

Quality of Life of Medical Students at Widad University College, Malaysia

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ABSTRACT

Background: Quality of Life (QOL) is an individuals' perception of their position in life, based on the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns. This study aimed to investigate the QOL of medical students at Widad University College (WUC). Methods: It was a cross-sectional study conducted in year 2022 among all 107 medical students of WUC. To collect data, a validated "WHOQOL-BREF" questionnaire consisted of 26 items under four domains of physical health, psychological health, social relations, and environment (3-9 items/domain) was used. Items were rated utilizing a 5point Likert scale, ranged score-1 (very poor) to score-5 (very good). Each domains' mean score was transformed into a linear scale 0-100, using a standard transformation method. The higher scores indicate better QOL The questionnaire was administered to the participants and data were collected and analysed using SPSS version-18. Results: Year-5 students were found to have highest mean scores ranged 63.72–71.83 in all four domains, while year-3 students presented with lowest scores ranged 61.34–66.17 in all domains. The QOL scores revealed a significant difference among participants of different study-years in all domains. Married participants has significantly high scores (90.5) of QOL in social relationship domain. Other sociodemographic characteristics did not show any significant difference. Conclusion: The QOL of WUC medical students scored better in terms of social relation (67.04), environment (62.84), psychological (61.70) and physical health (59.68) respectively. The higher the score the better is the OOL. Extra academic support and counseling by the faculty and organization are very much appreciated to improve the QOL of medical students.



Keywords: Quality of life, physical health, psychological health, social relations, environment health, medical students.

1.0 INTRODUCTION

The quality of life (QOL) is defined by the World Health Organization (WHO) as "an individual's perception of their position in life based on the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns" (Group, 1994). There are four domains in QOL which are (i) physical health, (ii) psychological health, (iii) social relationships, and (iv) environmental conditions (Pagnin & de Queiroz, 2015). In general term, QOL focuses either on how well human needs are met socially or economically or on the self-reported 'subjective well-being' by the extent to which individuals or groups perceive satisfaction or dissatisfaction such as happiness, pleasure, fulfillment etc. in various life domains (Costanza et al., 2007).

Medical students showed higher incidence of stress, depression and anxiety due to the education process itself on the top of the financial problems, social problems, family problem and others (Salam et al., 2013). It is noted that the stress perceived by medical students are higher than the stress perceived by students of the same age from other discipline (Tempski, et al., 2012). The high stressful condition causes change in their personal habits and lifestyle such as irregular eating habit, deficit sleep, substance abuse such smoking or alcohol consumption to cope with the academic stress and burden (Salam et al., 2013). The inadvertent negative effect on the physical and mental health exerted by medical education ultimately influences the QOL of medical students (Tempski, et al., 2012). Previous study has reported a poorer psychological well-being and social relationships among medical students compared to the age matched young people in the general population (Pagnin & de Queiroz, 2015). The



compromised psychological well-being and social relationships of the medical students affects the attitude of the individual and contribute to several adverse effects in the future and negative impacts on the students' professional development (Pagnin & de Queiroz, 2015). In their academic life, it influences their academic performance, academic dishonesty, and even can lead to alcohol and substance abuse (Amini et al., 2007). The various stressors that affect the QOL of medical students includes clinical work load, stress during patient interaction and handling, peer competition concerning educational brilliance, overwhelming information to learn, as well as difficulty in maintaining a work-life balance (Malibary et al., 2019; Chan and Koh, 2007).-

It is important to determine the quality of life of medical students to understand their general well-being as it affects their academic progression, future professional life and personal development. It informs the educational administrators about the students current physical, and mental health conditions and other relevant factors to guide them to take specific measures to improve the QOL of students. Improving QOL will help the students in their individual professional development and ultimately benefit future patients and community (Malibary et al., 2019; Qiu et al., 2019).

The Widad University College (WUC) is a private university located at Pahang district, Malaysia. The MBBS program in Faculty of Medicine, WUC follows a 5-year program, consists of a pre-clinical phase of two years and a clinical phase of three years' program (Salam et al., 2021). There is no previous study done related to QOL of medical students of WUC. Studying QOL of WUC medical students will help to establish the baseline QOL among WUC medical students. Understanding the apprehension related to this matter, specific programmes



and remedial measures can be implemented to educate WUC medical students towards an improved QOL. The objective of this study was to evaluate the QOL of medical students in WUC, Malaysia and to compare it with their sociodemographic characteristics.

