



Research Article

EFFECT OF SHORT TERM MEDITATION ON QUALITY OF LIFE IN NORMAL ADULTS

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ABSTRACT

Introduction- In recent years quality of life (QOL) has become a key concept in the medical community where health care places dual emphasis on treatment and quality of care.

Methodology- In this convenient random sampling study, 28 subjects who satisfied the inclusion criteria were included in the study. Data gathering instrument used was WHO QOL-BREF questionnaire. It was self administered before pretest and after post test and was conducted to evaluate the effect of two weeks Rajyoga meditation course on physical, psychological, social and environmental health of subjects.

Result- Significant increase in post test scores was seen in all the 4 domains.

Conclusion- It can be concluded that short term practice of Rajyoga meditation brings an overall improvement in the health of individuals thus enhancing their quality of life.

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INTRODUCTION

The last decade of 20th century has both fortunately and unfortunately, brought many issues of the adults and his or her medical problems to the front foot. Not only has there been a further elucidation of effective approaches to prevention, but also urgency to their application. If for no other reason, energies have been focused on the young adults as an individual, still unfixed in his or her life style and open to change. So much of what is experienced in the years of decline are payments for the errors of our ways during the ascent of life. Additionally, behavioral change and disease prevention are also important at a time when many immediate threats of disease intrude into a young adult's life (Lawrence, 1991). In recent years quality of life (QOL) has become a key concept in the medical community where health care places dual emphasis on treatment and quality of care. The World Health Organization (WHO) defines QOL as "an individual's perception of his/her position in life in context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"(The WHOQOL group WHOQOL-BREF. 1996). It depends on patient's physical, psychological and social responses to a disease and its treatment (Schipper, 1990).

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Multidisciplinary biopsychosocial rehabilitation has been shown to be better than usual care in improving QOL with reduction in the different problems of adults (Lang, 2003). Rajyoga meditation, with its holistic approach to improve overall quality of life, offers self regulatory practices that aim at correcting the psychological factors that contribute to low QOL. There are hardly any studies showing the effects of Rajyoga meditation on QOL in normal adults. Hence, this study included first year MBBS students who are usually prone to stress of coping with friends, environment, examination. So the need was felt to take up this study. Our hypothesis is that QOL after practice of short term Rajyoga meditation would be better than pretest, as Rajyoga meditation is a multidimensional treatment modality that caters to all the levels of human existence. Hence the study was planned with a objective to assess overall health with the help of standardized WHO questionnaire on Quality of life.

MATERIALS AND METHODS

In this study a total of 28 subjects volunteered to participate in the research project. The subjects were first MBBS students and postgraduate students from Jawaharlal Nehru Medical College of Datta Meghe University, Wardha, Maharashtra. There were 9 males and 19 females participating in the study. A signed informed consent was obtained from all the subjects. The study process was described in detail to the students.

Inclusion criteria

First MBBS students having no history of Diabetes, hypertension, or any other chronic illness were taken.

Exclusion criteria

Subjects having history of Diabetes, hypertension, any chronic illness and mental disorders, were excluded from the study.

Study design

In this convenient random sampling study, - subjects who satisfied the inclusion criteria were included in the study. Data gathering instrument used was WHO QOL-BREF questionnaire. It was self administered before pretest and after post test and was conducted to evaluate the effect of two weeks Rajyoga meditation course on physical, psychological, social and environmental health of subjects.

Who qol-bref questionnaire

It is a standardized comprehensive instrument for assessment of QOL comprising of 26 items and was developed by WHO. The scale provides a measure of an individual’s perception of quality of life for the four domains,

- Physical health (seven items)
- Psychosocial health(six items)
- Social relationships(three items)
- Environmental health(eight items)

The domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life). The range of scores is 4-20 for each domain. The scale has been found to have good decriminant validity (The WHOQOL group WHOQOL-BREF, 1996 and Padmini Tekur , 2005). It has good retest reliability and is recommended for use in health surveys and to assess the efficiency of any intervention at suitable intervals according to the need of the study.

