

Unpacking how the Living Arrangements of Undergraduates Influence Quality of Life

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Abstract

This study examined the connection between undergraduate students' living arrangements (private vs rented accommodation) and their Quality of Life (QoL) at the Sri Lanka Institute of Information Technology (SLIIT). All four domains of quality of life, psychological well-being, physical health, environmental factors, and social relationships were measured using an adapted version of the World Health Organisation Quality of Life: Brief Version (WHOQOL-BREF). The cross-sectional study included a sample of 64 individuals obtained from the campus premises between the ages of 18-25. Multivariate Analysis of Variance (MANOVA) revealed no statistically significant differences in QoL dimensions based on accommodation type. However, the effect sizes indicate living arrangements to be a better predictor of the environmental factors as opposed to other domains of QoL. Furthermore, a chi-square test yielded a strong association between the year of study and living arrangements among students, suggesting that the year of study may have an impact on students' choice of accommodation. These results further demonstrate the diversity of QoL and imply that, although environmental influences are worthy of consideration, living arrangements might not be a strong factor to explain students' well-being. While the nature of the sample (i.e., small and convenient) may have hindered the statistical significance of the study, the present findings highlight the necessity for subsequent studies to accurately uncover the impact of student life, accommodation, and other related factors on the quality of life.

Keywords: Student accommodation, quality of life, cross-sectional study, WHOQOL-BREF, health and wellbeing, university life

Introduction

Quality of life (QoL) is crucial for academic success and overall well-being in university students, shaped by academic pressures, social adaptation, and living arrangements (Worsley et al., 2021). The WHO (2025) defines QoL as one's perception of their position in life within the context of cultural and personal factors. Studies show living conditions strongly influence student QoL. For example, Turkish students living in state dormitories reported negative outcomes than those living with family or in private accommodation (Gür, 2024). East Asian students in rented accommodation, such as student hostels or apartments, faced psychological and environmental challenges despite adequate social well-

being (Achangwa et al., 2022), and neighbourhood satisfaction was also linked to better QoL (Wong et al., 2018). In South Asia, medical and dental students in rented accommodation reported good physical health but lower psychological, social, and environmental satisfaction, influenced by economic and policy pressures (Bilawal et al., 2024; Bashir et al., 2022). For instance, in Nepal, living conditions and academic stress significantly shaped QoL (Gupta et al., 2021). Similarly, students in Sri Lanka living in rented accommodation reported lower QoL due to poor facilities, racial discrimination, homesickness, academic stress, and other factors (Kuruppuarachchi et al., 2002; Madushanka et al., 2024; Wickramasinghe et al., 2023). However, research comparing QoL among students in private and rented accommodations, particularly within private universities, remains limited. Therefore, this study aims to investigate the relationship among the physical, psychological, social, and environmental domains of QoL and students' living arrangements at the Sri Lanka Institute of Information Technology (SLIIT). The study is guided by the hypothesis, H₁: Living arrangements significantly impact students' quality of life.

Materials and methods

This study employed a quantitative, cross-sectional design to examine the relationship between living arrangements and quality of life (QoL) among undergraduate students at the Sri Lanka Institute of Information Technology (SLIIT). QoL was assessed using the WHOQOL-BREF, a validated, abbreviated version of the WHOQOL-100, which measures QoL across four domains: physical health, psychological well-being, social relationships, and environmental factors.

Although the WHOQOL-BREF consists of 26 items, only the 24 items specifically related to the four domains were included in the analysis. Domain scores, originally ranging from 4–20, were transformed to a 0–100 scale, in accordance with WHO guidelines, to facilitate interpretation and comparison. The version of the WHOQOL-BREF used had been previously validated for the Sri Lankan context. The physical health domain includes items related to energy, mobility, sleep, daily activities, and work capacity. The psychological well-being domain assesses self-esteem, concentration, body image, and positive and negative feelings. The social relationships domain covers interpersonal relationships, social support, and sexual activity. The environmental domain evaluates aspects such as financial resources, safety, health care access, home environment, and opportunities for recreation.

A total of 64 full-time undergraduate students, aged 18–25 and representing academic years 1 through 4 across all faculties, were recruited through convenience sampling. Data were collected anonymously via a self-administered online questionnaire distributed through WhatsApp. Responses were compiled using Google Sheets, and statistical analyses were conducted using Jamovi software.

