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Assessing Students' Well-being by Campus Facilities

*Shamsul Azren Mohd Shukor[1], Natasha Dzulkalnine[1], Nur Aizureen Anwar[1], Zarina Abdul Munir[1], Mohammad Johari Abdul Rahman[2]
[1]Faculty of Business Management, Universiti Teknologi MARA Cawangan Selangor, Kampus Puncak Alam, Malaysia
[2]Tenaga Nasional Berhad, Malaysia
Email: *shamsulshukur@uitm.edu.my, natashad@uitm.edu.my, nuraizureen@uitm.edu.my, zarin453@uitm.edu.my, johariabdr@tnb.com.my
Corresponding Author: Shamsul Azren

Abstract: This study examines the relationship between student engagement and the availability and quality of campus facilities at a Malaysian university, particularly emphasizing the varying experiences of resident and non-resident students. The issue being addressed is the uneven degree of participation from students, especially those who do not live on campus, which could be impacted by their opinions and use of the facilities. The objective of this paper is to investigate the effects of facility availability and quality on student involvement and the effect of the involvement of non-resident students. A quantitative research design was used, and student survey data were analyzed using multiple regression and cross-tab analysis involving 271 respondents. The results show that while the quality of campus facilities positively and significantly impacts student engagement, there is a negative and significant relationship between facility availability and student engagement. Additionally, cross-tab results show that resident students are more engaged and satisfied than non-resident students. These findings imply that facilities' relevance, quality, and accessibility are more important than quantity. In order to create a more welcoming and balanced campus environment, the study suggests that university planners prioritize raising facility standards and creating inclusive strategies to involve all student groups, particularly non-residents.

Keywords: *Health Belief Model, Students' Engagement, Motivation, Campus Facilities*

1. Introduction and Background

The university experience extends beyond academics; it involves various aspects that contribute to student life and foster holistic development and well-being. Campus facilities, including libraries, classrooms, laboratories, recreation centers, and student housing, are essential for addressing students' physical, social, and psychological needs (Astin, 1999). Ensuring the availability and quality of these facilities is crucial for providing a supportive campus environment that enhances students' overall well-being (Temple, 2013). Key elements in improving the student experience include these facilities, which directly influence well-being, academic performance, and engagement. Since students spend much time on campus, access to high-quality facilities such as libraries, study areas, recreational spaces, and housing is vital for enhancing their overall experience (Astin, 1999). These resources ensure comfort for learning and significantly promote social interaction, physical health, and mental well-being among students and the wider community, as noted by Temple (2013). However, the need to continuously improve facilities raises concerns about whether they will adequately meet students' needs and expectations. Inadequate facilities can hinder students' mental and physical health, academic performance, and overall satisfaction (Fisher, 2015). Specifically, shortages of study spaces, limited entertainment options at the university, and poor maintenance of hostels can negatively impact student health, wellness, and academic progress.

Student well-being encompasses a holistic state of health that includes psychological, intellectual, emotional, physical, social, and spiritual dimensions (Adams et al, 2000). Balancing student strengths with available resources is essential to foster an environment where students can thrive. In this context, student well-being can be divided into two key components: eudaimonic indicators, which reflect meaningful growth and positive development, and hedonic indicators of subjective well-being, encompassing positive emotions, the absence of negative emotions, and overall life satisfaction.

In this study, "students' well-being" refers to the overall mental, physical, and emotional health of students at the university, shaped by their academic and social experiences. Well-being is a multidimensional concept that

includes physical health, mental resilience, life satisfaction, and a sense of belonging within the university community (Rahman et al, 2024). As universities increasingly acknowledge the significance of student well-being, evidence shows that students who experience positive well-being are more likely to excel academically, actively engage in campus life, and form meaningful social relationships (Teo et al, 2023).