Intervention

Rajyoga meditation involves 4 steps they are

- Initiation- training the mind to be detached.
- Meditation- consider the self to be a soul and experience from the ocean of all virtues and power.
- Concentration- soar in the flight of spiritual thoughts.
- Realization- in this stage, thought can be maintained easily for 10-15 minutes. This is the deepest level. As one progresses, the realization continues and the soul undergoes real and permanent change.

Analysis

After scoring, the mean values for total and individual domains were computed. These were multiplied by four to obtain the final score comparable to WHO QOL 100 as indicated in the manual. The data was then analyzed using SPSS version for windows 17.0. Higher scores meant better understanding and better effective coping of stress. Statistical analysis was done using the Wilcoxon Sign Rank Test.

OBSERVATIONS AND RESULTS

PRE TEST AND POST TEST EVALUATION

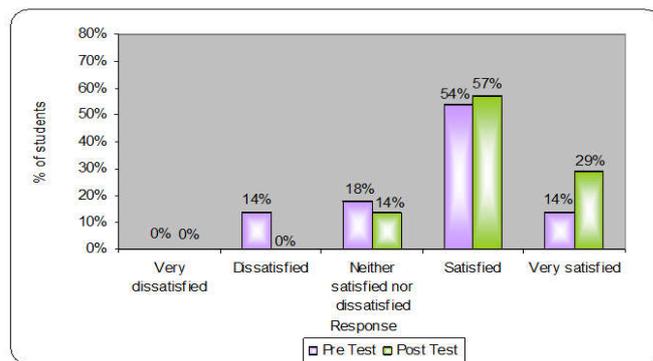
Question 1: How would you rate your quality of life?

Table 1.

Response	Pre Test	Post Test	2x-value	p-value
Very Poor	0%	0%	27.33	P<0.0001
Poor	0%	0%		Significant
Neither poor nor good	29%	3%		
Good	57%	68%		
Very Good	14%	29%		

Quality of life showed significant improvement in post test.

Question 2: How satisfied are you with your health?



Graph 1.

Significant satisfaction is seen with health in post test

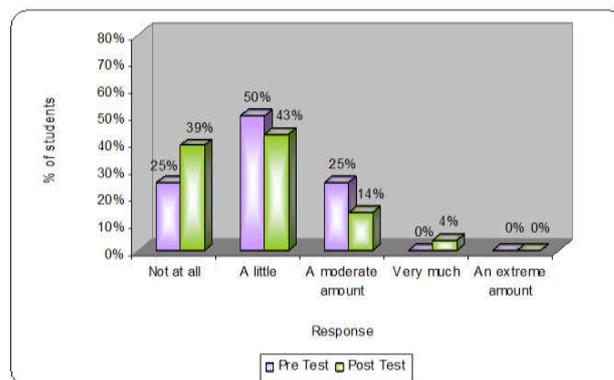
Question 3: To what extent you feel that the physical pain prevents you from doing what you need to do?

Table 2.

Response	Pre Test	Post Test	2x-value	p-value
Not at all	7%	32%	38.20	P<0.0001
A little	32%	36%		Significant
A moderate amount	50%	14%		
Very much	11%	18%		
An extreme amount	0%	0%		

There was a significant decrease in the pain felt which prevent them from doing what they need to do.

Question 4: How much do you need any medical treatment to function in your daily life?



Graph 2.

There was a significant decrease in need for medical treatment to function in their daily life.

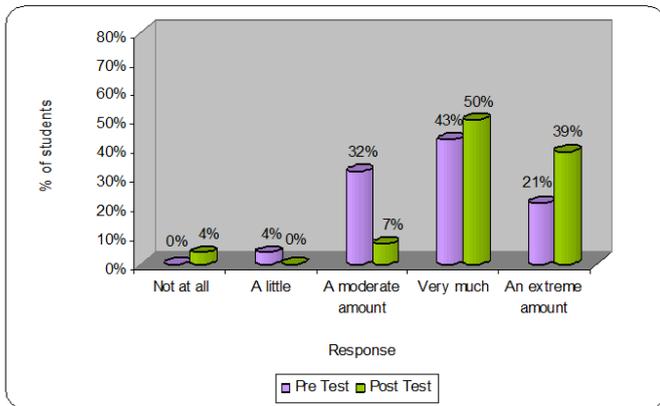
Question 5: How much do you enjoy life?

