



Original Research Article

Quality Of Life in Medical Students of Andhra Medical College, Visakhapatnam

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ABSTRACT

Context: Quality of life (QOL) is the subjective component of well being. It is a composite measure of physical, mental and social well being as perceived by each individual or group of individuals. As QOL is one of the major factors that will influence performance of students, we tried to assess and compare QOL in medical students. Aims: To measure QOL of second & final MBBS students& to identify differences in QOL among medical students based on gender, nativity, residence and exercise habits. Settings and Design: It was a cross sectional study conducted at Andhra Medical College, Visakhapatnam.

Methods and Material: Study was conducted from October to December 2013, among 250 voluntarily participated second and final MBBS students using WHOQOL-BREF questionnaire.

Statistical analysis used: Range and Mean scores of various domains of QOL were calculated and differences in the mean scores were tested.

Results: Mean values& ranges of QOL were, Physical domain 71.3(32.1-100), psychological domain 63.3(16.6-95.8), Social domain 70.1(0-100), Environmental domain 67.7(28.1-96.8), Overall Quality of Life 75.1(0-100), General Health72.5 (25-100). Rural area students had better physical& psychological domain than urban area students. Significant differences were not seen among those residing at Home or Hostel and also among those doing or not doing physical exercise for half an hour a day.

Conclusions: Medical students were weak in psychological domain among the four domains of QOL. Urban area medical students are weaker in physical and psychological domains when compared with rural area students.

Keywords: Quality of Life, Well-being, Medical students, WHOQOL-BREF

INTRODUCTION

Quality of life is the subjective component of well-being. It is a composite measure of physical, mental and social well-being as perceived by each individual or group of individuals. ⁽¹⁾ According to World Health Organization, Quality of Life was defined as “individual’s perceptions of their

position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns”. ⁽²⁾ It can be evaluated by assessing a person’s subjective feelings of happiness or unhappiness about the various life concerns. The WHOQOL-100 quality of life assessment was

developed by the WHOQOL group with fifteen international field centres, simultaneously, in an attempt to develop a quality of life assessment tool that would be applicable cross culturally. But it was too lengthy for practical use. The WHOQOL-BREF version has therefore been developed to provide a short form quality of life assessment that looks at domain level profiles which had a total of 26 questions, one item from each of the 24 facets contained in WHOQOL-100 and two items from the Overall Quality of Life and General Health facet. ⁽³⁾

Medical education is long in duration and consists of great academic pressure. Compared to the general population, medical students are more susceptible to stress, burning out, depression and anxiety. ⁽⁴⁾ Assessing the quality of life of medical students can inform us of their perspectives on health, current health conditions, and relevant factors. In the long run, promoting students' well-being will benefit patients, the public, and the profession, in addition to the individual. In this context, this study was conducted to assess and compare QOL in medical students based on gender, nativity, residence and exercise habits.

MATERIALS AND METHODS

It was a cross sectional descriptive study conducted at Andhra Medical College, Visakhapatnam, Andhra Pradesh, during the period from October 2013 to December 2013 with the help of WHOQOL-BREF, Generic Version. The main objectives of the study were to measure quality of life of medical students in 2nd and final MBBS students and to identify differences in Quality Of Life among medical students based on gender, nativity, and residence and exercise habits. An agreement was made with WHOQOL group and permission was obtained to use WHOQOL BREF tool, after that data was collected from 3rd, 5th, 7th and

9th semester medical students. Students who attended to college on data collection day were included and those students not willing to participate were excluded from the study. Later data was analysed after deletion of incompletely filled forms.

RESULTS

A total of 250 questionnaires were distributed to 3rd, 5th, 7th and 9th semester voluntarily participated medical students and received 205 filled forms in return with 82% response rate. Among 205 participants, 12 students filled the form incompletely and their data was excluded from study based on the missing data criteria given in WHOQOL BREF Instructions manual. Among the remaining 193 students 38 were 2nd MBBS students and 155 were final MBBS students. 79 were male students and 114 were female students. 64 students had rural area background and 129 students had urban area background as their native area. 114 students were residing at hostel and 79 students were coming from home to college. 69 students were doing daily physical exercise at least half an hour per day and 124 students were not doing daily exercise. Mean Age of study participants was 20.74 years.