2.0 MATERIALS AND METHODS

Study setting, population, sample, inclusion and exclusion criteria

This was a cross-sectional observational study carried out from April-June 2022 at WUC. The study was conducted by a group of year-4 WUC medical students under the guidance of supervisor/s during their community medicine posting. The study was done as a requirement of fulfilment of the posting. The study population were all the undergraduate medical students of WUC from year-1 to year-5 of academic session 2022. The sample size of this study was inclusive of all 107 medical students of WUC selected conveniently. The inclusion criteria comprised of all medical students of WUC who gave consent to participate in the study. Exclusion criteria consist of participant who were not responding or not available during the study period. Participation was anonymous and voluntary and consent was taken before participation.

Study Instrument

To collect the data, the questionnaire used in this study comprised of two parts. The first part consists of socio-demography to obtain information about year of study, gender, ethnicity, marital status, family problems, financial problems and residential status. The second part is the validated English version of the WHOQOL-BREF questionnaire (WHO, 2020). The WHOQOL-BREF is a brief version of the WHOQOL-100 questionnaire, and this brief version is comprised of 26 items under four domains of physical health, psychological health, social-relations, and environment (Alkatheri et al., 2020). The physical health domain includes items



on individual's overall perception of health, daily activities, mobility, energy, pain, sleep, rest, and medicine dependence. The psychological health domain measures self-image, negative thoughts, positive feelings, self-esteem, mentality, learning ability, memory concentration, religion, as well as mental status. The social relationships domain contains surveys on personal relationships, social support as well as sex life. The environmental health domain covers issues related to individual's overall perception of QOL, financial resources, safety, health and social services, living physical environment, opportunities to acquire new skills and knowledge, recreation as well as general environment (noise, air pollution, etc.) and transportation (WHO, 2020; Alkatheri et al., 2020). Among the 26 items, there were 8 items under physical health domain, 6 items under psychological health domain, 3 items under social relationship domain and 9 items under environmental health domain. Each of the item was rated utilizing a 5-point Likert scale, ranging from score-1 (very poor/ very dissatisfied/ not at all) to score-5 (very good/ very satisfied/ extremely satisfied). The possible range of scores were 8-40 for physical health, 6–30 for psychological health, 3–15 for social-relationship and 9–45 for environment health. The mean score of each domain was calculated and transformed into a linear scale that ranged 0-100, using a standard transformation method (WHOQOL User Manual 1998; Naseem et al., 2016). The domain scores are scaled in a positive direction and the higher scores indicating better QOL

Methods of data collection and analysis

To collect the data, the questionnaires were administered to the participants using printed forms after the lecture class. Students were explained about the purpose of the study and ensured about the anonymity. They were informed about the voluntary participation option and assured that the participation in this study will not hamper them in any way. Students were given approximately one-week time to complete the questionnaire. The questionnaires were



collected by the class representative of each year and data were compiled and analysed using IBM SPSS version-28.

Descriptive statistics for the socio demographic data were presented using frequency and percentage. The domain scores were presented using mean and SD. In each domain, the QOL scores of the socio demographic variables were compared via t-test and one-way analysis of variance (ANOVA). A significant difference was set at a *p* value of ≤ 0.05 .

3.0 RESULTS

Table 1 depicted the socio-demographic characteristics of medical students. Among 107 students responded, fourth year students (27.1%) were the highest in number followed by second year (26.2%), third year (19.6%), first year (15%) and fifth year (12.1%). Female (65.4%), Malay (93.4%) students were predominant. Around 22.4% of the students having family problem and were struggling from financial difficulties. More than half of the students resided in hostel (62.6%).



Sociodemographic	Number	Percent	
	Year-1	16	15
	Year-2	28	26.2
Year of study	Year-3	21	19.6
	Year-4	29	27.1
	Year-5	13	12.1
Condor	Male	37	34.6
Gender	Female	70	65.6
Marital status	Married	7	6.5
Walital Status	Unmarried	100	93.4
	Malay	100	93.4
Ethnicity	Chinese	5	4.7
	Indian	2	1.9
Family problems	Yes	24	22.4
Family problems	No	83	77.6
Einancial problems	Yes	24	22.4
Finalicial problems	No	83	77.6
Pasidanaa	Hostel	67	62.6
RESIDENCE	Non-hostel	40	37.4

Table 1: Sociodemographic characteristics of the respondents (n=107)

Table 2 showed the mean scores of QOL of participants in different domains and its association with their sociodemographic characteristics. Study year has shown significantly associated with all four domains of QOL. Marital status has significant relation with social relationship domain. Other sociodemographic characteristics did not show any significant association with QOL.



