experienced as a student.

3.4. Quantitative Analysis

The survey data were screened for missing data, finding that certain responses had about 20% missing data. To adjust for the missing data, in each data analysis in SPSS (Version 28), a respondent's data were included only if a complete set of data for the relevant analysis was available. Hence, there was variation in the number of respondents applicable for different analyses. Overall, three major analyses of data were conducted in this study. First, the internal consistency of each of the four independent domains of well-being (mental, physical, university learning, economic,) was analysed with Cronbach's alpha (CA). Second, analysis of mean and percentage, and a two-tailed Pearson correlation, were conducted to identify the areas of improvement in the health and well-being experience of students.

Third, hierarchical multiple regression was run to assess the association between the four predictive/independent well-being domains (mental, physical, university learning and economic) and the outcome variable "overall health and well-being". While running the hierarchical regression in SPSS (Version 28), the usual options such as "collinearity diagnostic", "casewise diagnostics" were chosen; for outliers outside 3 standard deviations, "standardised residual normal probability plot" and Cook's distance check were chosen. Moreover, the outcome variable "overall health and well-being" was tested for normal distribution through the "Explore" option in SPSS (Version 28).

In this hierarchical regression, predictive variables were entered in the model in two blocks. The first block entered the eight socio-demographic and study-related control variables, such as age and online/face-to-face study, as shown in Model 1 in Table 1. The second block entered the four independent domains of well-being as shown in Model 2 in Table 1. The movement of adjusted R2 and F values between models 1 and 2 clarified whether the four independent well-being domains explained the overall health and well-being experience of students, despite students' socio-demographic and study characteristics.

Table 1. Predicting factors of students' overall health and well-being experience.

Factors	Model 1			Model 2		
	Coeff. Standard Error	Standardized Coeff. B	t-Value	Coeff. Standard Error	Standardized Coeff. B	t-Value
Constant	0.4	-	8.15 ***	0.28	-	0.60
Age	0.03	0.16	3.27 ***	0.02	0.17	2.35 **
Gender	0.09	0.04	1.04	0.05	-0.03	-1.31
Domestic/International	0.14	0.04	0.78	0.08	-0.01	0.78
University-educated parent	0.04	0.11	2.6	0.03	0.03	1.95
Residing in Australia	0.24	-0.04	-1.01	0.14	0.02	0.90
Online/Face-to-face study	0.04	0.03	0.75	0.02	0.03	1.13
College of Study	0.03	0.01	0.21	0.02	0.05	1.9 *
Part-time/Full-time study	0.10	-0.05	-0.99	0.06	0.03	1.03

Table 1. Cont.

Factors	Model 1			Model 2		
	Coeff. Standard Error	Standardized Coeff. B	t-Value	Coeff. Standard Error	Standardized Coeff. B	t-Value
Mental Well-being	-	-	-	0.03	0.50	15.74 ***
Physical Well-being	-	-	-	0.37	0.31	9.48 ***
University Learning Well-being	-	-	-	0.03	0.12	5.163 ***
Economic Well-being	-	-	-	0.03	0.12	4.78 ***
R ² ; Adjusted R ²	4%, 3%	-	-	66%, 66%	-	-
F (Degree of Freedom)	617 (8)	-	-	613 (12)	-	-

Note: *** Value is significant at $p < 0.001$; ** Value is significant at $p < 0.01$; * Value is significant at $p < 0.05$.

3.5. Qualitative Analysis

Thematic analysis of the student responses to the open-ended question about comments on health and well-being issues was conducted using the Nvivo 12 software program, following the method described by [30]. This approach first identified the basic themes in the responses. Then, the identified themes were further analysed using the lens of the biopsychosocial model of health. Following this second step, interim themes were organised into the domains of mental, physical, university learning, and economic well-being. In our final step of the analysis, global themes emerged which recognised the interrelationship between students' university learning and other domains of well-being.

4. Results

The study sample consisted of 871 student respondents, reflecting an 8% response rate from 11,000 students who had received the survey.

4.1. The Student Profile

Survey respondents came from across the colleges at the university ($n = 851$): College of Arts, Law, and Education (28%), College of Health and Medicine (28%), Research Division (20%), College of Science and Engineering (13%), and College of Business and Economics and others (11%). About 63% ($n = 798$) of students were studying full-time. Out of the online delivery, 15% of the cohort had temporarily shifted from face-to-face due to the COVID-19 pandemic. Domestic students covered 86% of the respondents. By demography, the cohort was female-dominant (69%, $n = 850$), lived in Australia (96%, $n = 827$), and belonged to a family with university-educated parent/s (56%, $n = 669$). Students belonged to different age groups ($n = 851$): aged below 20 to 24 (33%), aged between 25 to 34 (23%), and aged between 35 to 40 and up (44%). The demographic distribution of the respondents by age and gender was reflective of that of the overall university student population.

