



Quality of Life and Its Associated Predictors among University Students in the United Arab Emirates: A Cross-Sectional Study

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1

What is already known on this topic?

- *In the existing literature, there are several studies linking Quality of Life (QoL) of university students with academic life in relation to career pressures, social integration, financial constraints, and academic demands.*

What does this study add on this topic?

- *Our study extends this literature by focusing on the correlations between social support, academic satisfaction, health-related behaviors and overall QoL of university students. Insights from this study can guide the development of policies and programs within educational institutions that prioritize student well-being and academic success*

ABSTRACT

Objective: The objective is to evaluate the quality of life (QoL) and well-being of university students in the United Arab Emirates (UAE) and to identify the factors influencing their QoL.

Methods: A cross-sectional study design was employed, utilizing a structured questionnaire to collect data from a sample of 417 university students at Higher Colleges of Technology (HCT) in the UAE between March and May 2021. Statistical analyses, including correlation and regression, were conducted to explore relationships between these factors and QoL outcomes.

Results: A total of 417 students participated in this study. The mean score of the students' overall perception was 3.76 (SD, 0.937), and the mean score of the students self-rated satisfaction with their current health and well-being was 3.65 (SD, 1.07). All QoL domains demonstrated approximate means with the environmental domain as the highest (37.53 [SD, 21.507]). There was a statistically significant mean difference in physical, psychological, and environmental health domains between male and female students. The 1-way analysis of variance (ANOVA) test showed a statistically significant mean difference in psychological domain ($F_{5,416}=2.996$; $P=.011$), social relationships domain ($F_{5,416}=2.913$; $P=.013$) and environmental domain ($F_{5,416}=4.167$; $P=.001$) between academic divisions. Regression analyses showed that age, gender, marital status and academic division were independent predictors of QoL domains.


Conclusion: Enhancing supportive social environments and promoting positive academic and health behaviors are vital for improving QoL among university students. Implementing targeted institutional policies can significantly enhance student welfare and academic success.

Keywords Physical health, psychological health, quality of life, United Arab Emirates, university students, well-being

Introduction

The concept of quality of life (QoL) has acquired substantial attention in the realms of public health and social sciences, especially with regard to college students. Quality of life is a multi-dimensional construct that comprises physical health, emotional well-being, social functioning, and environmental factors.¹ It provides a comprehensive assessment of an individual's overall well-being that considers social and mental aspects in addition to physical health. University life is a pivotal phase in a young adult's development, marked by significant changes and challenges. It can be both exciting and stressful for students to move from the more regulated high school setting to the more independent university setting. Students' QoL can be significantly impacted by a variety of pressures, including those related to their

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future careers, social integration, financial constraints, and academic demands.^{2,3} Several contextual factors interplay in shaping the QoL of university students incorporating mental, psychosocial, academic, and environmental factors. For instance, the mental health of students is influenced by multiple factors including academic pressure, social relationships, financial stress, and lifestyle changes.⁴⁻⁶ These mental health issues can negatively impact academic performance, social interactions, and overall QoL.⁷ Moreover, positive social support systems can mitigate the negative effects of stress and promote improved mental health.⁸ University students frequently struggle to maintain their current relationships and build new ones, which can be stressful and have an adverse effect on their social well-being.⁹ Physical health is yet another essential aspect of QoL. Changes in diet, exercise, and sleep habits are common during the transition to college, and these changes can have an impact on one's physical health.¹⁰ Many students take up unhealthy routines like eating poorly, exercising infrequently, and getting too little sleep, which can result in physical health issues and a lower QoL.¹¹ Regular exercise is known to enhance mental and physical well-being, thereby improving QoL.¹² Furthermore, academic pressures are a significant cause of stress that lowers their QoL. Excessive academic demand can cause anxiety, depression, and burn-out, all of which have a detrimental effect on one's general well-being and ability to perform well in school.^{13,14} QoL has also been demonstrated to be influenced by academic performance and the field of study, with students in particular disciplines reporting lower QoL and higher levels of stress.^{15,16} On the other hand, several demographic factors have been identified by recent research as influencing university students' QoL. For instance, male students frequently report superior physical and psychological health outcomes in comparison to their female counterparts.¹⁷ Significant predictors include age and marital status, with older students and married individuals typically reporting higher QoL.^{17,18} Moreover, factors such as financial status and sleep patterns have been linked to QoL, with studies showing that students experiencing financial stress and poor sleep quality often report lower QoL.^{19,20} Recent findings have also highlighted the importance of cultural context, with students in collectivist societies such as the UAE facing unique challenges that can impact their mental and social well-being.²¹ Studies have also shown that student involvement in extracurricular activities and social support networks can play a crucial role in enhancing QoL, offering students a sense of belonging and reducing stress.^{22,23} However, there is limited research focusing on QoL among college students in specific cultural contexts. Studies have also shown that student involvement in extracurricular activities and social support networks can play a crucial role in enhancing QoL, offering students a sense of belonging and reducing stress. In light of these factors, the aim of this study was to evaluate the QoL and well-being of university students in the UAE by examining how various demographic factors, including age, gender, marital status, and academic discipline influence their physical, psychological, social, and environmental QoL. The purpose of the study was to identify demographic and contextual predictors of QoL, focusing on factors such as academic pressures, social support, mental health, physical health, and environmental conditions. This study seeks to examine how these variables uniquely impact students' QoL within the academic and cultural context of the UAE.