Calculation of facets mean score and four domain scores: Scoring of each facet was 0-1 Very poor, 1-2 Poor, 2-3 neither poor nor Good, 3-4 Good, 4-5 very good. Most of facets mean score fell in the range 3-4, i.e., good. Maximum mean score was observed for Dependence on medical substances and medical aids, Minimum mean score was observed for Thinking, learning, memory and concentration.

Females had better perception than male medical students regarding Overall Quality of Life, Sexual activity & financial resources. Rural area students had better perception than urban area students in the facets like Energy & fatigue, Work capacity,

positive feelings, Spirituality, religion and personal beliefs, self esteem. Hostel students had better perception in the facets like Pain & discomfort, Work capacity, Negative feelings, whereas home group students had better perception in Home environment & Health and Social care: Accessibility and quality. Students who are doing exercise daily for half an hour had better perception in Negative feelings. 2nd MBBS students had better perception in Sexual activity, whereas final MBBS students had better perception in General health, Bodily image and appearance, Health and Social care: Accessibility and quality, Transport. Later domain scores were calculated and transformed to 0-100 scale by using formulas suggested by WHOQOL-BREF instructions manual. ⁽²⁾

Physical domain=

$(\text{MEAN}.6(f3,f4,f10,f15,f16,f17,f18))*4.$

Psychological domain =

$(\text{MEAN}.5(f5,f6,f7,f11,f19,f26))*4.$

Social domain = $(\text{MEAN}.2(f20,f21,f22))*4$

Environmental domain =

$(\text{MEAN}.6(f8,f9,f12,f13,f14,f23,f24,f25))*4.$

Overall = $(\text{MEAN}.2(f1,f2))*4$

Transformed Scores to 0 -100 scale

Physical Domain = $(\text{Physical domain} - 4)*(100 / 16).$

Psychological Domain = $(\text{psychological domain} - 4)*(100 / 16).$

Social Domain = $(\text{Social domain} - 4)*(100 / 16).$

Environmental Domain = $(\text{Environmental domain} - 4)*(100 / 16).$

Overall Quality of Life = $(f1 - 1)*(100 / 4).$

General Health = $(f2 - 1)*(100 / 4)$

Mean values & ranges of QOL were, Physical domain 71.3(32.1-100), psychological domain 63.3(16.6-95.8), Social domain 70.1(0-100), Environmental domain 67.7(28.1-96.8), Overall Quality of Life 75.1(0-100), General Health 72.5 (25-100). Medical students were weaker in

psychological domain of Quality of Life among all the four domains. The wide ranges were denoting huge variations of QOL among Medical students. Independent samples-t test was applied to test the differences of various domains of QOL among medical students based on gender, nativity, residence, exercise habits and year of MBBS education.

Females were better than males in Overall quality of life (p value=0.002). Rural area students had better physical (p value=0.043) & psychological domain (p value=0.009) than urban area students. No significant difference found between students residing at hostel or home, and students doing exercise daily or not doing groups in any domain of QOL. Final MBBS students were feeling better than 2nd MBBS students in perception of General health (p value 0.029)

Table No.1 Mean values of 26 facets of Quality of Life in Andhra Medical College students