4.2. Health and Well-Being of Higher-Education Students

4.2.1. Quantitative Results

The outcome variable "overall health and well-being" had a non-significant Shapiro–Wilk p -value, reflecting acceptable distribution to support the multiple regression analysis. All other statistics such as the minimum (−2.5) and maximum (2) value of the standard residual and the tolerance for collinearity statistic (in the range of 0.9) were also acceptable. The four independent domains of well-being were found to be internally consistent, with a CA score of 0.89 for mental well-being, 0.83 for physical well-being, 0.70 for university learning well-being, and 0.71 for economic well-being. The results of hierarchical regression (see Table 1) evidence the four domains (i.e., mental, physical, university learning, and economic) as significant predictors of a student's overall health and well-being experience. The Model 1 data clarified that the demographic and study characteristics explained 3% of

the variance in the student's overall health and well-being. In Model 2, as the four domains of well-being were added, the explanation of variance in overall health and well-being reached 66%. Hence, the inclusion of the four domains could explain an additional 63% of the variance in students' health and well-being. The influences of all the four independent well-being domains were positive, with the most and least influential domains being the mental (t-value = 15.7, $p = 0.000$) and economic well-being (t-value = 4.8, $p = 0.000$), respectively. A student's overall health and well-being experience positively varied with age (t-value = 2.4, $p = 0.01$), implying the older the student, the better the experience.

As shown in Table 2, mental well-being was the only domain that scored below the midpoint on a scale of 1 to 5. This can be a matter of concern, particularly, as mental well-being is significantly associated with students' experience of physical, university learning, and economic well-being (See Table 2).

Table 2. Descriptive analysis of the domains of students' health and well-being.

Health and Well-Being Domains	Mean (sd)	Mental WB	Physical WB	University Learning WB	Economic WB
Mental WB	2.4 (1.1)	1	0.66 **	0.15 **	0.22 **
Physical WB	3.1 (0.8)	0.66 **	1	0.10 **	0.30 **
University Learning WB	3.5 (0.7)	0.15 **	0.10 **	1	0.00
Economic WB	3.9 (0.8)	0.22 **	0.30 **	0.00	1

Note: ** Value is significant at $p < 0.01$.

In Table 3, the two items that scored the lowest mean values in each of the well-being domains are analysed with mean value and a percentage breakdown. It is noted that improvement in well-being domains is needed across the board, regarding basic lifestyle, accommodation, the balance of face-to-face and online learning, and health and well-being support at university.

Table 3. Lowest mean scores in the domains of health and well-being (WB).

Health and Well-Being Domains	Survey Question	Lowest Score Bracket	Mean (sd)	%
Mental	I woke up feeling fresh and rested	At no time or Some of the time	1.9 (1.4)	46%
	I have felt active and rigorous	At no time or Some of the time	2.2 (1.4)	34%
Physical	I am satisfied with the way I look	Extremely or Slightly Dissatisfied	3.1 (1.2)	35%
	I am satisfied with my hours of sleep per night	Extremely or Slightly Dissatisfied	3.1 (1.3)	40%
University Learning	I am satisfied with the balance between hours of face-to-face and online learning in units	Extremely or Slightly Dissatisfied	3.1 (1.3)	34%
	I am satisfied with the health and well-being support available at the University	Extremely or Slightly Dissatisfied	3.2 (1.0)	18%
Economic	Overcrowding in my accommodation did not disrupt my studies	Never or only 30% of time	2.7 (1.8)	39%
	I did not suffer from unhealthy living conditions (e.g., damp, mold, lack of basic facilities, in need of major repairs, etc.)	Never or only 30% of time	3.0 (1.9)	49%

4.2.2. Qualitative Findings

The following section presents the three global themes drawn from the 53 pages of student responses to the open-ended survey question, which was made up of 231 individual comments. As explained below, these three themes note an interdependency between the domains.

- Mental and University learning well-being

The students recognised that mental health was at times supported by their university learning experiences. One postgraduate student explained:

‘I always feel very supported by my supervisors at the university. My supervisors are mindful and supportive of my learning experience as a student and always check in with me to make sure everything is going well’.