Table 2: Association of mean QOL scores of the participants with their sociodemographiccharacteristics in different domains obtained using WHOQOL- BREF scale

Sociodemographic Characteristics		Mean Scores of QOL in Different Domains with <i>p</i> Values							
		Physical Health Mean (SD)	p value	Psychological Health Mean (SD)	p value	Social relationship Mean (SD)	p value	Environme ntal Health Mean (SD)	p value
	Year-1	61.34(15.3)		63.04 (10.8)		66.17(7.5)		65.81(14.7)	
~ .	Year-2	56.47(11.6)	0.00*	62.5 (8.3)		68.42(5.0)	0.044	64.98(8.9)	
Study year	Year-3	51.94(16.3)	0.03*	51.79(4.6)	0.05*	53.58(6.6)	0.04*	56.47(10.8)	0.05*
	Year-4	57.88(13.4)		59.63(13.8)		64.33(3.3)		61.70(15.6)	
	Year-5	63.72(13.1)		66.67(12.9)		71.83(13.3)		68.81(11.9)	
Gender	Male	61.81(14.1)	0.47	61.5(10)	0.54	66.25(7.5)	0.51	62.52(12.2)	0.79
Gender	Female	59.97(12.8)		59.54(8.8)		63.58(4.2)		63.25(11.4)	
Marital	Married	65.63(17.5)	0.06	64.29(19.2)	0.48	90.5(12.5)	0.01*	67.05(15.6)	0.41
status	Unmarried	57(13.1)		59.91(8.8)		62.67(6.6)		62.72(11.4)	
	Malay	56.88(13.4)		59.58(9.2)		63.75(2.4)		62.28(11.9)	
Ethnicity	Chinese	75(11.9)	0.10	72.91(4.6)	0.33	75.00(13.3)	0.51	80.55(17.2)	0.16
	Indian	63.75(14.1)		69.17(11.3)		71.67(15.8)		70(8.05)	
Family	Yes	53(9.4)	0.10	60.79(11.3)	0.78	63.92(1.9)	0.86	31.33(4.6)	0.64
problems	No	58.91(14.7)		59.91(8.8)		64.5(4.2)		63.36(11.4)	0.01
Financial	Yes	58.97(11.9)	0.60	59.46 (11.7)	0.94	64.75(9.2)	0.25	59.5 (10.3)	0.48
problems	No	57.22(13.4)		60.67 (7.9)		65(4.2)		64.25(12.2)	
Pasidones	Hostel	58.16(12.8)	0.50	60.70(8.8)	0.68	62.58(7.5)	0.19	62.72(12.2)	0.78
Residence	Non-hostel	56.56(13.8)		59.38(9.6)		67.75(1.7)		63.47(10.8)	

 $*p \le 0.05$.

Table 3 showed the highest mean score was the social relationships (67.01) followed by environmental domain's (62.82) and psychological health (61.75), and the lowest score was in the physical health domain (59.68).

	Table 3:	Distribution	of mean scores	s in each domain	of the WHOQO	L-BREF Scale
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Domain	Mean Scores	SD
Physical Health	59.68	13.48
Psychological Health	61.75	10.02
Social Relationship	67.01	7.04
Environmental Health	62.82	11.73



4.0 DISCUSSIONS

This present study explored the QOL of the medical students of WUC, Malaysia. In our study, the highest mean score was obtained in the social relationship domain, followed by environmental health domain and psychological health and the lowest score was obtained in the physical health domain. Highest score in social relationship domain reflects the good social support and personal relationship of our students. On the other hand, low physical health domain reflects the less energy, fatigue, less active with less sleep and rest which could be related to the high workload. Our study has similarity with study done at Alfaisal University, Saudi Arabia (Shareef et al., 2015) with higher score in social relationship domain and lowest in Physical domain. This study revealed that based on their year-of-study, there was significant difference in the students' QOL in all four domains of physical health, social relationship, psychological health and environmental health of the of WHOQOL-BREF scale. This result signifies that year of study is an important indicator of the QOL of medical students. This is due to the fact that students are exposed to different workload due to different learning environment and curriculum at different phases of study. In this present study, year-5 students were found to have highest score in all domains while year-3 students presented with lowest score. Study in China showed significant differences in the psychological health and social relations domains based on year of study where third-year students had the lowest overall QOL scores in all domains which is similar to our findings. (Zhang et al., 2012). Another study in Portugal also showed similar results of lower score by year-3 students (Chazan et al., 2015). Year 3 students are in a transition status from pre-clinical to clinical year which makes them stressful due to the exposure to the new learning environment in clinical settings. Exposure to real patients without adequate knowledge, skills, and experience to deal with critically ill patients may make them anxious, overwhelmed and vulnerable (Zhang et al., 2012). It is found



in another study that early clinical exposure like short clinical rotation (2 week) and providing an overview of clinical courses in the pre-clinical period would help to obtain a better quality of life by year-3 students (Naseem et al., 2016).