| Facet | Mean | SD |
|---|---------|---------|
| Overall Quality of Life (1) | 4.0052 | .69595 |
| General Health (2) | 3.9016 | .76760 |
| Pain and Discomfort (3) | 3.6528 | 1.04018 |
| Dependence on medical substances and medical aids (4) | 4.1979 | .85902 |
| Energy and fatigue (10) | 3.9119 | .82128 |
| Mobility (15) | 3.7720 | .73445 |
| Sleep and rest (16) | 3.9119 | .91715 |
| Activities of daily living (17) | 3.8922 | .67081 |
| Work capacity (18) | 3.6321 | .84435 |
| Positive feelings (5) | 3.6788 | .86627 |
| Spirituality, religion and personal beliefs (6) | 3.6953 | .98723 |
| Thinking, learning, memory and concentration (7) | 2.9326 | .81049 |
| Bodily image and appearance (11) | 3.6891 | 1.11651 |
| Self-esteem (19) | 3.7534 | .88794 |
| Negative feelings (26) | 3.4539 | .84902 |
| Personal relationships (20) | 3.9145 | .94604 |
| Sexual activity (21) | 3.5622 | 1.18860 |
| Social support (22) | 3.9378 | .91074 |
| Freedom, physical safety and security (8) | 3.6054 | .93618 |
| Physical environment (9) | 3.4263 | .81968 |
| Financial resources (12) | 3.8860 | 1.04456 |
| Opportunities for acquiring new information and skills (13) | 3.57658 | .903919 |
| Participation in and opportunities for recreation and leisure activities (14) | 3.2902 | 1.01487 |
| Home environment (23) | 3.7505 | .91375 |
| Health and Social care: Accessibility and quality (24) | 4.1917 | .71409 |
| Transport (25) | 3.9585 | .95652 |

Table No.2 Differences in various facets of QOL based on Gender, nativity, Residence, Exercise habit and education year

| Facet | Mean±SD | P value |
|--|---|---------|
| Overall Quality of Life (1) | Male-3.8±0.69 Female – 4.13±0.67 | 0.02 |
| Sexual activity (21) | Male-3.27±1.44 Female – 3.75±0.93 | 0.01 |
| Financial resources (12) | Male-3.69±1.15 Female – 4.01±0.94 | 0.043 |
| Energy and fatigue (10) | Rural –4.14±0.83 Urban -3.79±0.79 | 0.06 |
| Work capacity (18) | Rural –3.82±0.65 Urban -3.53±0.91 | 0.01 |
| Positive feelings (5) | Rural –3.85±0.77 Urban -3.58±.89 | 0.04 |
| Spirituality, religion and personal beliefs (6) | Rural –3.90±0.88 Urban -3.59±1.02 | 0.036 |
| Self-esteem (19) | Rural –3.99±0.79 Urban -3.63±0.91 | 0.09 |
| Pain and Discomfort (3) | Hostel-3.97±1.04 Home-3.79±1.01 | 0.028 |
| Work capacity (18) | Hostel-3.73±0.67 Home-3.48±1.02 | 0.038 |
| Home environment (23) | Hostel-3.49±0.89 Home-4.11±0.81 | 0.000 |
| Health and Social care: Accessibility and quality (24) | Hostel-4.08±0.74 Home-4.34±0.63 | 0.015 |
| Negative feelings (26) | Hostel-3.58±0.83 Home-3.26±0.83 | 0.008 |
| Negative feelings (26) | Daily doing Exercise-3.61±0.96 Daily not doing exercise-3.36 ±0.76 | 0.046 |
| General Health (2) | 2 nd MBBS-3.65±0.81 Final MBBS-3.96±0.74 | 0.029 |
| Bodily image and appearance (11) | 2 nd MBBS-3.15±1.12 Final MBBS-3.81±1.07 | 0.001 |
| Sexual activity (21) | 2 nd MBBS-3.92±1.20 Final MBBS-3.47±1.17 | 0.037 |
| Health and Social care: Accessibility and quality (24) | 2 nd MBBS-3.84±0.67 Final MBBS-4.27±0.69 | 0.001 |
| Transport (25) | 2 nd MBBS-3.47±0.89 Final MBBS-4.07±0.93 | 0.000 |

P value calculated with Independent samples-t test.