To understand the QoL of university students, this study draws on several established theories that highlight different dimensions influencing well-being. These frameworks offer understanding into how academic stress, social support, and lifestyle factors impact QoL. The World Health Organization's (WHO) Quality of Life Framework (WHOQOL) provides a broad view, considering physical health, psychological well-being, social relationships, and environmental conditions. This model is foundational, emphasizing that QoL is shaped not only

by physical health but also by emotional, social, and environmental factors, making it highly relevant to understanding the holistic experiences of university students.¹

The Stress and Coping Model by Lazarus and Folkman (1984) focuses on how individuals cope with stress.²⁴ Academic pressures, social challenges, and financial difficulties are common stressors for university students, and the way they cope can significantly influence their QoL. Effective coping strategies are associated with better mental health outcomes, whereas ineffective strategies may exacerbate stress and lower QoL.²⁴

The Social Support Theory (Cohen & Wills, 1985) posits that strong social networks can buffer against stress and improve mental health. University students often face new social challenges as they transition to university life, and the availability of social support plays a crucial role in enhancing their well-being.²⁵

Lastly, the Biopsychosocial Model (Engel, 1977) integrates biological, psychological, and social factors in understanding health outcomes. It highlights the interplay between mental health, social relationships, and physical well-being, emphasizing that factors such as poor sleep or unhealthy lifestyles can have a negative impact on students' overall QoL.²⁶

These theories collectively provide a comprehensive lens for examining the diverse factors that influence the QoL of university students.

Given the interaction between these factors, the study addresses the following research question: What are the demographic and contextual predictors of QoL among UAE students, and how do academic, social, psychological, and environmental factors differentially contribute to their perceived well-being?

Methods

Design

A cross-sectional design was employed to evaluate the QoL and well-being of university students at HCT and identify the predictors and associated factors with their QoL. The design is suitable to address the research question: What are the demographic and contextual predictors of QoL among UAE students, and how do academic, social, psychological, and environmental factors differentially contribute to their perceived well-being?

Population and Sample of the study

Eligibility criteria encompassed all actively registered students across all offered academic programs. Convenience sampling was employed as the most suitable technique. Data collection was conducted between March and May 2021. The 2 study questionnaires, the World Health Organization Quality of Life Questionnaire-Brief (WHOQOL-BREF) and a demographic data questionnaire, were combined into a single survey using Google Forms. The survey link was disseminated to potential participants in coordination with the Student Life Department. Data were collected consecutively by inviting all students to complete the survey via their institutional email addresses. A total of 3400 invitations to enroll in the study were sent to students from all HCT campuses.

Ethical Considerations

A written electronic digital consent form was provided to be signed before enrollment in the study. Participation was completely voluntary. Anonymity and confidentiality were ensured by storing all responses on a secure and password-protected device. Participation in this study posed no potential physical or psychological harm. Ethical committee approval was received from the Ethics Committee of HCT (Approval no: REIC-16/02/2021; Date: February 16, 2021). A 2-week email reminder

was sent to participants at each campus. Of all invitations sent, 417 students completed the survey, comprising the final study sample.

Data Collection Tools

World Health Organization Quality of Life Questionnaire (WHOQOL- BREF)

The WHOQOL-BREF is an abbreviated generic QoL scale derived from the WHOQOL-100, developed by the World Health Organization (WHO) and published in 1995, with revisions made in 2004.^{1,27} The WHOQOL-BREF is a self-administered questionnaire consisting of 26 items that assess 4 domains of QoL: physical health, psychological health, social relationships, and environment. Additionally, the questionnaire includes 2 items that measure overall perception of QoL and general well-being. Responses are recorded on a 5-point Likert scale, ranging from 1 (very poor/very dissatisfied/not at all/never) to 5 (very good/very satisfied/extremely/always). Domain scores are scaled in a positive direction with higher scores denoting better QoL. The mean score of items within each domain is calculated to determine the domain score. Mean scores are then multiplied by 4 in order to make domain scores comparable with the scores used in the WHOQOL-100. These scores are subsequently transformed to a 0-100 scale using the transformation formula provided in the WHOQOL scoring manual. Automatic computation of domains was achieved using the syntax files available for the WHOQOL-100. The overall QoL score was calculated by summing the scores of all 4 domains with higher scores indicating better QoL. For this study, WHOQOL-BREF demonstrated excellent internal consistency reliability, with a Cronbach's alpha of 0.938.

Demographic Data Questionnaire

The Demographic Data Questionnaire was designed by the investigators of this study. It comprised 5 items aimed at stratifying the social and demographic status of participants.