Table 3.

Response	Pre Test	Post Test	2k-value	p-value
Not at all	0%	3%	27.25	P<0.0001
A little	7%	0%		Significant
A moderate amount	32%	14%		
Very much	54%	57%		
An extreme amount	7%	25%		

There was a significant increase in their enjoyment of life.

Question 6: To what extent do you feel your life to be meaningful?



Graph 3.

There was a significant increase in their life to be meaningful.

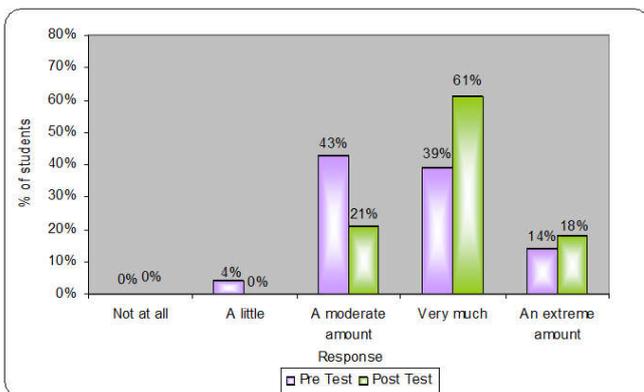
Question 7: How well are you able to concentrate?

Table 4.

Response	Pre Test	Post Test	2k-value	p-value
Not at all	0%	0%	54.12	P<0.0001
A little	21%	7%		Significant
A moderate amount	61%	25%		
Very much	14%	64%		
An extreme amount	4%	4%		

There was a significant increase in their ability to concentrate

Question 8: How safe do you take in your daily life?



Graph 4.

There was significant feeling of safety in daily life as seen from post test

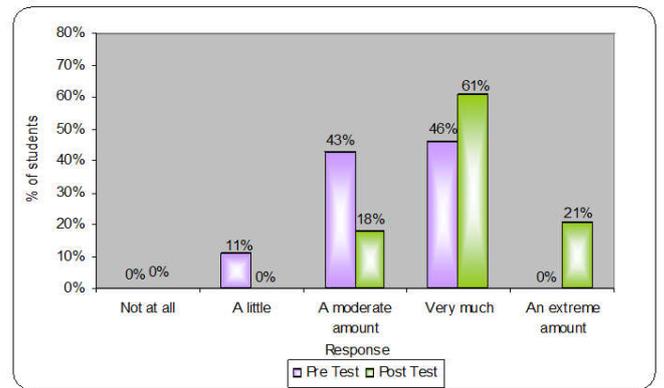
Question 9: How healthy is your physical environment?

Table 5.

Response	Pre Test	Post Test	2k-value	p-value
Not at all	0%	0%	36.21	P<0.0001
A little	11%	0%		Significant
A moderate amount	54%	25%		
Very much	32%	68%		
An extreme amount	3%	7%		

There was significant increase in the feeling of healthy environment.

Question 10: Do you have enough energy for everyday life?



Graph 5.

There was significant feeling of having enough energy for every day life.

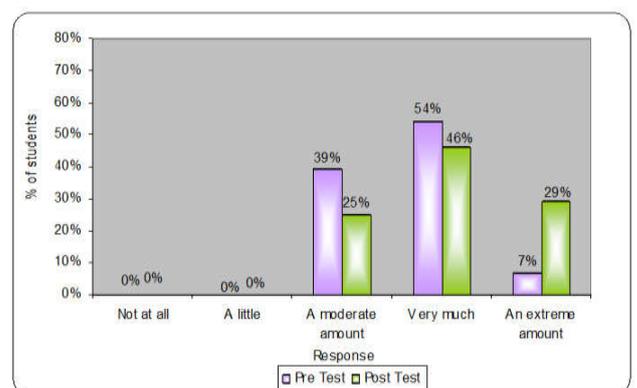
Question 11: Are you able to accept your bodily appearance?