However, in parallel to the above experience, it was common for students to find the university experience difficult in terms of the effect on relationships with peers and mental well-being. As the following statement indicated:

‘Mentally, the feeling of isolation has really gotten to me lately. Though I try come into campus library as much as I can, peer interaction is minimal to none. It is extremely saddening to think I moved to . . . from . . . only to experience such isolation even on campus. More needs to be done to lift campus life’.

Students who had close friends were better placed in terms of the shift to online learning during the pandemic. As one student stated:

‘My mental health is massively impacted by my experience at university. I am lucky enough to have made close friends in my first couple years of university, but without their support my current experience of online learning would be really badly impacting my mental state’.

International students at times felt lonely and unsupported, as one stated: ‘I am an international student and have not been able to go home for 18 months because of COVID-19. I terribly miss home and family’. Another international spoke of racist experiences and being afraid to go out, stating, ‘My girlfriend sometimes is afraid of going out since some random people would literally yell at us or flip their fingers in our faces’.

Students were aware of existing student services designed to help with mental health issues. However, they did not always find them welcoming and easy to navigate, stating:

‘Although I am aware of services available to assist students with difficulties including mental health issues. . . I found these services were not terribly easy to access, particularly as someone who struggles to reach out and ask for help in the first place. I made initial online contact with support services a couple of times in the past two years or so, but I didn’t follow it up any further. I wish someone might have followed up with me, given my initial outreach’.

- Physical and University learning well-being

Students also outlined how their studies at university, particularly, the remote ‘online’ experience, were linked to a perceived decline in their physical or bodily well-being. Sleep issues were identified, with one student explaining:

‘It has been really difficult to stay focused and alert during online classes taken from home. . . tiredness makes the online classes far more difficult than face-to-face classes’.

Another stated,

‘It has been extremely taxing on my body to study online all day. Headaches, eye twitching, back and neck pains are all products of spending too much time on a computer screen’.

Some positive health experiences were also articulated. One student suggested:

‘My university studies have contributed to my stability, both mentally and all-round health, as I find it rewarding to be learning. I also give myself time-out from study to exercise or walk my dogs, which helps me to clear my head, relieve stress and allows reflection of ideas for assessments’.

- Economic and University learning well-being

The financial implications of university life in terms of funding the experience, accessing nutritious food, and affording suitable accommodation were important factors for a few students. One student explained:

‘I have found it extremely difficult at times to make ends meet, to be able to afford quality food and accommodation to the point that I have been homeless and free camping for the past few months. Part time work has been very difficult to obtain due to my age. Centrelink (social security) payments are simply not enough to survive’.

Another student described the effect of financial hardship on their studies, stating: ‘It is hard to focus on university studies when living at student accommodation is so expensive. It goes up each year, yet the facilities stay only adequate’.

5. Discussion

This study has explored the experience of health and well-being in higher education from the perspective of students, using the lens of the biopsychosocial model of health [19]. The study found that students’ experience at university is shaped by the interrelated domains of mental, physical, university learning, and economic well-being. A variation in the level of health and well-being among students at different colleges of studies, age, and domestic versus international status was noted. The measure of health and well-being tested in this study confirmed that the four domains of well-being (mental, physical, university learning and economic) remain effective regardless of a university student’s sociodemographic and study characteristics. These findings contribute to a theoretically robust and contemporary conceptualisation of health and well-being in higher education literature.

Findings of the study imply students’ university journey should be supported with an integrated health and well-being solution. This is critical, as university students’ health and well-being are influenced by the learning engagement in the classroom as well as surrounding societal issues. As has been portrayed in previous literature [14–16], the study found that the surrounding COVID-19 pandemic became an inherent aspect of students’ health and well-being. Evidence of suffering in students’ mental health, due to social isolation from university peers, family, and campus life was apparent. The university learning, particularly, the worsening balance between face-to-face and online study during COVID-19, was found to take a toll on students’ physical comfort and concentration on study. In some cases, students’ economic well-being suffered during COVID-19, as it became difficult to transition into secure part-time jobs and afford suitable accommodation. Furthermore, students found the university health and well-being support services to be lacking in proactiveness and not easily accessible. Students’ experiences during the pandemic make a stronger case for supporting students with solutions across the mental, physical, university learning, and economic domains of health and well-being.