Research consistently indicates that when universities support students' well-being, it positively influences their motivation, mental health, and overall sense of purpose (Amir et al. 2023). Conversely, environments lacking sufficient resources or presenting challenges to students' well-being, such as limited mental health services or overcrowded study areas, can increase stress, decrease engagement, and even academic burnout. According to Norton (2023), campus facilities are crucial in shaping student well-being, as they provide spaces for studying, relaxation, and social interactions essential for mental and emotional health. At the university, assessing student well-being involves examining various factors, such as physical health (e.g., availability of healthcare services and fitness facilities), mental health support (e.g., access to counseling), and social well-being (e.g., community spaces conducive to interaction). This study aims to explore the relationship between campus facilities and these aspects of well-being, identifying areas for improvement to create a university environment that better addresses the diverse needs of students.

2. Literature Review

Quality of Campus Facilities

In this study, the quality of campus facilities is treated as an independent variable, referring to the perceived standards of maintenance, functionality, accessibility, and overall comfort of amenities provided at the university. High-quality campus facilities significantly enhance the university experience by promoting student comfort, safety, and active engagement within the campus environment (Lim & Tan,2021). The scope of facility quality spans various areas, including the cleanliness and upkeep of study and recreational spaces and the accessibility and reliability of essential support services such as healthcare and counseling. When these facilities align with students' needs and expectations, they increase satisfaction and engagement in campus life (Ahmad et al., 2022). Research highlights that well-maintained and easily accessible facilities positively affect students' mental and physical well-being, fostering an environment conducive to productivity, relaxation, and social interaction (Chen & Wong, 2023). In contrast, substandard facilities such as overcrowded libraries, poorly maintained restrooms, or outdated recreational areas can heighten stress, reduce comfort, and negatively impact the overall university experience. Zhang et al. (2023) emphasize that the quality of campus facilities is a critical factor influencing student satisfaction and well-being, as it shapes daily interactions with the campus environment and fulfills physical and emotional needs. At the university, evaluating facility quality involves assessing tangible elements, such as maintenance standards and overall comfort, alongside functional aspects, including accessibility and availability. By examining the relationship between facility quality and student well-being, this study aims to identify areas needing improvement to enhance the campus infrastructure and provide a more supportive environment for students' academic and personal success. Hence, the hypothesis for this study is developed as follows:

Hypothesis 1: Quality of campus facilities has a significant relationship with students ' well-being.

Availability of Campus Facilities

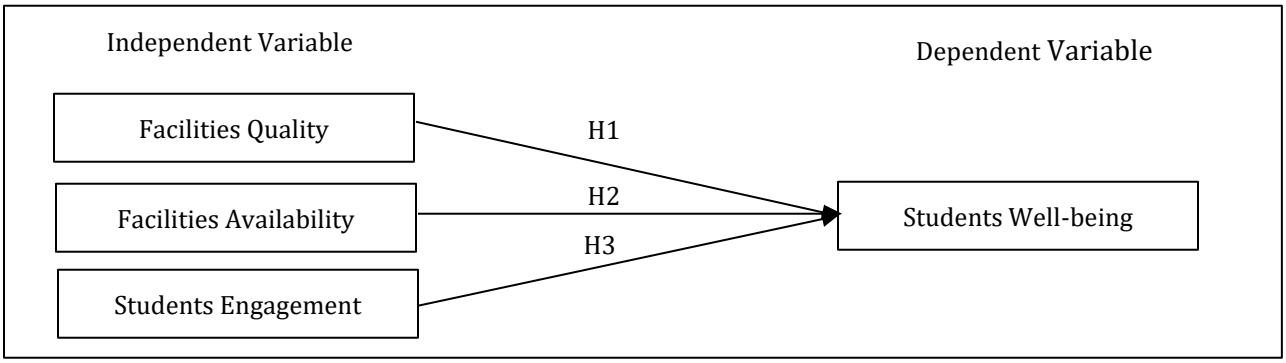
The availability of campus facilities plays a significant role in students' overall experience and well-being, making it a critical, independent variable in this study. It focuses on how easily students can access essential campus resources, such as libraries, recreational areas, health services, dining options, and study spaces at the university. Accessibility in this context refers to the ease with which students can utilize these facilities without facing unnecessary barriers or limitations. Ensuring smooth access to these resources is vital for academic success and personal well-being (Swai et al, 2022). Research consistently suggests that students who have ready access to various campus facilities tend to report higher satisfaction levels and lower stress, as these resources help them manage the pressures associated with academic and social life (Tan & Lee, 2022).