Statistical Analysis

Statistical analyses were performed using SPSS version 29.0 software (IBM SPSS Corp.; Armonk, NY, USA). The statistical assumptions were assessed prior to each analysis. Descriptive statistics were utilized to summarize the data. Continuous variables were reported as means and SD, while categorical variables were presented as frequencies and percentages. Each domain of the WHOQOL-BREF questionnaire was transferred into a liner scale that ranged from 0 to 100 and descriptively analyzed with mean and SD. To compare the mean scores of each domain across demographic variables, Independent samples student's *t*-test and 1-way analysis of variance (ANOVA) were employed. When ANOVA tests yielded statistically significant results, Tukey post-hoc tests were performed to determine the specific group differences within the tested variables. Multiple liner regression analysis using Generalized Linear Models (GLM) application was performed to develop a model for predicting the students' QoL. All regression models were computed using a main effects model with the hybrid method for parameters estimation. A *P*-value of less than .05 was considered the threshold for statistical significance for all analyses.

Results

Participants Characteristics

A total of 417 students from all HCT campuses participated in the study. Table 1 presents the demographic characteristics of the participants. The mean age of the participants was 20.67 (SD, 2.19) years. The majority of participants were female students (325/417, 77.9%) and single (375/416, 89.9%). Fujairah Women's Campus was the highest reported campus across all campuses (28.8%). In terms of academic programs, most participants were enrolled in the Faculty of Engineering

Table 1. Demographic Characteristics of Participants (N = 417)

Variables	Frequency (%)
Gender	
Male	92 (22.1)
Female	325 (77.9)
Marital status	
Single	375 (89.9)
Married	29 (7.0)
Divorced	3 (0.7)
Prefer not to answer	10 (2.4)
Campus	
Abu Dhabi Men's Campus	5 (1.2)
Abu Dhabi Women's Campus	29 (7.0)
Al Ain Men's Campus	15 (3.6)
Al Ain Women's Campus	86 (20.6)
Dubai Men's Campus	13 (3.1)
Dubai Women's Campus	49 (11.8)
Fujairah Men's Campus	16 (3.8)
Fujairah Women's Campus	120 (28.8)
Madinat Zayed Women's Campus	2 (0.5)
Ras Al Khaimah Men's Campus	11 (2.6)
Ras Al Khaimah Women's Campus	10 (2.4)
Sharjah Men's Campus	32 (7.7)
Sharjah Women's Campus	29 (7.0)
Academic division	
Applied Media	4 (1.0)
Business	81 (19.4)
Computer Information Sciences	53 (12.7)
Education	20 (4.8)
Engineering Technology and Sciences	193 (46.3)
Health Sciences	66 (15.8)

Technology and Sciences (46.3%), followed by the Faculty of Business (19.4%) and the Faculty of Health Sciences (15.8%).

Descriptive Statistics of the Quality of Life

Regarding the first question that measures the overall perception of QoL, the mean score of the students' overall perception was 3.76 (SD 0.937). Overall, 21.3% (*n* = 89) of the participants rated their QoL as "very good," 44.8% (*n* = 187) as "good," and only 2.4% (*n* = 10) described their QoL as "very poor" (Figure 1). In contrast, the mean score of the students' satisfaction with their present health and well-being was 3.65 (SD1.07). In general, 23.5% (*n* = 98) of the students were very satisfied with their current health and well-being, 37.9% (*n* = 158) were satisfied, and only 2.6% (*n* = 11) were very dissatisfied (Figure 2). Regarding the QoL domains, the data showed that all domains demonstrated approximate means, with the environmental domain as the highest (mean 37.53, SD 21.507), followed by the psychological domain (mean 61.04, SD 19.24), the social health domain (mean 59.53, SD 25.25), and finally the physical health domain with a mean score of (mean 57.22, SD 18.16). The Independent Samples *t*-test used to compare the means of the QoL domains between male and female students showed statistically significant differences in the physical health domain (male [mean 64.01, SD 17.61], female [mean 55.30, SD 17.88], $t(415) = 4.141$, $P < .001$), in the psychological health domain (male [mean 66.35, SD 19.22], female [mean 59.54, SD 19.01], $t(415) = 3.026$, $P = .003$), and in the environmental domain (male [mean 74.76, SD 18.37], female [mean 65.48, SD 21.91], $t(415) = 3.71$, $P < .001$). In contrast, the Independent Samples *t*-test showed no significant mean difference in the social relationships domain between genders. Table 2 summarizes the results of the Independent Samples *t*-tests.

Two 1-way ANOVA tests were performed to compare the means of the QoL domains among marital status and academic division Table 3 summarizes the results of the 1-way ANOVA tests. The first 1-way ANOVA test was performed to compare the mean difference of students' marital