Table 6.

Response	Pre Test	Post Test	2k-value	p-value
Not at all	4%	0%	26.74	P<0.0001
A little	4%	0%		Significant
A moderate amount	36%	21%		
Very much	46%	43%		
An extreme amount	10%	36%		

There was a significant increase in their ability to accept their bodily appearance.

Question 12: Have you enough money to meet your need?



Graph 7.

There was significant increase in their feeling to have enough money to meet their need.

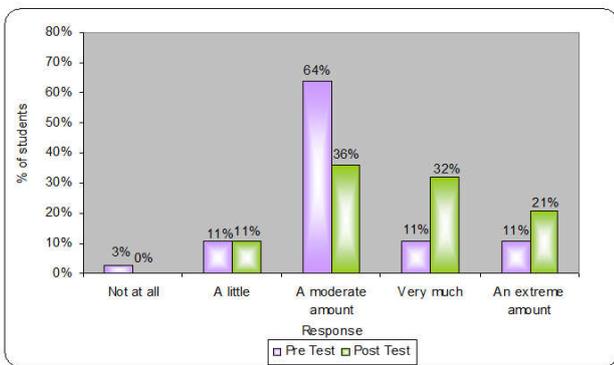
Question 13: How available to you is the information that you need in your day to day life?

Table 8.

Response	Pre Test	Post Test	Z-value	p-value
Not at all	0%	0%	19.36	0.0002
A little	4%	0%		Significant
A moderate amount	50%	25%		P<0.05
Very much	32%	54%		
An extreme amount	14%	21%		

There was a significant increase in their feeling of having needed information in their day to day life.

Question 14: To what extent do you have the opportunity for leisure activities?



Graph 8.

Post test shows significant increase in extent of opportunities for leisure activities.

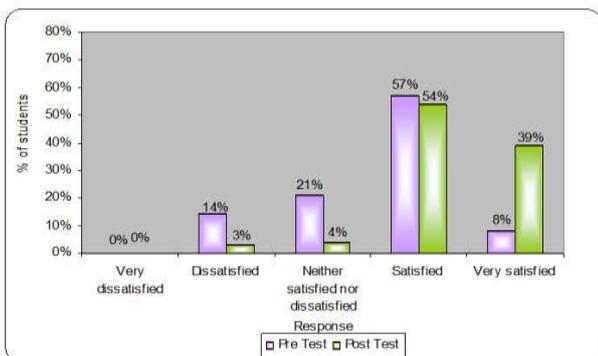
Question 15: How well are you able to get around?

Table 9.

Response	Pre Test	Post Test	Z-value	p-value
Very poor	0%	0%	31.92	P<0.0001
Poor	7%	0%		Significant
Neither poor nor good	32%	18%		
Good	61%	61%		
Very good	0%	21%		

Post test shows significant increase in the feeling to get around.

Question 16: How satisfied are you with your sleep.



Graph 9.

Significant number of subjects showed satisfaction with their sleep in post test.

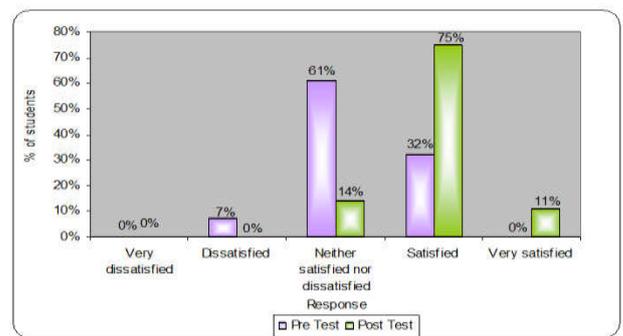
Question 17: How satisfied are you with your ability to perform your daily living activities?

Table 10.