In contrast, restricted or limited availability of campus facilities can present significant challenges, hindering students' ability to engage in campus life and diminishing their overall well-being. For instance, a study by Norton (2023) highlighted that limited access to quiet study spaces or mental health support services often leads to increased stress levels and a decline in academic motivation. This issue is particularly pronounced in

larger universities where the demand for certain facilities, such as study rooms or recreational spaces, can exceed supply, making it difficult for students to access these resources when needed. A campus with easily accessible and well-maintained facilities allows students to effectively balance their academic responsibilities with their social and recreational needs, contributing to their overall well-being. At the University, assessing the availability of campus facilities involves examining several factors, including the operating hours of key resources, the proximity and convenience of facility locations, and whether the capacity of these facilities aligns with the size and needs of the student population. This study aims to better understand how effectively the university meets its students' needs by evaluating these aspects. Additionally, it will help identify potential areas for improvement, providing valuable insights into how the university can enhance its campus environment to better support student success and well-being. Hence, the hypothesis for this study is developed as follows:
Hypothesis 2: Availability of campus facilities significantly correlates with students ' well-being.

Student Engagement
Student engagement with campus facilities pertains to the various ways in which students interact with the resources provided by the university, including how often they use these facilities, for what purposes, and in what manner. This variable measures how students actively utilize key amenities such as study spaces, recreational areas, and other campus resources. Engagement goes beyond mere usage; it reflects the effectiveness and impact of these facilities, providing valuable insights into their role in supporting students' academic, physical, and social well-being. Student engagement with campus facilities can be influenced by several factors, including students' awareness of available resources, individual preferences, and the overall quality and accessibility of these amenities (Astin, 1999). For instance, students who frequently use study rooms or libraries may experience academic benefits due to the quiet, well-equipped environments that help them focus on assignments and exam preparation. Likewise, engaging in recreational activities like gymnasiums or sports fields can improve physical health, reduce stress, and enhance peer interactions (Chaudry et al, 2024). However, engagement is not solely determined by the availability of facilities; it is also shaped by how relevant and accessible students perceive these resources. If students believe that certain facilities do not meet their needs or find them difficult to access, they may choose not to use them despite their availability. Chen and Wong (2023) point out that factors like the perceived inconvenience of a facility or its lack of alignment with students' academic or recreational needs can discourage engagement. Hence, the hypothesis for this study is developed as follows:
Hypothesis 3: Student engagement has a significant relationship with students ' well-being

Figure 1: Conceptual Framework of Assessing Students' Well-being by Campus Facilities



3. Research Methodology

This study adopted a quantitative approach through a survey questionnaire. The purpose of the study is descriptive research with correlational types of investigation, and three hypotheses were tested to confirm that the facilities' quality, facilities availability, and students' engagement significantly influence students' well-being. The population of this study was estimated to be more than 1000 students in one selected local university in Klang Valley. According to Krejie and Morgan (1970), the population (N) is 1000, and the estimated sample size of the study is 278. This study collected a 100 percent response rate using a convenience

sampling technique. However, after considering straight lining and missing values, 6 cases were removed, and the final sample used for data analysis was 271.

