Original Article

Role of quality of life in internalizing psychological problems: a comparative study of male and female medical students

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Objective: To assess the role of quality of life in internalizing psychological problems like depression, anxiety and stress with gender differences among medical students.

Methodology: This cross sectional-purposive sampling based study was conducted upon medical students of Wah Medical College from May 2019 to January 2020. A known, self-rated instrument World Health Organization quality of life and Depression, anxiety, stress (DASS) scale was used. Pearson correlation, linear regression analysis and independent sample t-test through SPSS version 21.

Results: Out of 200 respondents, 88(44%) were female and 112(56%) were male with the 18-25 age range (mean 21.5±2.4). Quality of life depicted a significant inverse relationship with depression, anxiety and stress. Non-significant gender differences revealed on WHO quality of life, depression and anxiety scale while significant gender difference on stress scale.

Conclusion: Quality of life acts as an important determinant of medical student's well-being and plays significant role in the preservation of internalizing psychological problems. (Rawal Med J 202;45:955-958).

Keywords: Quality of life, depression, anxiety.

INTRODUCTION

In modern world, so many aspects are detrimental to medical students' psychological health. The subjective facet of quality of life (QOL) is linked with living events plus individual satisfaction with current survival conditions. Quality of life is connected with person fitness, societal and substance well-being.[1] Medical students are highly at risk to internalizing psychological problems. Internalizing psychological or emotional problems refers to such issues where the person has a tendency to experience distress or other issues of emotional nature; for instance, depression, anxiety and stress, within their own selves.[2] Rate of internalizing psychological problems relied on students' own QOL and habitat.[3] Those with high QOL experience less symptoms of depression, anxiety and stress. Firmly, QOL is significantly associated with internalizing psychological problems.[4,5,6]

Depression, anxiety, stress are cause of morbidity in medical students.[7] Researches stated gender based non-significant differences in depression, anxiety, stress and quality of life.[8,9,10,11] Adversity of depression, anxiety and stress was more in female medical students[12,13] and males have a higher QOL than female students.[14] The present study aimed to investigate the role of QOL in internalizing psychological problems, majorly depression, anxiety, stress and to find gender differences in QOL, depression, anxiety, stress among medical students.

METHODOLOGY

This cross sectional study was conducted on 200 medical students of Wah Medical College from May 2019 to January 2020 after getting approval from University of Haripur and purposive sampling technique was used. Students studying in third to fourth year of MBBS and are willing to give informed consent were included in the study while rest of students were excluded from the study.

A known, self-rated instrument like World Health Organization quality of life (WHO-QOL-BRIEF) and Depression, anxiety and stress (DASS) scale were used for data collection. WHO-QOL-BRIEF is a 5 point Likert type scale, consisted of 26 items, with 4 subscales and well-established psychometrics. No cut-off results was provided by

authors, so top scores are indicators of high QOL and in reverse.[15] Depression Anxiety Stress Scale (DASS) is a four point Likert type scale with 42 items (0-3), well-established psychometrics and depression, anxiety, stress as subscales with 14 items each. Scores of each subscales range between 0-42.[16]

Statistical Analysis: Statistical analysis was performed using SPSS version 21. Descriptive statistics, Pearson correlation, linear regression analysis and independent sample t-test was computed. $p<0.05$ was considered statistically significant.

RESULTS

Out of 200 respondents, 88(44%) were females and 112(56%) were males with the 18-25 years of age (mean 21.5±2.4). The reliability analysis showed that WHO-QOL-BRIEF (α=.75) and Depression (α=.77), anxiety (α=.73) and stress (α=.70) (DASS) scale had sufficient internal constancy. Mean and standard deviation of the overall QOL was (85.56±9.78), depression (6.62±4.51), anxiety (6.82±4.18) and stress (9.28±4.16). Pearson correlation analysis indicated that QOL was significantly negatively related to depression ($p<0.001$), anxiety ($p<0.05$) and stress ($p<0.001$). Quality of life as the predictor variable depicted 11.4% variance in depression as outcome variable ($F(1,198)=26.61$, $p<.001$) as shown in (Table 1). Quality of life further display 7.8% variance in the anxiety with $F(1,198)=17.93$, $p<0.001$ (Table 1).

Table 1. Linear Regression analysis showing the role of quality of life in anxiety.

