

Original Article

## Unraveling the Well-being Spectrum: A Study on Quality of Life among Undergraduate Medical Students

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### ABSTRACT

**Background:** Quality of life (QoL) is a comprehensive indicator for assessing the health and well-being of individuals. As future healthcare providers, medical students face unique challenges and demands throughout their rigorous academic journey, which can significantly impact their overall well-being. This research study aimed to measure the quality of life among undergraduate medical students.

**Methods:** This cross-sectional study was performed among 926 undergraduate medical students and interns from nine medical colleges of Bangladesh, who were selected using the convenience sampling method. The quality of life was assessed using selected items from the WHOQOL-BREF questionnaire.

**Results:** This study revealed that the scores for different items related to quality of life ranged from 2.46 to 3.56 on a 5-points scale, with only 2 items scored above 3.5 (70%). The social domain had the highest mean score (3.37 to 3.51) and the environmental domain had the lowest mean score (2.46 to 3.18).

**Conclusion:** The results of this study indicate that the overall quality of life of the students was not satisfactory. The participants' ratings for different aspects of quality of life varied, with some areas being positively rated and others needing improvement.

**Keywords:** Quality of life, Undergraduate medical students.

### INTRODUCTION

The World Health Organization (WHO) has defined Quality of Life (QoL) as an individual's subjective perception of their position in life, taking into account the cultural and value systems in which they live, as well as their goals, expectations, standards, and concerns.<sup>1</sup> QoL is a multifaceted concept that encompasses various dimensions, including psychological health, physical well-being, social relationships, and environmental conditions.<sup>2</sup> Despite being trained to attend

to these aspects during their medical studies, health professionals themselves may experience a decline in their QoL throughout their time in medical school.<sup>2</sup>

The pursuit of a medical degree is a challenging yet rewarding journey that requires considerable dedication, commitment, and perseverance. Numerous studies have reported decreased QoL scores among medical students during their training years, leading to potential adverse effects such as adopting unhealthy lifestyles, experiencing psychological problems, academic struggles, and other negative

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impacts on their professional development.<sup>3-8</sup> Medical students face a range of stressors that can significantly influence their QoL, including the challenging transition from basic to clinical years, the demands of patient interactions, intense peer competition for academic excellence, the overwhelming amount of new information to learn, and the difficulty of balancing academic responsibilities with daily life activities.<sup>9-13</sup>

Notably, studies have revealed alarming levels of depression, anxiety, and stress among medical students in various regions, underscoring the importance of addressing their mental health.<sup>14,15</sup> Furthermore, medical students have been found to experience higher levels of stress compared to students in other academic programs, which can negatively impact their QoL.<sup>16-18</sup> Conversely, those students who maintain good physical and mental health tend to fare better in their academic environment, emphasizing the crucial role of overall well-being.<sup>19</sup> Research from Saudi Arabia highlights that students who perform better academically and demonstrate higher QoL scores tend to have better health overall.<sup>20</sup> Assessing the QoL of medical students is essential for gaining insights into their overall well-being and guiding educational administrations in developing context-sensitive interventions that can promote students' QoL. By addressing specific challenges and implementing appropriate support systems, these interventions can potentially prevent psychological problems and other pitfalls that threaten students' professional development. Ultimately, improving the QoL of medical students can positively impact the quality of care provided by future healthcare professionals.<sup>2,21</sup>

## **METHODS**

This study cross-sectional descriptive study was conducted from July 2022 to June 2023 (01 year) after approval from Institutional Review Board (IRB) of Centre for Medical Education (CME) as a part of thesis of Masters in Medical Education (MMEd) under Bangabandhu Sheikh Mujib Medical University (BSMMU). Data were collected from purposively selected 926 undergraduate medical students and interns from conveniently selected nine medical colleges of Bangladesh after getting permission from concerned authorities and respondents. Their responses regarding extent of internet use were collected in a self-administered semi structured questionnaire. The questionnaires were distributed to the undergraduate medical students and interns and were collected with responses face to face. Data was manually checked and edited after collection, and then processed and analyzed by using Statistical Package for Social Science Version 25 (SPSS-25).