4. Results

The demographic information provided in Table 1 shows that the participants offer important new perspectives on the makeup of the study sample. There were 271 students, most female (88.2%), with only 11.8% men. This shows relatively high female participation in the research. Regarding age, most respondents—60.9%—were between 23 and 25 years old, followed by 35.8% between 20 and 22. Very few were under 20 (0.7%) or 26 and above (2.6%), implying that the sample mostly comprised students in the usual undergraduate range. About academic development, most respondents (75.3%) were in Semester 5, suggesting a concentration of data on students in later phases of their education. Semester 4 (9.2%) and Semester 3 (8.5%) were the next most often occurring among the much smaller percentages of the remaining semesters. This implies that the results might most fairly depict the experiences of more senior students. Though smaller numbers came from Accountancy (3.0%), Pharmacy (2.2%), and Hotel and Tourism Management (1.1%), faculty distribution shows that 93.7% of respondents were from the Faculty of Business and Management. Most participants were also college residents, as indicated by the majority (89.3%) living in college accommodation.

Table 1: Demographic Factor Analysis

Classification		Frequency	Percentage (%)
Gender	Male	32	11.8
	Female	239	88.2
Age	Under 20 years old	2	0.7
	20-22 years old	97	35.8
	23-25 years old	165	60.9
	26 years old and above	7	2.6
Semester	Semester 1	5	1.8
	Semester 2	3	1.1
	Semester 3	23	8.5
	Semester 4	25	9.2
	Semester 5	204	75.3
	Semester 6	3	1.1
	Semester 7	5	1.8
	Semester 8	3	1.1
Faculty	Faculty of Business and Management	254	93.7
	Faculty of Accountancy	8	3.0
	Faculty of Hotel and Tourism Management	3	1.1
	Faculty Pharmacy	6	2.2
College Accommodation	Resident	242	89.3
	Non-Residents	29	10.7

Using multiple items, Table 2 shows the reliability analysis of four variables evaluated via Cronbach's Alpha coefficients. Measuring internal consistency, Cronbach's Alpha shows the general degree of relationship between a set of items. Generally speaking, a Cronbach's Alpha value above 0.70 is acceptable; above 0.80 is good; above 0.90 is excellent. Measuring five items apiece for the quality and availability of campus facilities, the Cronbach's Alpha values for each are 0.810 and 0.700, respectively. The findings imply that the availability variable is at the threshold of acceptability, indicating only modest dependability. However, the items used to measure quality are reliable and show good internal consistency. When these dimensions are considered holistically, the two facility-related variables' combined Cronbach's Alpha is 0.929, suggesting excellent dependability. Likewise, for students' engagement and well-being, each with five items, the overall dependability score is 0.877, which shows strong internal consistency. The high dependability coefficients

show the generally consistent and dependable nature of the survey items applied to evaluate these constructs. The results help justify the validity of investigating student perceptions and experiences using these variables in the following studies, including structural equation modeling or regression analysis.

Table 2: Assessment of Reliability

Variables	No of Items	Cronbach Alpha
Quality of Campus Facilities	5	0.810
Availability of Campus Facilities	5	0.700
Students Engagement	5	0.929
Students Well Being	5	0.877

Descriptive Analysis

The data provided in Table 3 offers a detailed look at students' perceptions of the Quality of Campus Facilities, Availability of Campus Facilities, Student Engagement, and Student Well-being, with each factor being assessed through a series of statements. Each statement has been ranked based on its mean score, with a higher mean indicating a more favorable perception. The overall quality of campus facilities received positive feedback, with a mean range of 3.86 to 4.50. The statement "Campus facilities are adequately equipped to meet students' needs" received the highest rating (mean = 4.50), suggesting that students are generally satisfied with the adequacy of campus facilities in meeting their needs. Similarly, other highly-rated facilities include "On-campus amenities such as cafeterias or convenience stores offer good service quality" (mean = 4.42) and "The study spaces available on campus are well-maintained" (mean = 4.06). The lowest rating was for recreational facilities, which scored 3.86, yet it still shows a relatively positive perception, with a standard deviation of 0.719, indicating moderate agreement among students.