Response	Pre Test	Post Test	Z-value	p-value
Very dissatisfied	0%	0%	57.98	P<0.0001
Dissatisfied	10%	0%		Significant
Neither satisfied nor dissatisfied	54%	21%		
Satisfied	36%	47%		
Very satisfied	0%	32%		

There was significant increase in satisfaction with their ability to perform daily living activities.

Question 18: How satisfied are you with your capacity for work?



Graph 10.

There was significant increase in their satisfaction with capacity for work.

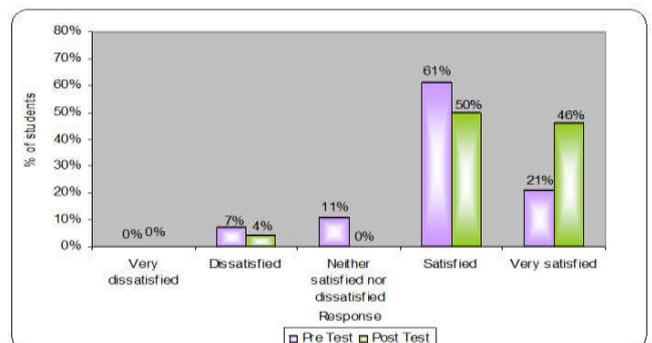
Question 19: How satisfied are you with yourself?

Table 11.

Response	Pre Test	Post Test	Z-value	p-value
Very dissatisfied	0%	0%	51.84	P<0.0001
Dissatisfied	3%	4%		Significant
Neither satisfied nor dissatisfied	36%	7%		
Satisfied	61%	57%		
Very satisfied	0%	32%		

Post test showed significant increase in satisfaction with oneself.

Question 20: How satisfied are you with your personal relationship?



Graph 11.

Significant increase in satisfaction was seen in their personal relationship.

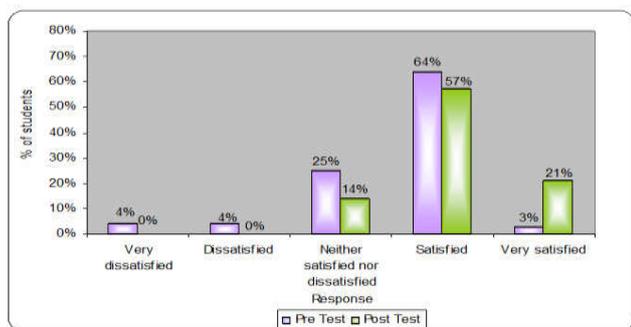
Question 21: How satisfied are you with the support you get from your friends?

Table 12.

Response	Pre Test	Post Test	2k-value	p-value
Very dissatisfied	3%	0%	33.17	P<0.0001 Significant
Dissatisfied	4%	4%		
Neither satisfied nor dissatisfied	39%	18%		
Satisfied	43%	57%		
Very satisfied	0%	21%		

There was significant increase in the feeling of support that they get from their friends.

Question 22: How satisfied are you with the condition to your living place?



Graph 12.

Post test showed significant increase in their satisfaction to the condition of their living place.

Question 23: How satisfied are you with your access to health services?

Table 13.

Response	Pre Test	Post Test	2k-value	p-value
Very dissatisfied	0%	0%	30.29	P<0.0001 Significant
Dissatisfied	7%	4%		
Neither satisfied nor dissatisfied	29%	7%		
Satisfied	57%	57%		
Very satisfied	7%	32%		

Significant satisfaction was seen with their access to health services.

RESULTS

1.Comparison of QOL score pre and post test

Descriptive Statistics

Domain	QOL Score	Mean	n	Std. Deviation	Std. Error Mean
Physical	Pre Test	61.78	28	11.45	2.16
	Post Test	75.32	28	12.02	2.27
Psychological	Pre Test	61.96	28	13.17	2.48
	Post Test	77.10	28	13.63	2.57
Social	Pre Test	62.75	28	12.70	2.40
	Post Test	78.35	28	10.39	1.96
Environmental	Pre Test	63.82	28	12.43	2.34
	Post Test	75.53	28	14.71	2.78

Significant number of subjects were satisfied with their transport.