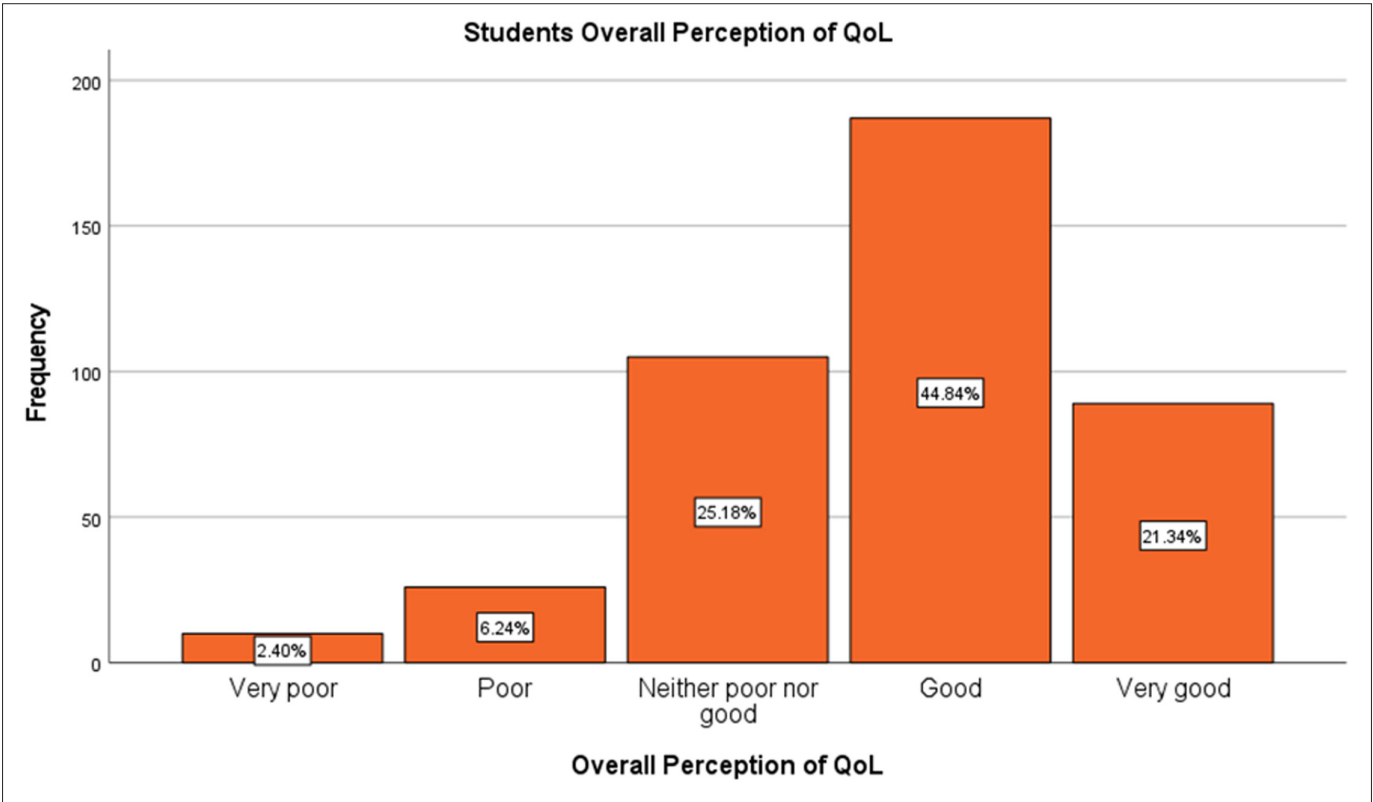


Figure 1. Students’ self-reported overall quality of life.

status on the QoL domains. The results indicated no statistically significant differences in the mean scores of physical, psychological, social and environmental domains of QoL. Conversely, the 1-way ANOVA

test comparing the means between students from different academic divisions revealed statistically significant differences in the psychological domain ($F(5,416)=2.996, P = .011$), social relationships domain