Next is the availability of campus facilities; however, it seems to be a more problematic area. The statement that campus facilities are available at the times that suit my schedule received the lowest mean score of 2.52, indicating significant dissatisfaction with facility scheduling. Students also reported overcrowding: "I find the campus facilities overcrowded when I try to use them, receiving a score of 2.85. These findings suggest that while students may be satisfied with the quality of facilities, the availability and accessibility may not always meet their expectations. The statement "I frequently experience issues (e.g., broken equipment, lack of availability) with campus facilities" had the highest mean in this section (3.96), still showing some dissatisfaction. Furthermore, in terms of engagement, students appear to be quite active in using campus facilities. The statement "I frequently use campus facilities for academic purposes received the highest score of 4.45, followed by "Campus facilities motivate me to participate in group activities or social interactions" (mean = 4.37). These results suggest that the facilities are a strong motivating factor for students' academic and social engagement. Additionally, the university effectively promotes awareness of available facilities and programs, receiving the highest mean score in this section (4.46), indicating that students are well-informed about available opportunities.

In addition, the impact of campus facilities on students' well-being is highly significant, with mean scores ranging from 4.09 to 4.75. The statement "improving campus facilities would enhance my well-being and university experience" received the highest mean (4.75), showing that students firmly believe that better facilities could improve their overall experience. Other statements that scored highly include "Well-maintained campus facilities are important for my mental well-being" (mean = 4.61) and "Recreational facilities contribute positively to my physical health and fitness" (mean = 4.55). The lowest score in this section was "Campus facilities significantly impact my ability to focus on academic work" (mean = 4.09), yet it still indicates a positive perception. Therefore, the results indicate that while students are generally satisfied with the quality and engagement of campus facilities, there are clear concerns regarding the availability and accessibility of those facilities. Students also value the campus facilities' role in enhancing their academic performance and well-being. Therefore, addressing the issues of overcrowding and accessibility could further improve students' experiences and perceptions of campus life.

Table 3: Descriptive Analysis

1. Quality of Campus Facilities	Mean	Standard Deviation	Ranking
Recreational facilities (e.g., gyms, sports fields, equipment) on campus are of high quality.	3.86	0.719	1
Public areas on campus (e.g., restrooms, hallways, common spaces) are clean and well-maintained	3.94	0.699	2
The study spaces available on campus (e.g., libraries, reading rooms) are well-maintained	4.06	0.644	3
On-campus amenities such as cafeterias or convenience stores offer good service quality.	4.42	0.852	4
Campus facilities are adequately equipped to meet students' needs.	4.50	0.784	5
2. Availability of Campus Facilities	**Mean**	**Standard Deviation**	**Ranking**
Campus facilities are available at the times that suit my schedule.	2.52	1.549	1
I find the campus facilities overcrowded when I try to use them.	2.85	1.151	2
Study spaces and recreational areas are accessible when I need them.	3.04	1.200	3
My university provides sufficient options for both academic and recreational activities.	3.18	1.259	4
I frequently experience issues (e.g., broken equipment and lack of availability) with campus facilities.	3.96	1.296	5
3. Student's Engagement	**Mean**	**Standard Deviation**	**Ranking**
I often use campus facilities for recreational activities (e.g., gyms and sports fields).	4.13	1.259	1
I actively participate in events or programs organized on campus (e.g., workshops and tournaments).	4.17	1.188	2
Campus facilities motivate me to participate in group activities or social interactions.	4.37	0.910	3
I frequently use campus facilities for academic purposes (e.g., libraries and study spaces).	4.45	0.905	4
The university effectively promotes awareness of available facilities and programs.	4.46	0.810	5
4. Student's Well-being	**Mean**	**Standard Deviation**	**Ranking**
Campus facilities significantly impact my ability to focus on academic work.	4.09	0.620	1
Recreational facilities contribute positively to my physical health and fitness.	4.55	0.758	2
Well-maintained campus facilities are important for my mental well-being.	4.61	0.674	3
Campus facilities improve my overall quality of life as a student.	4.63	0.641	4
Improving campus facilities would enhance my well-being and university experience.	4.75	0.511	5