To achieve the purpose of the present study, the instrument is divided into two sections. First section consists of background information of participants. Second section was used to assess the quality of life of medical students. In this study, world health organization quality of life questionnaire-short version (WHOQOL-BREF) was used. It is 26 items on a five-point Likert scale. The 26 items are divided as follows: Two global items about quality of life and health, seven items about physical health, six items about psychological health, three items about social relationship and eight items about environment. The higher the score, the better quality of life.<sup>22</sup> Sixteen items of WHOQOL-BREF were used to assess the

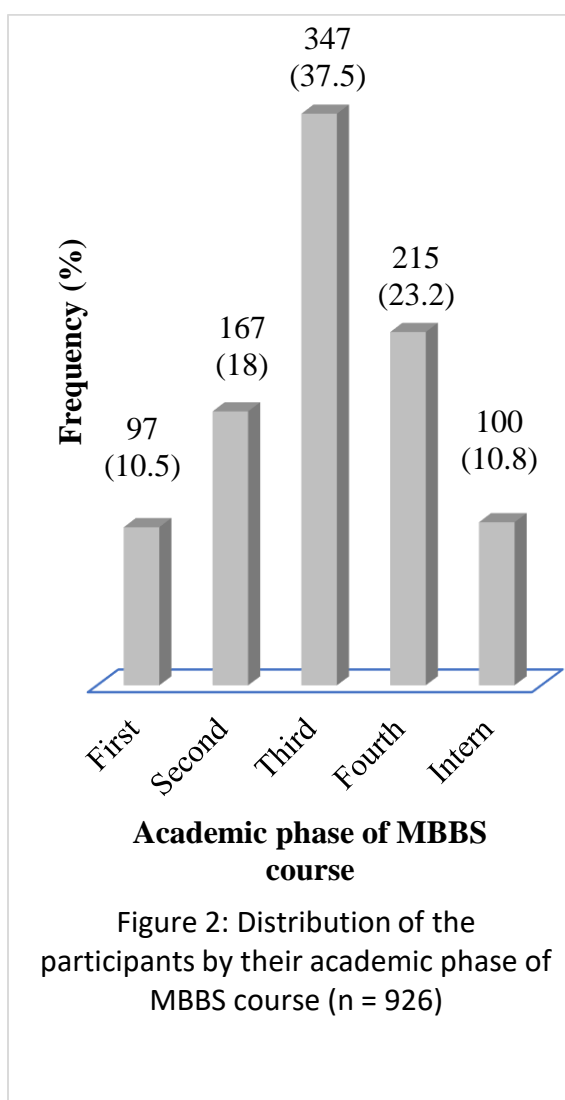
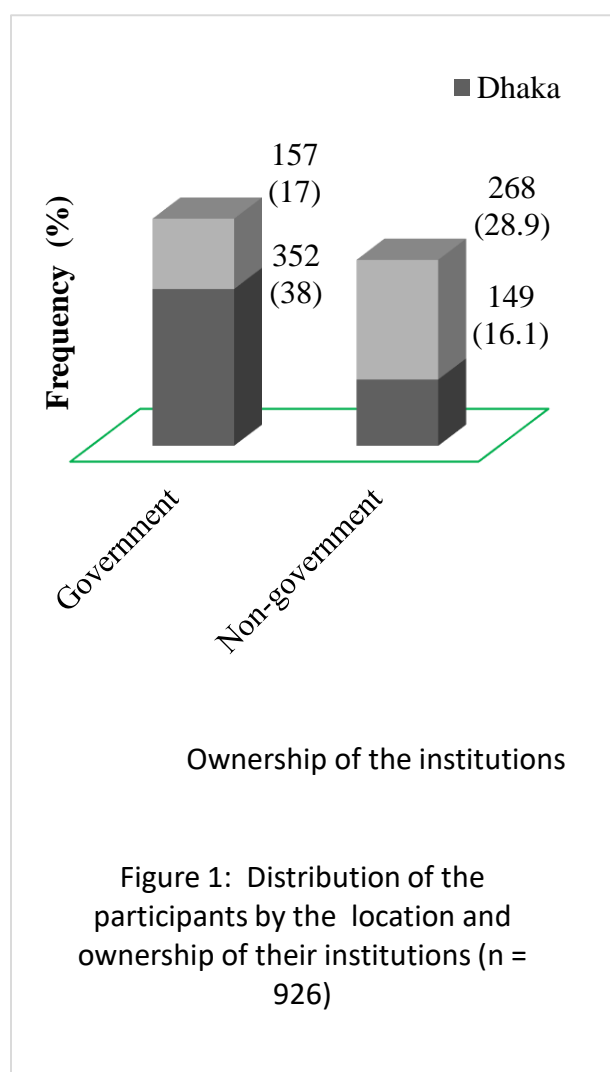
quality of life of undergraduate medical students in this study. Bangla translation has been used along with English language in the WHOQOL-BREF questionnaire sections so that students can easily understand them.