On the other hand, this present study showed year-5 students were having higher scores in all domains revealing a better QOL among the senior students. This result is similar to a previous study on QOL on medical students in Malaysia (Roy et al., 2020). Study among health professions students in Saudi Arabia showed physical health domain score of QOL was drastically increased as the year of study advances (Alkatheri et al., 2020). This could be due to that year-5 students have better coping with the educational stressors, more familiar with the learning environment, well prepared for their curriculum. However, study in Pakistan showed different results where the final year students scored low together with first year students across all domain (Naseem et al., 2016). The high study load and work load during clinical clerkship, pressure of exam, pressure of graduation and to meet the expectation of the teachers as well as stress related to acquire a medical residency in a competitive environment contributed to the high stress in final year students (Naseem et al., 2016). Therefore, it is important to look into these matters by the educational managers to solve these problems. Regular feedback from students and mentoring and guidance on their academic progress as well as teaching them on coping strategies to alleviate the stress is necessary (Naseem et al., 2016).

In this present study, gender did not show any significant difference in QOL across all domains which is similar to the study by Malibary et al., (2019). One study in Brazil showed female students scored low than male students in physical and psychological well-being domain (Pagnin & de Queiroz, 2015) which is similar to study in Alfaisal University, Riyadh,



Saudi Arabia. (Shareef et al 2015)¹⁵. Another report using Short Form Health Survey (SF-36), showed that male students scored better compared to female students in quality of life which could be due to variable academic stress according to gender (Latas et al., 2014). Study in Pakistan showed male students have higher score compared to female in the Physical Health domain while females had significantly higher score in Social Relationship domain. (Naseem et al., 2016). This present study revealed that in WUC, gender has no effect on the QOL in medical students that signifies that the medical program and workload are similar across both genders. Similarly, in this present study, ethnicity also did not show any significant difference with their QOL across all domains which revealed ethnicity has no impact on the QOL of medical students.

Another important finding in this present study is that, marital status showed significant difference in the social relationship domain. Married students showed higher score in all domains and significantly higher score was obtained in the social relationship domain. This is similar to the study on health professionals where unmarried students were reported to have lower QOL in the social relationship domain (Alkatheri et al., 2020). In this present study, other socio demographic factors of family problem, financial problem, residence did not show any difference in the four domains of WHOQOL-BREF scale.

The limitation of this study is the cross-sectional nature of the study that reflects results on single point of time. The self-reported results used here that may have some biased results. Also, small sample size from one institute may not represent all medical students in Malaysia and may affect the generalizability of the findings. Study on large sample from different



institutes using qualitative method of data collection may be able to get a deeper understanding on the topic.

It is necessary to provide support to the affected students by the educational managers. Faculty plays a great role in this regard and regular faculty development in education is critical for developing and sustaining quality in higher education (Salam et al., 2022a). Thus, effective faculty development with adequate resources and a conducive educational environment and adequate support system is necessary for these students (Salam et al., 2022b).

5.0 CONCLUSION

This present study revealed, the highest score was obtained in the social relationship domain, while the lowest score was obtained in the physical health domain. This study demonstrates year of study has significant effect on the QOL of WUC medical students. Year-5 students were found to have highest score while year-3 students presented with lowest score in all domain. The high level of stress in year-3 could be the underlying reason of this difference. Married student also scored significantly high in the social relationship domain. Gender, ethnicity, family problem, financial problem, residence did not show any difference in the four domains of WHOQOL-BREF scale. Educational managers need to develop strategies and support system to counsel the students frequently to improve their QOL.



REFERENCES

- Alkatheri AM, Bustami RT, Albekairy AM, Alanizi AH, Alnafesah R, Almodaimegh H, et al. (2020). Quality of Life and Stress Level Among Health Professions Students. *Health Professions Education*, 6(2),201-2011.
- Amini M, Safaee Ardekani G, Golkar A, Jafari P, Hosseini Alhashemi HR, Moghadami M,
 Hosseini MM, Zahraee N. (2007). Quality of Life of Medical Students in Different
 Stages A Multi-Center Study. *Journal of Medical Education*, 11 (1,2), 13-19.
- Chan GC, Koh D. (2007). Understanding the psychosocial and physical work environment in a Singapore medical school. *Singapore Med J*, 48(2),166-171.
- Chazan AC, Campos MR, Portugal FB. (2015). Quality of life of medical students at the State University of Rio de Janeiro (UERJ), measured using Whoqol-bref: a multivariate analysis. *Cien Saude Colet*, 20,547-556.
- Costanza R, Fisher B, Ali S, Beer C, Bond L, Boumans R et al. (2007). Quality of life: An approach integrating opportunities, human needs, and subjective well-being. *Ecological Economics*, 61, 267–276.
- Group WH (1994). Development of the WHOQOL: rationale and current status. *Int J Ment Health*, 23,24–56.



