

Health related quality of life of medical students in Trichy, Tamil Nadu

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Abstract

Introduction: Medical students are exposed to highly stressful environments. These young individuals are expected to put in long durations of study, attend lectures, visit the hospital to see patients and write exams. The quality of life of a medical student directly impacts his/her outlook towards the medical field and thus shapes the kind of doctor that he/she becomes.

Methods: Cross sectional study was conducted with a structured questionnaire- 36-Item Short Form Health Survey (SF-36). Designated questions were combined to arrive at eight domains of health related quality of life, namely- Physical functioning, Role limitations due to physical health, Role limitations due to emotional problems, Energy/fatigue, Emotional well-being, social functioning, Pain and General health. Again these eight domains were categorised into two components: Physical component and Mental Component.

Results: A total of 251 students were studied. Of these 61.1% were boys. The mean (SD) age of the study population was 19.83 (0.97) years. The total mean SF-36 score among the medical students was found to be 67.45 (15.2). The mean scores for physical component was found to be 70.27 (16.61) and the mental component was found to be 64.59 (18.07).

Conclusion: The quality of life measured by SF-36 showed that the medical students have reported favourably for all domains assessing the quality of life. There is no significant difference in the total SF-36 score according to the year/semester they are studying.

Keywords: Physical, Mental, Health Status, Emotional, Under Graduate.

Introduction

The World Health Organisation (WHO) defines Quality of Life as a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life.⁽¹⁾ Quality of life is a subjective term/ measure. It cannot be directly measured like any physical attribute like weight, height, etc. or like any biochemical attribute like serum cholesterol, blood sugar, etc. It needs to be assessed based on sense of well-being and general measures of how happy or satisfied they are with their life as a whole.⁽²⁾

Health related quality of life can be assessed by the responses given by the individual to questions on physical abilities, emotional aspects and the level of energy. Quality of life is very important for students well-being and it has an impact on academic achievement.⁽³⁻⁵⁾ It affects their ability to learn, ability to participate actively in all the curricular and extracurricular activities and ultimately it shapes their future. Undergraduate medical education and training is stressful and demanding. The quality of life of a medical student directly impacts his/her outlook towards the medical field and thus shapes the kind of doctor that he/she becomes.⁽³⁾ These young individuals are expected to put in long durations of study, attend lectures, visit the hospital to see patients and write exams. They are required to assimilate large volumes of information in relatively short periods of time. Frequently their personal and family lives are compromised. These professional obligations are met by ignoring personal health, exercise and happiness.⁽⁶⁾ Numerous studies have consistently shown that medical students are severely stressed and

face numerous emotional, mental and physical problems. International studies have shown the adverse effects of lack of sleep, stress, ill health, fatigue, depression,⁽⁷⁻⁹⁾ etc. On the quality of life of medical students. The medical field garners great respect among the populace. Numerous students are now opting to become doctors. Their good health is vital to ensure the good health of a nation.

Studies from India have tried to identify the deficits in the health status of our future physicians and surgeons; however there are none that compare the health related quality of life of students in different years of medical education. As professors who closely interact with medical students, we find ourselves in an ideal position to study and effect favourable changes in the quality of life of medical students from different years of MBBS. This study was thus undertaken to study the health related physical and mental dimensions of quality of life of medical students in their early years of medical education i.e. second and third years.

Materials and Methods

A cross sectional study was conducted among all second and third year MBBS students (119 from the second year and 132 from the third year) of K.A.P. Viswanatham Government Medical College, Trichy district in Tamil Nadu state during the year 2016. The calculated sample size was found to be 205 using a mean (SD) score of 59.55(16.48) based on a study by Pagnin D. et. al.⁽⁹⁾ A pre-validated, pre tested, structured questionnaire- 36-Item Short Form Health Survey (SF-36) developed by RAND was used for this purpose.⁽¹⁰⁾