**RESULTS**

This study found that out of 926 participants, 56.3% were female and 43.7% were male. And they belonged to first (10.5%), second (18%), third (37.5%) and fourth (23.2%) academic phase of MBBS

government (45%) medical institutes, and they were studying/working at Dhaka (54.1%) and outside of Dhaka (45.9%) (Figure 1). The participants had different categories of marital and living status.

Table 1 shows the distribution of the participants' quality of life related to their physical domain as per selected items of WHOQOL-BREF. It was found that out of 5-point scales the mean scores of these issues were within 2.86 to 3.56.



course, and 10.8% belonged to internship training phase (Figure 2). The participants were from both government (55%) and non-

Table 1: Distribution of the participants related to physical domain of the quality of life (n=926)

Questions related to physical domain of quality of life	Frequency (%) of Level of agreement with corresponding scores					Mean(±SD)
	NAA=1	AL=2	M=3	Mo=4	C=5	
Do you have enough energy for everyday life?	86(9.3)	197(21.3)	385(41.6)	186(20.1)	72(7.8)	2.96(1.047)
Are you able to accept your bodily appearance?	62(6.7)	117(12.6)	250(27)	231(24.9)	266(28.7)	3.56(1.215)
<i>NAA = Not at all =1, AL= A little =2, M = Moderately = 3, Mo = Mostly = 4, C = Completely =5</i>						
Questions related to physical domain	VD=1	DS=2	NSNDS=3	S=4	VS=5	Mean(±SD)
How satisfied are you with your sleep?	111(12)	240(25.9)	300(32.4)	214(23.1)	61(6.6)	2.86(1.103)
Have satisfied are you with your capacity for work?	62(6.7)	182(19.7)	385(41.6)	258(27.9)	39(4.2)	3.03(0.955)
<i>VD = Very dissatisfied, DS=Dissatisfied, NSNDS = Neither satisfied nor dissatisfied, S = Satisfied, VS = Very satisfied</i>						

Table 2: Distribution of the participants related to their psychological domain of the quality of life (n=926)

Questions related to psychological domain of the quality of life	Frequency (%) of Level of agreement with corresponding scores					Mean(±SD)
	NAA=1	AL=2	MA=3	VM=4	Ex=5	
To what extent do you feel your life to be meaningful?	69(7.5)	129(13.9)	350(37.8)	243 (26.2)	135(14.6)	3.27(1.102)
How well are you able to concentrate?	62(6.7)	179(19.3)	498(53.8)	154 (16.6)	33(3.6)	2.91(0.873)
<i>NAA = Not at all, AL= A little, MA = Moderate amount, VM = Very much, Ex = An extreme amount</i>						
Questions related to psychological domain	VD=1	DS=2	NSNDS =3	S=4	VS=5	Mean(±SD)
How satisfied are you with yourself?	67(7.2)	140(15.1)	310(33.5)	316(34.1)	93(10)	3.25(1.06)
<i>VD = Very dissatisfied, DS=Dissatisfied, NSNDS = Neither satisfied nor dissatisfied, S = Satisfied, VS = Very satisfied</i>						
Questions related to psychological domain	A=1	VO=2	QO=3	S=4	N=5	Mean(±SD)