This study also noted a few defining features of integrated health and well-being solutions for university students. From the discussion of students’ experiences of the university journey, it became apparent that health and well-being have a strong social feature. As had been noted in previous literature [11,19,31], this social feature incorporates support received through interaction with peers, teachers, and the community (beyond the university campus). Interestingly, participants in this study also touched on a face-to-face component of this social feature, that is, campus life. This notion of campus life was expected to be physically situated on the campus, countering feelings of isolation. Previous research has endorsed similar notions of campus life that can enhance students’ quality of life and university belonging, providing a geographical surrounding of cultural, extra-curricular, and recreational activities [32–35]. Hence, universities should be prepared to promote health and well-being solutions with a combination of face-to-face and virtual approaches. An area worthy of future research is investigating the best approaches to offer social features in the suite of health and well-being solutions.

Another defining feature of integrated health and well-being solutions should be pro-active monitoring of students' needs in the mental, physical, university learning, and economic well-being domains. Through such monitoring, universities should offer greater engagement between academics, administrators, alumni, and students, using academic and non-academic agendas to provide long-term help to each other [15,36,37]. For instance, at the university under study, the mental/psychological well-being of students is identified as an area needing improvement, being the domain that received the lowest score among all the well-being domains. The mental well-being domain was also found to have the highest level of association with the physical well-being of students. At this university, initiatives concerning a sustainable lifestyle of students, including eating healthily, stress management, and resilience, and maintaining a balance between a host of issues, for example, sleep and study, and technology use and physical activities, should be explored as avenues for integrated health and well-being solutions [38–43]. More studies about how to operationalize integrated solutions across the domains of health and well-being of university students would be of great value.

Other defining features of integrated health and well-being solutions should be inclusiveness and continuity. As mentioned earlier, the study found variation in the level of health and well-being among students at different colleges and age-related cohorts. In line with previous literature [44], international students were also noted to suffer from lower levels of well-being than other student cohorts, due to COVID-19-induced racist notions that constrained social inclusion. These findings imply that the higher-education sector requires support from macro policies and a community-wide approach to student health and well-being that targets inclusiveness. In Australian higher education, while general interest in promoting student success through policy guidance such as equitable access to quality education exists, more concrete measures for specific student cohorts are needed [45]. Future studies should investigate the health vulnerability and well-being of each of the identified cohorts in this study, for example, by age, college of study, and citizenship status, and explore suitable concrete measures.

Health and well-being solutions should be in practice during pandemic as well as non-pandemic times. Continuity with health and well-being support is necessary to empower students for success in university life and beyond. As seen in this study and previous literature [11], universities should promote health and well-being through quality learning as part of their core business. Practices of reciprocal interactions between teachers and students in the classroom environment should be promoted to enhance students' well-being [38]. The embedding of a health and well-being curriculum through partnership with industry and co-teaching with experienced members in the community is another avenue to bring integrated health and well-being solutions to the university [46]. Additionally, this study advocates for universities to address students' mental, physical, and economic well-being needs so that students remain capable of contributing to the community's achievement of SDGs [44]. A university's role in supporting students' health and well-being and the influence of such support in the achievement of UN SDGs should be investigated in future studies. This study has certain limitations. The investigation took place during the COVID-19 pandemic; however, the study method did not distinguish the threat of vulnerability to students between pandemic and non-pandemic issues. While the COVID-19 pandemic had brought pre-existing health and well-being issues of students to the surface, not distinguishing the COVID-19 influence may limit the generalisability of the findings for certain contexts. The study was conducted through a self-reported survey by students in one university and had a low response rate (8%). However, no sampling bias was detected due to the low response rate. Finally, this study could not apply a validated tool to assess health and well-being of higher education students, as currently the biopsychosocial model of health is not supported with one such tool. Notwithstanding, the study findings endorse that a theoretically sound and regular assessment of student's health and well-being can advance a university's agenda to understand student needs and accordingly offer integrated support for students' health and well-being.

6. Conclusions

This study has clarified students' perceptions of their experience at university according to the biopsychosocial model of health, identifying the mental, physical, economic, and university learning domains of students' health and well-being. Hence, the study has been successful in a more holistic conceptualization of health and well-being, going beyond the usual mental and physical dimensions. As the four domains of students' health and well-being were found to be interrelated, in line with the theory of the biopsychosocial model of health, universities should advance student success by working in all these domains. This work should be done proactively, ensuring continuity, inclusiveness, and a balanced delivery of integrated health and well-being solutions through a combination of face-to-face and virtual approaches. The task at hand is to provide solutions that facilitate quality learning as well as provide a sustainable lifestyle for students. This is not an easy task: given the diversity in the cohort of university students, this implies that there will not be a one-size-fits-all solution with a uniform level of requirements across the mental, physical, university learning, and economic well-being domains. However, there is potential that offering integrated health and well-being support at university will empower students to pursue success across their personal journey at university and in the community.

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