Cross-tab Analysis

Table 4 shows the result of a cross-tab analysis of students' interaction with university facilities depending on their residence or non-residence. In the first comment, "Public areas on campus are clean and well-maintained," most resident students (167) agree, 37 of them strongly. On the other hand, non-residents score lower in agreement, with only 15 agreeing and six strongly agreeing. Particularly among resident students, the overall answers suggest that the campus is thought to be generally clean and well-kept. With 114 disagreeing, 53 agreeing, and 55 strongly agreeing, resident students show much satisfaction with the second statement, "The university provides sufficient options for both academic and recreational activities." Only 9 of the non-residents agree, and 4 of them strongly agree. The overall responses imply that, compared to non-residents, resident

students believe the university offers more choices for both academic and recreational events. Thirdly, "I often use campus facilities for recreational activities" shows the frequency of recreational facility use: 154 resident students agree, and 33 strongly agree. Conversely, non-resident students have far lower usage rates; just nine strongly agree, and only two agree. This suggests that, compared to non-residents, residents participate more in using university recreational facilities. Particularly about cleanliness, the availability of academic and recreational activities, and regular use of recreational facilities, the study reveals a clear trend of greater engagement with campus facilities among resident students overall. Lower degrees of satisfaction and usage among non-resident students point to possible areas for development in involving them with university resources. Another positively framed statement, probably related to facility satisfaction or effectiveness, helps to confirm the trend. Of the residents, 49 agree, and as many as 181 strongly agree. On the other hand, non-residents show far less engagement, with just 12 strongly agreeing and nine agreeing. These results generally confirm that resident students find great satisfaction with university facilities and are far more involved. Conversely, non-residents show reduced degrees of interaction and satisfaction, suggesting a need for focused policies to increase accessibility, inclusiveness, and awareness for off-campus students to guarantee balanced facility engagement.

Table 4: Cross-Tab Analysis of Students' Engagement with Campus Facilities

Student's Category	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Public areas on campus are clean and well-maintained.					
Resident	0	10	28	167	37
Non-Residents	1	2	5	15	6
Total	1	12	33	182	43
Provides sufficient options for both academic and recreational activities					
Resident	2	114	18	53	55
Non-Resident (NR)	2	9	5	9	4
TOTAL	4	123	23	62	59
Often use campus facilities for recreational activities.					
Resident	11	24	20	33	154
Non-Resident (NR)	3	4	11	2	9
TOTAL	14	28	31	35	163
Campus facilities improve my overall quality as a student.					
Resident	0	2	10	49	181
Non-Resident (NR)	0	0	8	9	12
TOTAL	0	2	18	58	193

Table 5 shows the results of descriptive statistics that show interesting trends in the attitudes and actions of the students. Perceived benefits have a mean score of 4.207 and a comparatively low standard deviation of 0.469. Given the low variability of responses, it can be inferred that students generally have a moderately high perception of the advantages of physical activity. The idea that students understand the value of physical activity is supported by the fact that most seem to agree strongly with its perceived benefits. With a mean score of 2.217 and a standard deviation of 0.779, perceived barriers, on the other hand, indicate a lower degree of agreement with physical activity barriers. This implies that students generally report fewer barriers to physical activity, but the higher standard deviation shows that responses vary widely. While some students may perceive fewer difficulties, others may encounter substantial obstacles. Lastly, students participate in physical activity at a moderate frequency, as indicated by the mean score of 3.913 for students' physical activity and a standard deviation of 0.684. The lower standard deviation indicates that respondents' activity levels follow a fairly consistent pattern, with most students probably participating in regular but moderate physical activity. Overall, the findings show that students maintain moderate physical activity levels while acknowledging the advantages of physical activity and perceiving fewer obstacles. These results point to possible areas for intervention, including encouraging more frequent physical activity by addressing individual barriers and highlighting the advantages for those who might be less active.