A Multivariate Analysis of Variance (MANOVA) was conducted to assess the effect of living arrangements (independent variable) on the four QoL domains (dependent variables). MANOVA was chosen as it allows for the simultaneous analysis of multiple dependent variables, reducing the risk of Type I error and providing a more comprehensive understanding of group differences compared to multiple univariate tests.

This study was conducted as a partial requirement of the Individual Differences and Developmental Psychology module of the Bachelor of Science Honors (Psychology) program. Ethical approval was obtained from the Pro Tem Ethics Review Committee of the School of Psychology, SLIIT.

Results

Descriptive statistics

The mean scores for QoL across both groups suggest that the students experience moderate levels of overall QoL (Table 1). The mean scores for both private accommodation ($M = 14.3$; $SD = 2.17$) and rented accommodation ($M = 13.9$; $SD = 2.11$) are clustered near the midpoint of the scale, indicating that participants are neither entirely satisfied nor dissatisfied with their QoL. The clustering of QoL scores in the moderated range is likely attributable to common stressors inherent to the undergraduate experience, such as high academic demands, final exam pressure, financial constraints, and the general transition to early adulthood. These stressors are universal to both groups and serve as strong negative influences that prevent QoL scores from reaching high levels. A closer look at the domains shows that the social domain recorded the highest mean scores for both groups, suggesting that students generally maintain good social relationships, regardless of where they live. Conversely, the psychological domain reported the lowest mean for both groups.

Table 1: Descriptive statistics for Quality-of-Life domains by living status

	Living status	Physical	Psychological	Social	Environmental	QoL Total	Transformed scores
Mean	RA	3.56	3.36	3.59	3.41	13.9	55.7
	PA	3.66	3.37	3.63	3.68	14.3	57.4
St. dev	RA	0.512	0.679	0.793	0.546	2.11	8.43
	PA	0.616	0.670	0.742	0.691	2.17	8.66
Min.	RA	2.14	1.83	2.33	1.63	8.27	33.1
	PA	2.29	1.83	1.67	2.00	9.51	38.0
Max	RA	4.57	4.50	5.00	4.38	18.0	72.1
	PA	4.86	4.67	5.00	5.00	18.6	74.4

Note. RA – Rented accommodation, PA – Private accommodation, Min – minimum, Max – Maximum, St. dev – Standard deviation

Reliability analysis

The internal consistency of the adapted WHOQOL-BREF demonstrated excellent reliability (Table 2). At the domain level, apart from the social dimension, all others exhibited good reliability. The lower reliability for the social domain may have resulted from its limited number of items, yet the exceptionally high overall reliability of the scale supports the confident use of the WHOQOL-BREF for subsequent statistical analyses.

Table 2: Reliability of WHOQOL-BREF

	WHOQOL-BREF	WHOQOL-BREF (Physical)	WHOQOL-BREF (Psychological)	WHOQOL-BREF (Social)	WHOQOL-BREF (Environmental)
Cronbach's α	.92	.72	.78	.57	.86

In addition to the higher reliability, all domains showed positive and statistically significant correlations, with the strongest coefficients observed between the physical and environmental domains, and the psychological and environmental domains (Table 3). This confirms that a student's perceived quality of life is intricately linked across health, mood, social life, and living environment.

Table 3: Correlation matrix of WHOQOL dimensions

	WHOQOL-BREF	WHOQOL-BREF (Physical)	WHOQOL-BREF (Psychological)	WHOQOL-BREF (Social)	WHOQOL-BREF (Environmental)
WHOQOL-BREF	1.00				
WHOQOL-BREF (Physical)	.839***	1.00			
WHOQOL-BREF (Psychological)	.833***	.656***	1.00		
WHOQOL-BREF (Social)	.722***	.424***	.384**	1.00	
WHOQOL-BREF (Environmental)	.868***	.730***	.699***	.441***	1.00

Note. $p < .002$ - **, $p < .003$ - ***

Assumption checks

Before conducting the multivariate analysis of variance (MANOVA), assumptions were evaluated. The Shapiro–Wilk test of multivariate normality for the residuals was significant, indicating a deviation from normality, $W = .953$, $p = .017$. The assumption of homogeneity of variance–covariance matrices, assessed using Box’s M test, was not violated, $\chi^2(10) = 13.30$, $p = .207$.

Inferential statistics

Table 4: Multivariate tests

		Value	F	df1	df2	Sig.
Living arrangements	Pillai’s trace	0.0902	1.46	4	59	.225
	Wilk’s Lambda	.910	1.46	4	59	.225

Note. df – degrees of freedom, sig. – statistical significance

As per the MANOVA output obtained, living arrangement does not have a statistically significant impact on QoL, Pillai’s trace = .090, $F(4, 59) = 1.46$, $p = .225$. The small Pillai’s trace value suggests that living arrangement accounts for only a minor proportion of variance in QoL, indicating that other factors are likely more influential. Hence, H1 could not secure adequate support to be accepted.