This questionnaire is designed to assess both negative and positive aspects of health. The scoring has been suitably modified so that a score of 0 indicates the worst possible quality of life and 100 the best. The students were explained the purpose of the study and their consent for participation was obtained. While answering the questionnaire the students were asked to choose the option that they felt was their best suitable answer from the options provided. Demographic characteristics were collected separately. The answers were recoded and scored on a scale of 0 to 100 as per the guidelines provided in the scoring instructions.⁽¹¹⁾ Designated questions were combined to arrive at eight domains of health related quality of life, namely- Physical functioning, Role limitations due to physical health, Role limitations due to emotional problems, Energy/fatigue, Emotional well-being, Social functioning, Pain and General health.⁽¹²⁾ Again these eight domains were categorised into two components: Physical component (Physical Function, Role Limitations due to Physical Health, Body Pain and General Health) and Mental

Component (Energy/Fatigue, Social Functioning, Role Limitations due to Emotional Problems, Emotional Well-being). Cronbach's alpha for each domain was 0.93, 0.84, 0.83, 0.86, 0.90, 0.85, 0.78 and 0.78 respectively.⁽¹¹⁾ The mean value for each group denotes the quality of life for that particular domain. Results are described as mean (SD) and percentages. Independent sample 't' test was used to compare means. P value of ≤ 0.05 was considered as significant.

Results

A total of 251 students were studied. Of these 61.1% were boys. The mean (SD) age of the study population was 19.83 (0.97) years. 94.3% of the students were hostellers (n=231). The total mean SF-36 score among the medical students was found to be 67.45 (15.2). In the physical domain, the mean score was 70.27 (16.61); the mean score for the mental component was found to be 64.59 (18.07).

Table 1: Mean scores for domains of Quality of Life

Domain	Year	Mean (SD)	t value*	P value
Physical functioning	III	78.96 (20.35)	1.98	0.04
	II	73.35 (24.05)		
Role limitations due to emotional problems	III	61.49 (38.31)	0.12	0.90
	II	60.88 (41.65)		
General Health	III	59.51 (20.95)	1.08	0.28
	II	62.16 (17.54)		
Fatigue	III	63.37 (16.97)	0.06	0.95
	II	63.24 (15.82)		
Emotional well-being	III	67.51 (14.87)	0.87	0.38
	II	65.68 (17.87)		
Role limitations due to physical health	III	72.29 (34.36)	0.84	0.40
	II	68.63 (34.39)		
Social functioning	III	65.91 (21.57)	1.08	0.28
	II	68.80 (20.77)		
Pain	III	72.19 (21.78)	1.07	0.28
	II	75.04 (20.10)		
Physical Component	III	70.74 (16.84)	0.449	0.65
	II	69.79 (16.37)		
Mental Component	III	64.57 (17.59)	0.012	0.991
	II	64.60 (18.54)		
Total Score	III	67.65 (15.36)	0.225	0.822
	II	67.22 (15.08)		

*Independent sample 't' test

Second year students fared better than the third year medical students in terms of their general health, had better social activity and they complained of lesser pain. Students from both, second and third year had similar mean scores for other domains of quality of life. Students of the third year were found to have significantly better physical function than those in the second year. There

was no significant difference between the two groups with respect to the other domains. Also, third year medical students had better mean scores in all domain except general health, social functioning and pain (Table 1). There was no significant difference in the quality of life of day scholars as compared to hostellers ($p > 0.05$).

Table 2: Sex wise distribution of domain scores

Domain	Male (%)		Female (%)	
	<50	>50	<50	>50
Physical functioning	23.2	76.8	8.1	91.9
Role limitations due to emotional problems	43.6	56.4	34.9	65.1
General Health	21.1	78.9	26.2	73.8
Fatigue	18.9	81.1	18.1	81.9
Emotional well-being	20.0	80.0	14.8	85.2
Role limitations due to physical health	26.3	73.7	16.8	83.2
Social functioning	16.8	83.2	10.7	89.3
Pain	16.8	83.2	17.4	82.6

Overall, the mean scores for physical functioning and pain appeared to be better among both genders as compared to other domains. With the exception of pain and general health, females had better mean scores than males in all domains. Almost half the male study population (43.6%) complained of symptoms leading to role limitation due to emotional problems, whereas 34.9% of females had the same complaints. Across all other domains, majority of the males and females had a mean score above 50 (Table 2).