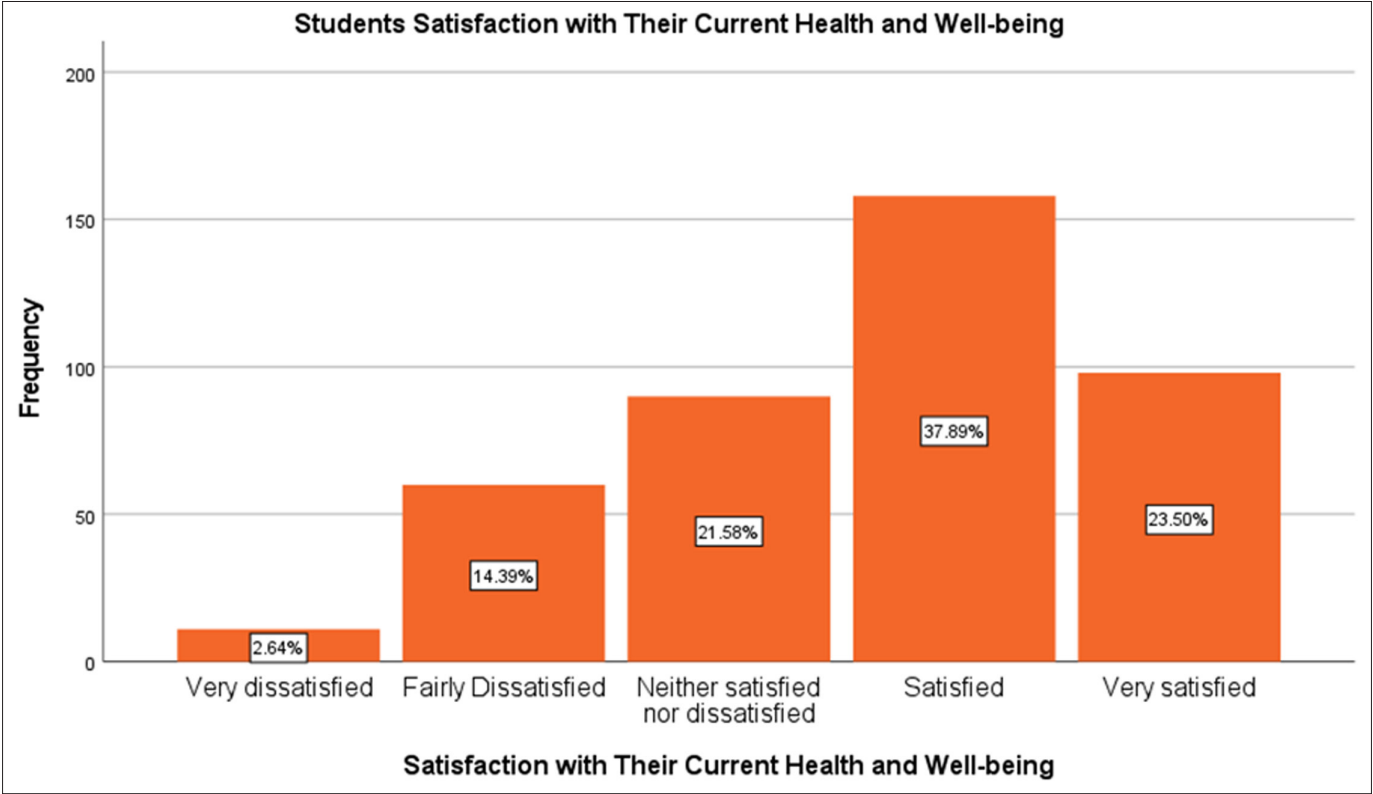


Figure 2. Students’ satisfaction with their current health and well-being.

Table 2. Independent Samples *t*-test for Gender on Quality of Life Domains (N = 417)

QoL Domain	Gender	N	Mean	SD	Δ Mean	<i>t</i>	<i>P</i>	95% CI	
								LL	UL
Physical	Female	325	55.30	17.88	8.717	4.141	<.001	4.579	12.856
	Male	92	64.01	17.61	8.717			4.593	12.841
Psychological	Female	325	59.54	19.01	6.811	3.026	.003	2.386	11.236
	Male	92	66.35	19.22	6.811			2.335	11.287
Social	Female	325	58.95	25.64	2.645	0.887	.376	-3.218	8.509
	Male	92	61.59	25.14	2.645			-3.315	8.606
Environmental	Female	325	65.48	21.91	9.281	3.710	<.001	4.364	14.199
	Male	92	74.76	18.37	9.281			4.804	13.759

($F(5,416) = 2.913$, $P = .013$), and environmental domain ($F(5,416) = 4.167$, $P = .001$). The Tukey post hoc test indicated that the psychological domain was significantly higher in Business students (mean 65.53, SD 17.44; $P = .015$) compared to Education students (mean, 50.00, SD 14.24; $P = .015$). Additionally, the social relationships domain was significantly lower in Health Sciences students (mean 53.16, SD 25.44; $P = .028$) compared to Business students (mean 65.53, SD 17.44; $P = .028$). For the environmental domain, significant differences were found where Business students (mean 70.76, SD 19.70; $P = .027$) scored higher than Education students (mean 54.53, SD 17.43; $P = .027$). Furthermore, Education students scored lower (mean 54.53, SD 17.43; $P = .027$) compared to Engineering students (mean 70.19, SD 20.59; $P = .021$). Engineering students scored higher (mean 70.19, SD 20.59; $P = .049$) than Health Sciences students (mean 61.55, SD 24.25; $P = .049$).

Regression Analysis

Four multiple regression models were performed to predict each of the QoL domains from age, gender, marital status, and academic division. The models are presented in Table 4. The regression model predicting the physical health domain showed a collective significant prediction by the 4 predictors ($F(4, 412) = 7.789$, $P < .001$, $R^2 = 0.070$). Age ($\beta = .895$, $P < .001$) was a significant predictor. Moreover, single ($\beta = .660$, $P = .005$), married ($\beta = .662$, $P = .003$), and divorced ($\beta = 1.745$, $P = .004$) students exhibited significantly higher scores compared to those who did not disclose their marital status. Students from the Faculty of Computer Science ($\beta = .841$, $P = .049$) and Education ($\beta = 1.574$, $P = .009$) demonstrated significantly higher scores compared to students from the Faculty of Health Sciences. Male students scored significantly higher than female students by 1.508 units in the physical health domain ($\beta = 1.508$, $P < .001$). The regression model predicting the psychological health domain was statistically significant

($F(4,412) = 6.875$, $P < .001$, $R^2 = 0.063$). Age ($\beta = 1.058$, $P < .001$) and gender contributed significantly to the prediction. Married students ($\beta = .682$, $P = .010$) had significantly higher scores in the psychological health domain compared to divorced students. The regression model predicting the social relationship domain was statistically significant ($F(4,412) = 4.461$, $P = .002$, $R^2 = 0.042$). Marital status and academic division were significant predictors. Single ($\beta = 1.376$) and divorced ($\beta = 2.101$) students had significantly higher scores compared to married students. Additionally, all students except Engineering students had significantly higher scores in the social relationship domain compared to Health Sciences students. The regression model predicting the environmental domain was statistically significant ($F(4,412) = 5.627$, $P < .001$, $R^2 = 0.052$). All variables except age contributed significantly to the prediction. Male students scored 1.228 units higher than female students ($\beta = 1.228$, $P < .001$).