How often do you have negative feelings such as blue mood, despair, anxiety, depression?	110(11.9)	288(31.1)	343(37)	161(17.4)	24(2.6)	2.68(0.980)
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A= Always, VO = Very often, QO= Quite often, S= Seldom, N=Never

Table 3: Distribution of the participants related to environmental domain of the quality of life (n=926)

Questions related to the environmental domain	Frequency (%) of Level of agreement with corresponding scores					Mean(±SD)
	NAA=1	AL=2	MA=3	VM=4	Ex=5	
How safe do you feel in your daily life?	65(7)	155(16.7)	420(45.4)	207(22.4)	79(8.5)	3.09(1.003)
How healthy is your physical environment?	138(14.9)	255(27.5)	386(41.7)	126(13.6)	21(2.3)	2.61(0.972)
NAA = Not at all, AL= A little, MA = A moderate amount, VM = Very much, Ex = An extreme amount						
Questions related to the environmental domain	NAA=1	AL=2	M=	Mo	C	Mean(±SD)
Have you enough money to meet your needs?	102(11)	139(15)	341(36.8)	218(23.5)	126(13.6)	3.14(1.163)
To what extent do you have the opportunity for leisure activities?	149(16.1)	391(42.2)	232(25.1)	123(13.3)	31(3.3)	2.46(1.019)
NAA = Not at all =1, AL= A little =2, M = Moderately = 3, Mo = Mostly = 4, C = Completely =5						
Questions related to environmental domain	VD=1	DS=2	NSNDS=3	S=4	VS=5	Mean(±SD)
How satisfied are you with the condition of your living place	93(10)	153(16.5)	291(31.4)	274(29.6)	115(12.4)	3.18(1.153)
VD = Very dissatisfied, DS=Dissatisfied, NSNDS = Neither satisfied nor dissatisfied, S = Satisfied, VS = Very satisfied						

Table 2 shows the distribution of the participants' quality of life related to psychological domain. It was found that out of 5-point scales the mean scores of these issues were within 2.68 to 3.27.

Table 3 shows the distribution of the participants' quality of life related to environmental domain. It was found that out of 5-point scales the mean scores of these issues were within 2.46 to 3.18.

Table 4: Distribution of the participants related to social domain of the quality of life (n=926)

Questions related to the social domain	Level of agreement with corresponding scores					Mean(±SD)
	Frequency (%)					
	VD=1	DS=2	NSNDS=3	S=4	VS=5	
How satisfied are you with your personal relationship?	64(6.9)	98(10.6)	226(24.4)	375(40.5)	163(17.6)	3.51(1.109)

How satisfied are you with the support you get from your friends? 67(7.2) 102(11) 304(32.8) 328(35.4) 125(13.5) 3.37(1.076)

VD = Very dissatisfied, DS=Dissatisfied, NSNDS = Neither satisfied nor dissatisfied, S = Satisfied, VS = Very satisfied

Table 5: Distribution of the participants' quality of life related to the life enjoyment (n=926)

Questions related to life enjoyment	Level of agreement with corresponding scores					Mean(±SD)
	Frequency (%)					
	NAA=1	AL=2	MA=3	VM=4	Ex=5	
How much do you enjoy life	94 (10.2)	157 (17)	426 (46)	161 (17.4)	88 (9.5)	2.99 (1.063)

NAA = Not at all, AL= A little, MA = Moderate amount, VM = Very much, Ex = An extreme amount

Table 4 shows the distribution of the participants' quality of life related to social domain. It was found that out of 5-point scales the mean scores of these issues were within 3.37 to 3.51.

Table 5 shows the distribution of the students' quality of life related to life enjoyment. It was found that out of 5-point scales the mean score of this issue was 2.99

### DISCUSSION

In the physical domain (Table 1), the highest mean score was observed for the item related to bodily appearance, indicating that participants generally felt positive about their body image. On the other hand, the item related to energy levels had the lowest mean score, suggesting that a significant proportion of participants faced challenges in managing their energy for daily activities. Overall, the physical domain's mean score was 2.96, indicating a moderate level of quality of life in this aspect. Similarly, Biswas et al. reported a moderate level of physical domain of quality of life among undergraduate medical students of India.<sup>23</sup> Regarding the psychological domain (Table 2), the item with the highest mean score was related to the ability to concentrate,

suggesting that most participants reported being able to concentrate well. However, a significant proportion (31.1%) reported experiencing negative feelings such as anxiety and depression quite often or very

often. It may be due to medical students undergo significant stress and pressure related to academic performance, clinical responsibilities, and future career prospects. A study conducted in China also showed impairment in the psychological domain, which is consistent with this study.<sup>21</sup>