- Pagnin D, de Queiroz V. (2015). Comparison of quality of life between medical students and young general populations. *Educ Health*, 28(3),209-212.
- Latas M, Stojkoviü T, Raliü T, Jovanoviü S, Špiriü Z, Milovanoviü S. (2014). Medical students` health-related quality of life – A comparative study. *Vojnosanit Pregl*, 71(8),751–756.
- Malibary H, Zagzoog MM, Banjari MA, Bamashmous RO, Omer AR. (2019). Quality of Life (QoL) among medical students in Saudi Arabia: a study using the WHOQOL-BREF instrument. BMC Medical Education, 19,344. <u>https://doi.org/10.1186/s12909-019-1775-8</u>.
- Naseem S, Orooj F. (2016). Ghazanfar H, Ghazanfar A. Quality of life of Pakistani medical students studying in a private institution. *J Pak Med Assoc*, 66(5),579–583.
- Qiu Y, Yao M, Guo Y, Zhang X, Zhang S, Zhang Y, Huang Y, Zhang I. (2019). Health-Related
 Quality of Life of Medical Students in a Chinese University: A Cross-Sectional Study. *Int J Environ Res Public Health*, 16(24),5165. doi: 10.3390/ijerph16245165
- Roy B, Naidu CR, Perumal V, Vallipuram P, Subramaniam J, Chandrasekaran SK et al. (2020).
 Quality of life (QoL) among medical students of clinical years in Perak state, Malaysia:
 A study using the WHOQOL-BREF instrument. *Quest International Journal of Medical and Health Sciences*, 3(2),24-32.



- Salam A, Yousuf R, Bakar SMA, Haque M. (2013). Stress among Medical Students in Malaysia: A Systematic Review of Literatures. *International Medical Journal*, 20(6),649-655.
- Salam A, Allaw BAQ, Begum H, Abdelhalim AT, Alsharkawy A, Hassan KM, Satwi S, Zainol J. (2021). Audit on clinical competency of fresh medical graduates in a Malaysian private university using Kirkpatrick level-1 evaluation model. *Education in Medicine Journal*, 13(4),57–70. <u>https://doi.org/10.21315/eimj2021.13.4.5</u>
- Salam A, Y.Surahaya MY, Zainol J. (2022a). Management of Teaching-learning in Classroom Setting. *Journal of Science and Management Research*, 9(1),126-133.
- Salam A, Yousuf R, Allhiani RF, Zainol J.(2022b). Continuous Assessment in Undergraduate
 Medical Education Towards Objectivity and Standardization. *International Journal of Human* and *Health* Sciences (IJHHS), 6(3),233-236.
 doi:http://dx.doi.org/10.31344/ijhhs.v6i3.453.
- Shareef MA, AlAmodi AA, Al-Khateeb AA, Abudan Z, Alkhani MA, Zebian SI, Qannita AS, Tabrizi MJ. (2015). The interplay between academic performance and quality of life among preclinical students. *BMC Medical Education*, 15,193. DOI 10.1186/s12909-015-0476-1.
- Tempski P, Bellodi PL, Paro HB, et al. (2012). What do medical students think about their quality of life? A qualitative study. *BMC Med Educ*, 12, 106. https://doi.org/10.1186/1472-6920-12-106



World Health Organization. (2020). WHOQOL: Measuring Quality of Life

https://www.who.int/tools/whoqol/whoqol-bref/docs/default-source/publishingpolicies/whoqol-bref/english-australian-whoqol-bref [Access date May 11th 2022

- WHOQOL User Manual. (1998, updated 2012). English only. Division of Mental Health and Prevention of Substance Abuse. World Health Organization, P52-56. Retrieved from: <u>http://apps.who.int/iris/bitstream/10665/77932/1/WHO_HIS_HSI_Rev.2012.03_eng.p_df</u>. Accessed on 1 August 2022.
- Zhang Y, Qu B, Lun S, Wang D, Guo Y, Liu J. (2012). Quality of life of medical students in China: a study using the WHOQOL-BREF. *PLoS One*, 7,e49714.