Discussion

The study examined the QoL of college students studying at the Higher Colleges of Technology in UAE. The students generally had a positive overall perception of their QoL, with an average score of 3.76. This finding is consistent with the results of a study by Malibary et al,²⁸ which also found high levels of satisfaction among college students in the Gulf region. Most students rated their QoL as "good" or "very good," demonstrating a positive perspective despite the usual stressors of university life.²⁸ This aligns with findings from similar studies, which indicate that university students often report moderate to high levels of QoL despite the challenges they face.²⁹ Nonetheless, a small percentage of students rated their QoL as "very poor" (2.4%) and "very dissatisfied" (2.6%) with their health, highlighting the existence of a vulnerable subgroup in need of specific support.

Table 3. One-Way Analysis of Variance for Students Marital Status and Academic Division on Quality-of-Life Domains (N = 417)

Variable	N	Physical Domain			Psychological Domain			Social Domain			Environmental Domain		
		Mean \pm SD	<i>F</i>	<i>P</i>	Mean \pm SD	<i>F</i>	<i>P</i>	Mean \pm SD	<i>F</i>	<i>P</i>	Mean \pm SD	<i>F</i>	<i>P</i>
Marital status													
Single	375	57.32 \pm 17.64	.512	.674	61.59 \pm 18.52	1.594	.190	59.89 \pm 24.80	.313	.816	68.22 \pm 20.54	1.343	.260
Married	29	58.00 \pm 19.73			58.19 \pm 22.83			57.47 \pm 28.63			61.21 \pm 28.52		
Divorced	3	59.52 \pm 23.78			59.72 \pm 16.83			55.56 \pm 45.89			66.67 \pm 13.01		
Prefer not to answer	10	50.36 \pm 30.37			49.17 \pm 31.41			53.33 \pm 28.65			60.31 \pm 32.54		
Academic division													
AM	4	67.85 \pm 13.67	2.084	.066	73.95 \pm 12.89	2.996	.011	77.08 \pm 22.94	2.913	.013	81.25 \pm 16.73	4.167	.001
BUS	81	61.19 \pm 17.94			65.53 \pm 17.44			65.84 \pm 23.33			70.75 \pm 19.69		
CIS	53	59.29 \pm 17.00			62.26 \pm 19.80			62.73 \pm 27.61			64.20 \pm 22.29		
EDU	20	51.78 \pm 11.08			50.00 \pm 14.24			51.66 \pm 26.98			54.53 \pm 17.42		
ENG	193	56.45 \pm 18.97			60.70 \pm 20.04			58.63 \pm 24.52			70.19 \pm 20.59		
HS	66	53.89 \pm 18.03			58.08 \pm 18.58			53.15 \pm 25.43			61.55 \pm 24.24		

AM, applied media; BUS, business; CIS, computer information sciences; EDU, education; ENG, engineering; HS, health sciences.

Table 4. Multiple Linear Regression Model Using Generalized Linear Model for the Prediction Quality of Life Domains (N = 417)

Regression Parameters	F	P	Exp(B)	P	95% CI	
					Lower	Upper
Model 1 (physical domain)	7.789	<.001				
Predictors						
Age			.895	<.001	.870	.921
Marital status: single			.660	.005	.495	.880
Marital status: married			.622	.003	.453	.853
Marital status: divorced			1.745	.004	1.197	2.542
*Marital status: prefer not to answer			1			
Academic division: AM			.952	.739	.711	1.274
Academic division: BUS			1.087	.179	.963	1.227
Academic division: CIS			.841	.049	.708	.999
Academic division: EDU			1.574	.009	1.118	2.217
Academic division: ENG			1.024	.672	.916	1.145
*Academic division: HS			1			
Gender: male			1.508	.000	1.371	1.660
*Gender: female			1			
Model 2 (Psychological domain)	6.875	<.001				
Predictors						
Age			1.058	<.001	1.039	1.078
Marital status: single			1.006	.966	.783	1.292
Marital status: married			.682	.010	.509	.914
Marital status: divorced			1			
*Marital status: Prefer not to answer			1.242	.077	.977	1.579
Academic division: AM			1.013	.840	.897	1.143
Academic division: BUS			.941	.296	.839	1.055
Academic division: CIS			.943	.459	.808	1.101
Academic division: EDU			.951	.334	.859	1.053
Academic division: ENG			1			
*Academic division: HS			1.070	.094	.988	1.158
Gender: male			1			
Model 1 (Social domain)	4.461	0.002				
Predictors						
Age			1.011	.068	.999	1.023
Marital status: single			1.376	<.001	1.184	1.599
Marital status: married			.881	.159	.738	1.051
Marital status: divorced			2.101	<.001	1.629	2.710
*Marital status: prefer not to answer			1	.	.	.
Academic division: AM			1.365	<.001	1.154	1.613
Academic division: BUS			1.217	<.001	1.143	1.295
Academic division: CIS			1.135	<.001	1.061	1.215
Academic division: EDU			1.331	<.001	1.194	1.484
Academic division: ENG			1.014	.649	.955	1.077
*Academic division: HS			1	.	.	.
Gender: male			1.024	.387	.971	1.079
*Gender: female			1	.	.	.
Model 1 (Environmental domain)	5.627	<.001				
Predictors						
Age			.993	.397	.978	1.009
Marital status: single			.991	.881	.884	1.112
Marital status: married			.843	.033	.720	.986
Marital status: divorced			1	.	.	.
*Marital status: prefer not to answer			1.697	<.001	1.377	2.091
Academic division: AM			1.294	<.001	1.182	1.418
Academic division: BUS			1.287	<.001	1.153	1.436
Academic division: CIS			1.012	.868	.876	1.169
Academic division: EDU			1.125	.006	1.035	1.223
Academic division: ENG			1	.	.	.
*Academic division: HS			1.228	<.001	1.138	1.326
Gender: male			1	.	.	.