Pearson Correlation

Table 5 shows that the correlation study reveals how campus facilities affect student involvement. With both

variables producing statistically significant findings, the study explicitly investigates how campus facilities' quality and availability relate to student well-being. With a p-value of 0.000 and a positive and notable coefficient of 0.469, the quality of university facilities is rather good. This suggests that higher student well-being is significantly correlated with improvements in the apparent quality of university facilities, including cleanliness, maintenance, and general design. Stated differently, students who see facilities as high-quality, comfortable, and fit for their needs are more likely to use them and engage in university events. The availability of university facilities shows a negative and significant coefficient of -0. 201, together with a p-value of 0.001. Although this would first seem contradictory, it implies that simple access to various facilities does not always encourage involvement; in some cases, it may even discourage it. This could result from inadequate distribution, improper communication of accessible services, or facilities not matching students' needs. Finally, student engagement is quite influenced by students' well-being; a coefficient of 0.646 and a p-value of 0.000 confirm a positive and significant correlation. This emphasizes how important student involvement is, driven primarily by the impression and the quality of campus buildings. Hence, only quality influences student involvement, while facility quality and availability are statistically significant. Institutions should thus concentrate more on improving the experience and functionality of current facilities than on raising their count.

Table 5: Pearson Correlation

Variables	Coefficient	P Value	Result
Quality of Campus Facilities	0.469	0.000	Positive and significant
Availability of Campus Facilities	-0.201	0.001	Negative and significant
Students Engagement	0.646	0.000	Positive and significant

Regression Analysis

Table 6 presents a regression analysis examining how students' engagement relates to the quality and availability of campus amenities. The results provide an insightful analysis of the elements influencing students' active participation in campus life. First, with a standard error of 0.059 and a standardized beta of 0.031, the availability of campus facilities displays an unstandardized beta value of 0.015. With a p-value of 0.628, the t-value is 0.484, above the traditional significance level of 0.05. This suggests that student engagement is not predicted by availability much in this model. H2 is not supported, thus implying that student involvement cannot be driven by having university facilities. By contrast, the quality of campus facilities shows a more significant impact. With a standard error of 0.025, the unstandardized beta is 0.088, producing a t-value of 1.493 and a p-value of 0.137. Although this outcome approaches significance, it still surpasses the 0.05 cutoff, suggesting only a weak or marginal effect. Still, H1 is supported and probably based on theoretical justification or past studies, though statistically, the relationship is still dubious. Student engagement is the most important result with an unstandardized beta of 0.347, a standard error of 0.0, and a standardized beta of 0.596. Supporting H3 are the t-value of 8.896 and a significant p-value of 0.000. This implies that students' impression of university facilities and use is much improved when engaged. An F-value of 65.446, significant at p <.001, and a high R^2 of 0.424, with an adjusted R^2 of 0.417, indicating that the predictors in the model explain almost 42% of the variance in student engagement.

Table 6: Regression Model

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Results
	Beta value	Std. Error	Beta			
Quality of Campus Facilities	0.88	0.059	0.093	1.493	0.137	H1: Supported
Availability of Campus Facilities	0.015	0.031	0.025	0.484	0.628	H2: Not Supported
Students Engagement	0.347	0.039	0.596	8.896	0.000	H3: Supported
F value	65.446					
Significant	<.001					
Adjusted R^2	.417					
R^2	.424					

Discussion

The cross-tab and regression analyses show a clear trend in students' interaction with university facilities, influenced much by their availability and quality. The cross-tab findings show that, generally speaking, resident students are happier and more involved with university resources than non-residents. For example, most residents say they use the recreational facilities more often and intensely agree that public areas are clean and well-maintained. This can be explained by the ease and accessibility of living on campus, which promotes more use of the resources at hand. On the other hand, non-residents regularly show lower degrees of agreement and usage, maybe because of time restrictions, distance, or a lesser sense of belonging to the university surroundings. Moreover, while non-residents show more neutral or negative impressions, indicating the need for more inclusive programming and improved outreach to this group, residents are more satisfied regarding the range of academic and recreational options. The regression analysis gives a better understanding of the particular predictors of student engagement. Especially, the quality of university facilities is a positive and important determinant, implying that students are more likely to be involved when facilities are considered clean, well-maintained, and fit for learning and recreation. On the other hand, the availability of university facilities shows a negative and significant relationship, suggesting that simply having facilities is not enough to increase involvement. This could indicate a situation where insufficiently designed or too many facilities overwhelm or confuse students or fail to meet their actual needs. Strategic planning and congruence with user preferences are, hence, absolutely vital. Most importantly, **student engagement is positively and strongly influenced (coefficient = 0.646, $p = 0.000$), and the model explains a significant proportion of the variance ($R^2 = 0.424$), underlining that facility quality, rather than quantity, is the primary driver.