Females had significantly better physical function than males ($t= 3.502$, $p=0.001$) the mean scores (SD) for the same were: males- 70.10(25.61) and females- 80.69 (18.29). However the quality of life with respect to the other domains did not vary significantly for males and females.

Discussion

The present study was aimed to explore the quality of life of medical students. Our study has shown that majority of the students have reported favourably for all domains assessing the quality of life. The mean scores for all domains are above the 50% mark for both second and third year medical students. As found in another study by Das P et al.⁽¹³⁾ the students of all semesters had a similar pattern of score distribution except for physical function. Quality of life was better in second year when compared to other year medical students.⁽⁸⁾ The overall SF-36 score of medical students in the present study was 67.4 (15.2) which is slightly lower than a study⁽¹²⁾ in Serbia 73.3 (15.2). In the present study the Physical domain score was found to be high compared to the study Pagnin D. et al (59.55±16.48).⁽⁹⁾ As found in other studies the physical component score was found to be higher than other domains.^(12,14)

The proportion of students who feel that their role is limited due to emotional problems is high. This is comparable to a study by Namita Deka et al. in Assam which found a strong correlation between emotional distress and poor quality of life.⁽¹⁵⁾ Studies have shown that medical education has a negative impact on students' health and thereby their quality of life.⁽¹⁶⁾ However a study by Latas, M et al.,⁽¹²⁾ found that the total score was favourably high among medical students. Some studies have documented a positive influence of

medical education on the quality of life of medical students by improving self-esteem, granting meaning and purpose to life.⁽⁴⁾ But alongside these students have frequently reported numerous adverse effects such as stress and exhaustion, financial hardship and other sacrifices.⁽¹⁷⁾

In the present study the mean score was found to be high among females than males across all the domains of health related quality of life except body pain and general health. This is in contrast to a study done by Chazan A.C.S. et al., where the lowest Quality of Life scores were observed among women.⁽¹⁸⁾ In the present study, there is no significant difference in total SF-36 score according to the year/semester they are studying. Heidari M revealed that, increase in educational level decreases the quality of life among students at all four domains.⁽¹⁹⁾ This lack of difference could probably be attributed to the importance given to extracurricular activities such as sports and cultural which play an important role in alleviating stress. Raj, S. R., et al. revealed significant role limitations due to physical and emotional problems as years of study increase.⁽²⁰⁾ Our study found no significant difference in the quality of life of students staying at home and in hostels. This is comparable to another study by Das P et al., in Kolkata wherein students living in hostels and homes had a similar score.⁽¹³⁾

A limitation in the present study was that only second and third year medical students were included.

Conclusion

The quality of life as measured by SF-36 showed that the medical students have reported favourably for all domains assessing the quality of life. The symptoms of mental distress were lower than those reported in other similar studies.^(8,15) The medical curriculum is one of the most rigorous, demanding and taxing curriculums among professional courses. Despite being exposed to the same, our study has found that the second and third year medical undergraduates enjoy a fairly good quality of life. Numerous factors may contribute to their good health such as their involvement in sports, having good friendships, an eagerness to learn, receptive parents, etc. But there is still scope for improvement in the score. Yoga, which has recently been introduced in the college,

may further improve the quality of life. As there is a significant positive correlation between spirituality and quality of life,⁽⁸⁾ the same may be encouraged to improve the score further. The role of a student counsellor will also be of immense help to the few students who have certain emotional problems. Successful implementation of mentorship program will also improve the emotional well-being and thereby the quality of life of students. We recommend further research to explore and implement interventional strategies to improve the quality of life of medical students.

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