AM, applied media; BUS, business; CIS, computer information sciences; EDU, education; ENG, engineering; HS, health sciences. *Set at zero as a reference variable.

The examination of quality-of-life categories shows that the environmental category had the highest average score of 37.53, with psychological following at 61.04, social health at 59.53, and physical health at 57.22. These results are consistent with prior studies emphasizing the significant influence of environmental elements, like campus facilities and living conditions, on students' overall QoL.³⁰ Additionally, the availability of recreational facilities, campus safety, accessibility of resources, and conducive study environments are factors that potentially contribute to higher environmental QoL scores. Similar findings have been reported in previous studies, where favorable learning environments were associated with higher QoL scores.³¹ The comparatively lower ratings in the physical health category may indicate lifestyle factors such as sedentary behavior and dietary habits, which are common issues among university students.^{32,33} The study found statistically significant gender differences in 3 of the 4 QoL domains. Male students had higher scores in physical health, psychological health, and environmental domains compared to female students. This aligns with global patterns where male students commonly report better QoL in specific domains due to various factors, including lower levels of stress and anxiety.^{34,35} Furthermore, the lower QoL scores observed among female students are consistent with findings from previous research indicating gender disparities in perceived well-being among university students. Several factors may contribute to this phenomenon. Female students may experience higher levels of stress and anxiety due to academic pressures, societal expectations, and gender-related responsibilities, which can adversely affect their overall QoL.³¹ Studies have shown that female students are more likely to report higher perceived stress levels, which may be attributed to factors such as academic performance expectations, financial concerns, and balancing academic, social, and personal responsibilities.³⁶ Furthermore, societal and cultural norms in certain contexts may place additional pressure on female students, influencing their mental health and overall well-being.³⁷ For instance, gender-based discrimination or unequal opportunities can contribute to feelings of frustration, reduced self-efficacy, and overall lower QoL. Additionally, females are generally more likely to internalize stress, which can negatively impact their physical, emotional, and social well-being.³⁸ On the other hand, the lack of notable difference in the social support domain suggests that both male and female students have similar levels of social support and interaction, which is vital for their overall well-being. Future studies should consider exploring gender-specific factors in greater depth and employing qualitative methodologies to better understand the lived experiences of female students and the contextual factors that may influence their QoL.

The 1-way ANOVA results showed no significant differences in QoL domains based on marital status. This finding is different from some studies that have suggested that married students tend to have higher QoL because of the emotional and financial support they receive from their partners.³⁹ This discrepancy could be attributed to cultural variations or the young age of the study participants, where marriage had not yet considerably impacted their QoL. On the other hand, notable differences were found in QoL domains based on the academic division of the students. Business students showed better ratings in psychological and environmental domains, whereas Health Sciences students demonstrated lower scores in social relationships. These variations could be due to the differing academic demands and social interactions within each discipline. In addition, these findings may be attributed to differences in the nature of academic programs, workload, and learning environments. Business programs may offer more flexibility, opportunities for social interaction, and less stressful coursework compared to health sciences programs, which often involve rigorous academic requirements and intensive clinical training. For instance, health sciences students, particularly those undergoing clinical training, may experience higher levels of stress and limited social interaction due to

demanding schedules and clinical rotations.^{40,41} Clinical training can be time-intensive and emotionally taxing, potentially impacting students' ability to maintain healthy social relationships.⁴² Moreover, the clinical environment may contribute to psychological stress due to high expectations, emotional challenges associated with patient care, and the need to meet academic and professional standards.³⁸

Furthermore, the structured and highly regulated nature of health sciences programs may restrict opportunities for social engagement, further contributing to lower social QoL scores. In contrast, business programs may provide greater opportunities for networking, extra-curricular involvement, and work-life balance, all of which positively influence psychological and environmental well-being.

The study found that age, gender, marital status, and academic division were significant predictors, with older students and males generally reporting higher QoL scores. These findings align with several previous studies that identified age and gender as important determinants of QoL in university students.⁴³⁻⁴⁵ However, the explanatory power of the regression model, as indicated by the R^2 values, was relatively low, suggesting that additional relevant variables may not have been captured by the current study. Factors such as financial status, sleep habits, and family support, which were not measured in this study, may also influence QoL outcomes. Previous studies have indicated that financial stress can adversely affect mental health and QoL, while sufficient sleep and supportive family environments are positively associated with better psychological and overall well-being.^{8,46} Future research could benefit from incorporating these variables to improve the explanatory power of regression models and provide a more comprehensive understanding of the determinants of QoL among university students. This approach would enhance the ability to develop evidence-based interventions aimed at promoting students' well-being.