The environmental domain (Table 3) focused on aspects like safety, physical environment, financial sufficiency, and opportunity for leisure activities. Findings of this study aligned with the findings of Henning et al. who reported lower environmental domain of quality of life among medical students studying in New Zealand.<sup>17</sup>

The social domain's (Table 4) mean score was 3.44, indicating a moderately positive social quality of life. These findings were consistent with a study among medical students of Saudi Arabia in 2019 using the WHO-BREF tool.<sup>24</sup> The distribution indicates the importance of social connections and support in students' quality of life. It may be due to medical students often form close

bonds with their peers during their rigorous and demanding training. They share similar experiences, challenges, and goals, which can foster a strong sense of camaraderie and social support. This positive social environment may contribute to the higher mean score in the social domain, reflecting a sense of belonging and satisfaction with their social relationships.

Table 5 presents the distribution of participants' responses related to life enjoyment. And the mean score for this item was 2.99, indicating a moderate level of life enjoyment among the participants.

Comparing these findings with existing literature on quality of life among students, it is important to consider contextual factors and variations in assessment tools. However, several studies have explored similar domains and reported findings relevant to student well-being. For example, a study by Fatehi et al. examined the quality of life among medical students using the WHOQOL-BREF questionnaire.<sup>25</sup> The study found that medical students faced challenges in multiple domains, including physical health, psychological well-being, social relationships, and environmental factors. These findings align with the distribution of scores in the given data.

The finding that medical students had the highest mean score in the social domain, followed by the physical domain, psychological domain, and the lowest score in the environmental domain of quality of life. A study in Pakistan revealed similar results, where the lowest reported mean score was that of the environmental domain.<sup>26</sup> The lower mean score in the environmental domain suggests that medical students face challenges in their living environment and financial situations. The demanding nature of medical education, long hours, and limited time for leisure

activities might contribute to a perception of less satisfaction with their living conditions and opportunities for leisure activities. On the other hand, a study in Saudi Arabia revealed the highest mean score was the environmental domain.<sup>24</sup> Many factors can explain this difference, such as the stable extrinsic environment in Saudi Arabia, both politically and economically, and well-balanced cohesive society supporting students.

Overall, the study's findings indicate that participants had a moderate level of quality of life across the assessed domains. The social and physical domain scored slightly higher than the psychological and environmental domains, indicating better overall well-being in these areas. The study provides valuable insights into various aspects of quality of life and highlights potential areas of improvement for interventions and support programs. However, it's essential to consider that the quality of life can be influenced by various individual, social, and environmental factors, and a comprehensive approach is needed to address these factors for improving overall well-being. Further research and targeted interventions may be required to enhance specific aspects of quality of life for the participants.

## **CONCLUSION**

This research investigated the quality of life of participants using the WHOQOL-BREF questionnaire, encompassing four domains: physical, psychological, environmental, and social, along with a life enjoyment assessment. Findings suggest that participants experienced moderate levels of quality of life across these domains. In the physical domain, participants generally held positive views about their bodily appearance, while energy levels posed



challenges for many. The psychological domain revealed a capacity for concentration and moderate satisfaction with oneself, but also a notable prevalence of negative feelings like anxiety and depression. The environmental domain indicated a moderate perception of safety and physical environment satisfaction, although opportunities for leisure activities were seen as lacking. The social domain exhibited higher satisfaction with personal relationships compared to support from friends, indicating the significance of social connections for participants. Life enjoyment was assessed at a moderate level. Notably, social and physical domains scored higher than psychological and environmental domains. These findings underscore the need for comprehensive interventions and support programs to address the multifaceted influences on participants' well-being. Tailored interventions and further research are crucial to enhance specific aspects of quality of life for participants and promote their overall well-being.

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