Table No.3 Differences in various facets of QOL based on Gender, nativity, Residence, Exercise habit and education year

| | GENDER | | NATIVITY | | RESIDENCE | | EXRECISE | | MBBS | |
|-------------------------|-----------------|---------------------------|---------------|----------------------------|---------------|-----------------|---------------|--------------------------|-----------------|-----------------------------|
| | Female n=114 | Male n=79 | Rural n=64 | Urban n=129 | Home n=79 | Hostel n=114 | No n=124 | Yes n=69 | 2nd n=38 | Final n=145 |
| Physical Domain | 70.9 ±12.1 | 71.8 ±11.9 | 73.8 ±11.8 | 70 ±12 ^a | 69.4 ±13.4 | 72.6 ±10.8 | 70.7 ±11.5 | 72.3 ±12.9 | 70.56 ±13.98 | 71.51 ±11.51 |
| Psychological Domain | 63.5 ±15.8 | 63.1 ±13.5 | 67.3 ±12.8 | 61.3 ±15.5 ^a | 61.5 ±16.9 | 64.5 ±13.2 | 63 ±14.5 | 63.8 ±15.7 | 61.42 ±14.27 | 63.81 ±15.11 |
| Social Domain | 72.2 ±18.6 | 66.9 ±19 | 71.3 ±17.5 | 69.5 ±19.9 | 70.2 ±17.2 | 70 ±20.4 | 70.2 ±18 | 69.8 ±21.1 | 75.00 ±18.7 | 68.98 ±19.1 ^a |
| Environmental Domain | 68.0 ±13 | 67.3 ±14.4 | 67.4 ±12 | 67.9 ±14.3 | 69 ±14.9 | 66.8 ±12.6 | 68 ±13.3 | 67.2 ±14.2 | 64.29 ±12.34 | 68.61 ±13.8 ^a |
| Overall Quality of Life | 78.2 ±16.7 | 70.5 ±17. ^a | 75.7 ±18.3 | 74.8 ±169 | 75.6 ±19.1 | 74.7 ±16.1 | 76.2 ±16.8 | 73.1 ±18.3 | 74.34 ±16.9 | 75.32 ±17.5 |
| General Health | 72.8 ±18.6 | 72.1 ±20 | 74.6 ±21.1 | 71.5 ±18.1 | 69.9 ±20.1 | 74.3 ±18.3 | 70.5 ±18.8 | 76 ±19.3 ^a | 66.44 ±20.3 | 74.03 ±18.5 |

a = Independent samples-t test, p value <0.05

DISCUSSION

In the pilot study conducted by WHOQOL team, mean scores of Quality of Life in “well” study group were physical domain 70.4, psychological domain 67.1, social domain 67.7, and environmental

domain 63.1. ⁽⁵⁾ In the present study it was observed that, psychological domain in Andhra Medical College students (63.3) was weak when compared to WHO “well” study group. In the study “Validation of the WHOQOL-BREF Quality of Life

Questionnaire for Use with Medical Students” conducted by CU Krageloh et al, medical students physical domain score was observed as 56 which is lower than the physical domain of Andhra Medical college students. ⁽⁵⁾ In the study “Quality of Life of Medical Students in china: A Study Using the WHOQOL-BREF” conducted by Zhang Y et al, range of different domains of QOL in male medical students were physical domain 52.3-81.5, psychological domain 49.3-89.6, social domain 55.6-81, environmental domain 42.0-80.5 and in female medical students physical domain 43.7-87.4, psychological domain 41.0-81.6, social domain 54.3-73.6, environmental domain 49.5-78. ⁽⁴⁾ In the current study it was observed that, the range was much wider in Andhra Medical college students than china medical students in both the genders. Social domain in china medical students was 63.91, whereas social domain in female medical students in the current study was 72.2. Environmental domain score of AMC students higher than of china medical students in both the gender groups. QOL of Rural area students of China Medical College in various domains were physical domain 67.47, psychological domain 63.35, social domain 63.84, and environmental domain 54.71. These scores were lower than the domain scores in rural area AMC students. QOL of Urban area students of China Medical College in various domains were physical domain 67.82, psychological domain 65.02, social domain 64.91, and environmental domain 55.11. Urban area china medical students had

better psychological domain score than Urban area AMC students, but remaining three domain scores were better in AMC students.

CONCLUSION

Medical students were weaker in psychological domain of Quality of Life among all the four domains. Low score for Thinking, learning, memory and concentration was an alarming signal. Urban area medical students are weaker in physical and psychological domains when compared with rural area students. Overall quality of life among medical students was influenced by Gender and it was better in female students.

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