Univariate tests were conducted to further examine the individual quality of life (Table 5). The results indicated that none of the domains showed a statistically significant difference between the groups. The environmental domain had a p-value of 0.088 ($p = .088$). While not statistically significant at the 0.05 level, this value is close to the significance threshold and could be considered “supportive”. The effect sizes for all domains were also included in the analysis (Table 5). Effect sizes were small across the psychological and social domains, while the environmental ($d = -.43$) and physical ($d = -.18$) domains showed a moderate effect, though it did not reach statistical significance.

A chi-square (χ^2) test further indicated that a student’s residence situation and their academic year had a statistically significant association, $\chi^2(2, N = 63) = 6.53$, $p = .038$. Analysis of the frequency counts indicated that year 1 students were the most represented group across both living statuses. Furthermore, there was a noticeable drop-off in the number of 3rd and 4th year students residing in rented accommodation compared to those in private accommodation, suggesting a tendency for students to change their living arrangements as they progress through their degree.

Table 5: Univariate analyses

	Dependent variable	Sum of squares	df	Mean square	F	Sig.	Cohen's <i>d</i>
Living arrangements	Physical	0.16869	1	0.16869	0.52603	0.471	-0.1813
	Psychological	0.00174	1	0.00174	0.00382	0.951	-0.0154
	Social	0.01563	1	0.01563	0.02650	0.871	-0.0407
	Environmental	1.16235	1	1.16235	3.00110	0.088	-0.4331
Residuals	Physical	19.88202	62	0.32068			
	Psychological	28.21354	62	0.45506			
	Social	36.55208	62	0.58955			
	Environmental	24.01318	62	0.38731			

Note. df – degrees of freedom, sig. – statistical significance

Discussion

The research examined the relationship between Quality of Life (QoL) and its domains—physical, psychological, social, and environmental—and how they are influenced by university students' living arrangements. The MANOVA results indicated that the data did not support H1. While the findings suggest that students' residential arrangements do not have a statistically significant impact on their overall quality of life, they still account for 9% of QoL's total variance. Despite the lack of significance, a pattern of low scores for students in rented accommodations was observed in the descriptive statistics, aligning with previous research by Kuruppuarachchi et al. (2002), Madushanka et al. (2024), and Wickramesinghe et al. (2023). These lower scores may have resulted from factors such as dormitory quality, privacy, hygiene, and other concerns (Mubita et al., 2022; Noll et al., 2020).

The average QoL for both types of accommodation has not exceeded higher levels, possibly due to cultural differences in how Sri Lankans view QoL or the impact of constraints common in Sri Lankan urban areas (e.g., poor transportation, congested housing, limited access to services). Both cultural differences and systemic constraints could influence perceptions of QoL, affecting individual scores on the WHOQOL-BREF.

Similarly, strong correlations between the QoL domains were observed, supporting previous research by Chang et al. (2023) and Zhong et al. (2024). While these significant associations demonstrate the reliability of the scale, they also indicate how a changes in one QoL domain is likely to affect others, highlighting the importance of adopting a holistic approach in university QoL policy-making. Research by Martin et al. (2021) and Wang & Zhang (2020) found benefits related to rented accommodations, such as regulated routines and access to resources. However, these benefits were not reflected in the present study, suggesting cultural differences may significantly shape students' perceptions of well-being—especially when adapting to new social and academic environments (Achangwa et al., 2022).

Overall, this study offers a broad overview of how undergraduate students perceive QoL. It also provides evidence for the reliability of WHOQOL-BREF, with a recommendation to further improve the scale's social domain. The limited, convenient, and homogeneous sample may have influenced the study's outcomes. Therefore, future research should include multiple universities and diverse student populations to create a larger, more representative sample for revisiting this study.

Conclusion

This study concludes that QoL among university students is a multidimensional construct, highly correlated across physical, psychological, social, and environmental domains. There were no private/rented residential differences, although differences in environmental QoL scores, especially

among rented residents, indicate that the living environment affects QoL. These results inform student-centred policy at universities comprehensively. By foregrounding the need for holistic support structures in all areas of student life, this study contributes to efforts towards promoting student well-being, academic motivation, and long-term growth, and in the process, a healthier and more balanced academic environment.

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