Variable	B		95% CI	
			LL	UL
Constant	17.35***		[12.42	22.29]
Qol	-.12***		[-.18	-.07]
R^2		.078		
F		17.93***		

Table 2. Linear Regression analysis showing the role of quality of life in depression.

Variable	B		95% CI	
			LL	UL
Constant	20.21***		[14.98	25.44]
Qol	-.159***		[-.22	-.10]
R^2		.114		
F		26.61***		

Table 3. Regression analysis showing the role of quality of life in stress.

Variable	B		95% CI	
			LL	UL
Constant	15.13***		[10.06	20.20]
Qol	-.07***		[-.13	-.01]
R^2		.026		
F		5.23*		

Table 4. Mean, standard deviation and t-values forquality of life, depression, anxiety and stress.

Variable	Female(n=88)		Male (n=112)		t(198)	P	95%CI		Cohen's d
	M	SD	M	SD			LL	UL	
Qol	84.70	9.03	86.22	10.32	1.09	.27	-1.23	4.26	0.15
Dep	6.36	4.40	6.82	4.61	.71	.47	-.81	1.73	0.10
Anx	7.09	4.45	6.61	3.96	-.81	.41	-1.66	.69	0.12
Str	10.03	4.28	8.70	3.99	-2.28	.02	-2.50	.18	0.32

Note. [Qol= quality of life, dep= depression, anx= anxiety, str= stress].

In order to obtain results regarding role of QOL in internalizing psychological problems (Depression, anxiety, stress), Linear Regression analysis was used (Tables 2, 3and 4). Quality of life as the predictor variable indicated 2.6% variance in the stress with $F(1,198)=5.23$, $p<0.05$. For determining, gender differences t-test was used (Table 4). Results indicate non-significant mean differences on QOL with $t(198)=1.09$, $p>0.05$, depression with $t(198)=.711$, $p>0.05$ and anxiety with $t(198)=-.81$, $p>0.05$.

DISCUSSION

Medical scholars irrespective of gender are

prepared to keep up the well-being of patients and general community. Such preparing was found to be physiologically and intellectually challenging and unpleasantly affected the medical students' own wellbeing.[17] Study on medical students showed that they appeared to have a poorer condition of somatic and psychological well-being, and more internalizing psychological problems and adverse QOL when compared with non-medical scholars.[18] The evaluation of QOL ended up helping to decide the effects of disguising mental issues in medical students. Previous studies found an inverse link of QOL in stress, depression and anxiety among medical students.[4,5,19,20]

The existence of adverse QOL amid medicinal education clarified this high predominance of internalizing psychological problems among medical students. As indicated by different investigations in Pakistan, it has been assessed that medical scholars are inclined to a more prominent level of internalizing psychological problems when contrasted with the common community.[21,22] Recognizable proof of this is imperative, since long haul pressure can instigate some perpetual identity changes in people.[22]

Medical students generally show a high adversity of depression, anxiety and stress in female medical students[12,13] while males have higher QOL than female students.[14] Present study in consistency with some other studies demonstrated a gender based non-significant difference in depression, anxiety[8,9] and QOL[10,11] among medical students, as well as notable male and female differences in the stress levels of medical students.[13] Their "adapting strategy" is always in danger of altogether lessening since they have less time and vitality to frame and manage connections and for their own care.[23] This can somewhat disclose medical students' defenselessness to nervousness, depression and stress.

Medical colleges could assist students suffering from internalizing psychological problems, especially those whose sorrow is relentless, by shaping a framework that distinguishes and supports as soon as possible, because researches demonstrated that these scholars were hesitant to look for help.[24] Despite of strengths, present study must put forth a few limitations. For one, study only focuses on QOL as an independent variable; other variables should also be considered in order to find out what reasons contribute in internalizing psychological problems. Additionally, more studies generally comprehensive in nature are needed about internalizing psychological problems and QOL among medical students. This study had small sample size. Studies rich in sample size might be required in order to explore more about this aspect, especially of gender differences. Furthermore, intervention based studies must be designed to overcome internalizing psychological problems in medical students.

CONCLUSION

Medical students were highly vulnerable to internalizing psychological problems because their education was found to be inherently demanding and stressful. Increased levels of quality of life positively contributed in the preservation of internalizing psychological problems among medical students.

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