2. QOL score with significance

Significant increase in post test scores was seen in all the 4 domains.

DISCUSSION

This randomized control study on 28 patients using a self administered questionnaire namely WHO QOL-BREF for 2 weeks showed that there was significantly better (P<0.01) improvement in quality of life on all domains of WHO QOL in the post intervention group of all the subjects. Several non-pharmacological intervention including mindfulness based meditation (Carmody, 2008), cognitive behavior modification (Williams, 1993), and multidisciplinary program (Sjstrom , 2007), have been showed to be effective in reducing pain disability and improving quality of life in CLBP (effect of yoga and CLBP patients). But there are no data as per our searches on the effect of Rajyoga Meditation on QOL.

Physical health / Domain 1

The pretest value was 61.78 and reached a higher score of 75.32 in the post test. This finding shows that meditation has positive effect on physical QOL. This domain of WHO QOL-BREF deals with features such as mobility, fatigue, pain, sleep, work capacity etc (The WHOQOL group WHOQOL-BREF, 1996). Other studies on integrated yoga in healthy children and adults have showed better physical stamina (Schipper, 1990). dexterity and left hand coordination (Telles, 2006). Better quality and duration of sleep after yoga has been reported in the elderly (Manjunath, 2005).

Table 13. QOL score with significance

Student's paired t test

	Paired Differences				t	df	p-value	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Upper				Lower
Physical	13.53	12.18	2.30	18.25	8.81	27	0.000 S,p<0.05	
Psychological	15.14	14.07	2.65	20.59	9.68	27	0.000 S,p<0.05	
Social	15.60	12.86	2.43	20.59	10.61	27	0.000 S,p<0.05	
Environmental	11.71	12.51	2.36	16.56	6.86	27	0.000 S,p<0.05	

Psychological health/Domain 2

There was a significant improvement in the findings of domain 2 in the post test value (77.10) as compared to pretest values (61.96). These domains deals with question related to feeling, self-esteem, spirituality, thinking, learning, memory etc (The WHOQOL group WHOQOL-BREF, 1996).

The improvement found in this domain may be attributed to reduction in anxiety and depression. Several studies have showed the effect of yoga in reducing anxiety (Michalsen, 2005), depression (Sharma, 2005), and stress (Carmody, 2008) with enhanced mental perceptual sharpness (Telles, 1975), memory (Naveen, 1997), and better information processing at the thalamic level (Telles, 1993).

Social health /Domain 3

The domain had question related to problems in interpersonal relationship, social support etc (The WHOQOL group WHOQOL-BREF, 1996). In our study we found higher score of 78.35 as compared to pretest value of 62.75. Our study finding is in line with findings like Nagaethna R, Nagendra HR who had find that yoga promotes positive health (7). Therefore even short term meditation shows improvement in social health of the subjects.

Environmental Health/ Domain 4

This domain has question that deals with problem related to finance resource, physical safety, physical environment such as pollution, noise climate etc. In our study we found that the mean value was higher in post test group i.e. 75.53 as compared to pretest group of 62.71, which indicated that meditation by bringing about calmness of mind, increases our adaptability and response to stress thus improving environmental health. This finding were in line with different studies on yoga which had showed that yoga changes the physiological response to stressors by improving autonomic stability with better parasympathetic tone in normal adults and reducing sympathetic arousal with improved performance in congenitally blind children (Telles, 1999).

General Health

General health was assessed by Q1 and Q2 which showed improvement in the same in the post test group. Studies of Kabat Zinn (Kabat-Zinn, 1982), also showed similar findings and suggested that with meditation there occur mastery over emotional surges leading to controlled and need based physiological responses to stressfully demanding situation instead of uncontrolled overtone of HPA axis (The WHOQOL group WHOQOL-BREF, 1996).

Conclusion

It was found that there was a significant improvement in the entire four domains pertaining to physical, psychological, social and environmental health of an individual. It can be concluded that short term practice of Rajyoga meditation brings an overall improvement in the health of individuals thus enhancing their quality of life.

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