Implications for Practice

The findings of this study highlight the importance of addressing both demographic and contextual factors to improve the QoL among university students. The results suggest that specific strategies within university settings are necessary to promote student well-being and academic success.

One key implication of this study is the need to enhance mental health support services, particularly for female students, who reported lower QoL scores in several areas. Universities should prioritize expanding accessible mental health services, ensuring that counseling resources are available and approachable. In addition to individual counseling, stress management workshops and group support programs could be implemented to help students cope with the academic and social pressures they face. These interventions should adopt culturally responsive approaches, as demonstrated by Dari et al.,⁴⁷ who highlighted the effectiveness of group work in fostering resilience among marginalized youth.⁴⁸ Furthermore, integrating qualitative methods such as Online Photovoice (OPV) into the design of these services could provide deeper insight into students' mental health challenges, ensuring support is grounded in their lived experiences. Prior studies have successfully used OPV to explore wellbeing among Muslim and student populations, particularly during crises like coronavirus disease 2019 (COVID-19), emphasizing its utility for capturing significant psychosocial needs.⁴⁷⁻⁵⁰ Another important aspect revealed by the study is the influence of academic pressures on students' QoL. To mitigate the negative effects of academic stress, universities should consider offering more robust academic support services. Personalized academic counseling, peer tutoring, and workshops on time management can provide students with the tools they need to navigate their

studies effectively and reduce stress. Such programs could significantly improve both academic performance and students' overall well-being. Utilizing innovative research methods such as Community-Based Participatory Research (CBPR) could also engage students directly in the process of developing academic support services that are tailored to their specific needs, thus making these services more effective.⁵¹ Such initiatives would not only improve students' academic performance but also promote a balanced academic life, contributing to their overall well-being.

The study also highlights the critical role that physical health plays in students' QoL. Universities can promote healthier lifestyles by offering wellness programs that focus on physical fitness, proper nutrition, and sleep hygiene. Encouraging students to engage in regular physical activity through campus-based sports events or fitness classes can contribute to their mental and physical health, leading to an improved QoL.

Finally, the importance of social support networks cannot be overstated. The study found that social relationships were a significant factor in students' overall well-being. Therefore, universities should actively foster social interaction through student clubs, campus activities, and peer support programs. Creating an inclusive and supportive campus environment can reduce feelings of isolation and help students build meaningful connections, ultimately improving their social and emotional well-being. By incorporating participatory research methods, universities could better understand the social dynamics on campus, ensuring that programs designed to enhance social support are aligned with students' needs.

By addressing these areas—mental health, academic support, physical health, and social relationships, universities can create a more supportive environment that enhances the QoL for their students. Implementing these recommendations could lead to healthier, more resilient students who are better equipped to navigate the challenges of university life.

Strengths and Limitations

This study offers several strengths and limitations that warrant consideration when interpreting the findings. One of the key strengths of this study is its focus on assessing the QoL among university students in the UAE, a population that is underrepresented in the literature. By utilizing validated and widely used instruments, the study enhances the reliability and comparability of its findings. Moreover, the timing of the study during the COVID-19 pandemic is another notable strength, as it captures insights during a critical period that may have uniquely impacted students' QoL. However, the study has certain limitations that should be acknowledged. The cross-sectional design limits the ability to establish causal relationships between the identified predictors and the QoL of university students. Longitudinal studies are recommended to assess changes over time and establish causality more effectively. Additionally, the reliance on self-reported measures may be subject to social desirability bias and inaccuracies in recall. Although self-reported questionnaires are commonly used in QoL research, future studies could benefit from incorporating objective measures or triangulating data collection methods to enhance validity.

The relatively low response rate of 12.3% poses a risk of response bias and potential sampling bias. Non-response bias may have occurred if students who chose not to participate differed significantly from those who completed the survey. Possible reasons for non-participation include lack of interest, time constraints, survey fatigue, or limitations associated with the online survey format. This low response rate may

have resulted in the underrepresentation of certain groups or perspectives, thereby affecting the generalizability of the findings.

Furthermore, while the use of an online survey was the most appropriate method during the COVID-19 pandemic to ensure participant safety and convenience, it may have limited participation among students with restricted access to digital devices or internet connectivity. Although online surveys were necessary during the pandemic, future studies could consider employing mixed-mode survey approaches to enhance participation rates and inclusivity.

Conclusion

This study evaluated the QoL of university students in the UAE, focusing on their perception of QoL and identifying differences based on academic and demographic factors. Overall, the students had a positive view of their QoL. The findings suggest the need for targeted support programs, especially for female students, to address their unique challenges. Specifically, implementing mental health support programs, academic counseling services, and stress management training tailored to the needs of female students could be beneficial. Additionally, providing accessible resources for stress reduction and coping mechanisms may contribute to improved QoL among this demographic. Improving campus facilities and creating a supportive social environment can enhance students' QoL. Future research should explore various aspects of QoL in university settings, focusing on longitudinal studies to assess changes over time and the effectiveness of interventions.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of HCT University (Approval no: REIC-16/02/2021; Date: February 16, 21).

Informed Consent: Written informed consent was obtained from the participants who participated in this study.

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