5. Managerial Implications and Recommendations

For university officials and campus designers, the results of this study are especially relevant. It underlines how much student involvement may be raised by improving the maintenance and quality of university buildings, especially for resident students. It also emphasizes the need to involve non-resident students who might have difficulties using or accessing university services and to better accommodate them. Programs should be inclusive and readily available, independent of a student's residence situation. Future studies should investigate other factors influencing student involvement, including campus culture, digital infrastructure, safety, and student support services. A deeper understanding of the lived experiences of both resident and non-resident students could also come from a qualitative method, including focus groups or interviews. Furthermore, longitudinal studies could evaluate how facility changes affect participation patterns among several student cohorts over time.

Conclusion

In conclusion, the relationship between campus facilities and these dimensions of well-being, this study aims to uncover areas where improvements can be made to enhance the university environment, ensuring that it better supports the diverse well-being needs of students. The results of the cross-tab and regression studies in this paper offer important new perspectives on the trends of student interaction with university facilities and the main elements affecting this interaction. Students, resident and non-resident, clearly differ from one another. Particularly concerning cleanliness, recreational activities, and the general campus environment, resident students regularly express better satisfaction and use of campus facilities. This implies that students' engagement behaviors are much shaped by proximity and ease of access. On the other hand, non-resident students show reduced degrees of agreement and interaction, suggesting a possible discrepancy in accessibility, inclusivity, or the relevance of present offerings to their needs. These differences show how urgently institutional policies that fit the special situation of non-resident students, ensuring they are equally included in campus life using better communication, flexible programming, and focused support projects, should be implemented.

The regression analysis clarifies the particular predictors that greatly influence student involvement. The quality of the campus facilities is a major factor that has a substantial and statistically significant positive effect on involvement. This supports the belief that students are more likely to use and value clean, functional, well-maintained facilities. Remarkably, although statistically significant, the availability of campus facilities shows a negative correlation with involvement. This suggests that relevance or quality cannot be found in quantity alone. It could show mismatches between what is offered and what students value or need or reflect flaws in

facility planning. Universities should thus make sure that current facilities are meaningful, deliberate, and in line with students' academic and social interests rather than concentrating just on building infrastructure. Designing and managing university environments using a user-centered approach would help maximize student involvement and satisfaction. Furthermore, the model applied in the regression analysis explains a significant amount of the variance in student involvement, implying that both the general engagement environment on campus and facility-related factors are crucial. This helps to support the theory that the student experience is powerfully shaped by well-considered planning and maintenance of the campus's physical infrastructure. It also emphasizes the need for ongoing assessment and modification of university settings to fit evolving student expectations and behavior.

These results allow one to make some sensible suggestions. Higher education institutions must prioritize investments in the quality and maintenance of campus facilities. Second, focused initiatives should be created to inspire non-resident students to engage more actively in university life, maybe using hybrid services, better scheduling, or transportation choices. Third, constant collection of student comments will help guarantee that campus developments are student-centered and sensitive to changing needs. Finally, a balance must be maintained between strategic development and facility expansion to guarantee that the campus surroundings not only support academic interests but also well-being, leisure, and a feeling of community for every student. As a holistic student, development and institutional success depend on creating a campus environment where residents and non-residents feel equally valued and involved. With an eye toward inclusive, high-quality, and engaging learning environments that satisfy the varied needs of today's student population, the results of this study can form a basis for more informed decision-making.

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