

## Quality of Life Before and After the Practice of Yoga: A Comparative Analysis

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### Abstract

**Background:** Quality of Life of a person is a concept indicating to what extent he/she encircles "the goodness" of multiple aspects in his/her life. This includes psychological and physical wellness, life fulfilment, work satisfaction, and satisfaction in personal relationships. Yoga is a practice contributing to both physical and psychological health benefits.

**Objective:** The study has attempted to analyze quality of life of people before and after the practice of yoga and understand the influence of the characteristics of the respondents on quality of life achieved after starting yoga practice.

**Materials and Methods:** The study was carried out using a questionnaire among a sample of 100 yoga practitioners, which contained the items of the WHOQOL User Manual, sex, marital status, period of yoga practice of the respondents, and whether they had any psychological problem/s during the past six months of this study. The data was analyzed as proportion and through statistical test.

**Results:** The study has shown the influence of yoga practice in improving Quality of Life (QOL) of the respondents, with statistically significant difference in the QOL scores before and after the practice of yoga. The positive QOL parameters have improved after the practice of yoga, while the negative parameters have reduced after its practice. Statistically significant difference was observed between the mean score of many of the QOL parameters before and after the practice of yoga. Unmarried yoga practitioners got a higher score than married respondents, higher period of yoga practice resulted in a comparatively higher QOL score than lesser period of practice, and those who did not report psychological problem/s during the past six months got a higher QOL score than those who had such problem.

**Conclusions:** The study has clearly shown the influence of yoga practice in improving the Quality of Life of the respondents, as compared to before its practice. Conducting such studies by yoga training centres and disseminating the findings to more people through seminars and other awareness programmes would probably help in improving the number of people practicing measures such as yoga.

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### INTRODUCTION

Quality of Life of a person (QOL) is a concept which mainly includes to what extent he/she encircles "the goodness" of multiple aspects in his/

her life. This includes psychological and physical wellness, life fulfilment, work satisfaction, and satisfaction in personal relationships. QOL has most often been defined as the measurement of one's own well-being and is affected by both physical and psychological health, as well as personal benefits, social relationships, and relationship with salient features of the environment. Most researchers agree that the concept of QOL came about during the social indicators' movement of 1960s. This movement approached QOL as a population concern such that QOL was looked at as the importance of the objective and subjective indicators of social wellbeing. Objective indicators were represented by societal facts such as health, poverty and crime, whereas subjective indicators took in to account the individual perceptions of societal conditions such as job satisfaction, sense of safety, happiness etc.<sup>1</sup> Yoga is a practice contributing to both physical and psychological health benefits.

## OBJECTIVE

The study has attempted to analyze Quality of Life (QOL) of people before and after the practice of yoga, and find out the influence of the characteristics of the respondents on QOL achieved after starting yoga practice.

## MATERIALS AND METHODS

The study was carried out using a questionnaire among a sample of 100 yoga practitioners selected randomly from Kozhikode District of Kerala in India. The questionnaire contained the parameters in the WHOQOL User Manual for working out QOL<sup>2</sup>, details of the respondents such as sex, marital status, period of yoga practice, and whether they had any psychological problem/s during the past six months of this study. The data was analyzed as proportion and through statistical test.

## RESULTS

Table 1 shows the statistical significance of the difference in QOL scores before and after the practice of yoga.

**Table 1:** Statistical significance of the difference in QOL scores before and after the practice of yoga

Mean QOL Score	
Before the practice of yoga	After yoga practice
72.0	90.4
t = 4.96; significant p < 0.01	
Maximum possible QOL score under the study = 115	

*The responses to various QOL parameters before and after the practice of yoga are shown below:*

- How easily got tired:** While 80% respondents experienced this moderately and 20% very much before the start of yoga practice, only 20% respondents experienced it moderately and 80% experienced it very less only after the start of yoga practice. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
- Difficulty in Sleeping:** While all the respondents reported experiencing this problem moderately before yoga practice, after starting yoga, 60% have not experienced this at all, while 40% reported experiencing this problem a little only. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
- How much Satisfied with Sleep:** Even though there was no statistically significant difference between the mean score of this QOL item before and after yoga practice, the respondents have reported more satisfaction with sleep after the practice of yoga than before it. Before the start of yoga practice, 20% had very much satisfaction, 60% moderate satisfaction, while 20% had a little satisfaction only with sleep. However, after they started doing yoga, 60% reported very much satisfaction and 20% reported extreme satisfaction with their sleep.
- How much you Enjoyed life:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Considering the before yoga practice scenario, 80% respondents opined that they enjoyed life to a moderate level, 20% mentioned that they enjoyed life a little only, However, after the start of yoga practice, 60% reported enjoying life very much and 40% to a moderate level.
- Experiencing positive feelings in life:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Considering the condition of before yoga practice, 60% respondents opined that they enjoyed life to a

moderate level, while 40% mentioned that they enjoyed life a little only, However, after the start of yoga practice, 80% reported enjoying life very much and 20% to a moderate level.

6. **Ability to concentrate:** While 60% respondents reported that they were able to concentrate moderately, 40% were of the opinion that they could do this a little only before the start of yoga practice. However, after starting yoga, 40% were able to concentrate very much and 60% moderately. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
7. **Confidence in oneself:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Before the start of yoga practice, 80% respondents had moderate level of confidence in themselves and 20% had a little confidence. After doing yoga, 80% had very much and 20% moderate confidence in themselves.
8. **How much of worry:** While 80% respondents reported moderate level of worry and only 20% reported a little worry before the start of yoga, after practicing yoga, only 20% report moderate worry, while 80% report a little worry only. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
9. **How much feelings of sadness interfered with everyday functioning:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). 60% respondents reporting that sadness interfered moderately with their everyday functioning and 40% reporting that it affected a little only before the start of yoga changed for the better to 80% reporting that sadness interfered with their everyday functioning a little only and 20% mentioning that it has not all affected their everyday functioning.
10. **How much bothered due to any feelings of depression:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Before yoga practice, 80% reported some level (a little) of this problem and 20% reported moderate level of the problem. However, after starting yoga, 60% reported some level (a little) of this problem only and 40% reported that such a problem was not at all there for them.
11. **How much worried about money:** While 80% respondents were worried a little about money and 20% were moderately worried before yoga practice, 40% reported that they were not all worried about this and 60% reported a little worry only after the start of yoga practice. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
12. **Having enough energy for everyday life:** Even though statistically significant difference was not there between the mean score of this QOL item before and after yoga practice, the data shows that before the start of yoga practice, 60% respondents reported moderate energy and 40% very much energy availability for them. This changed to 60% reporting very much of energy and 40% only reporting that they had moderate level of energy for every day life after they started yoga practice.
13. **How much of satisfaction with the energy in everyday life:** Even though statistically significant difference was not there between the mean score of this QOL item before and after yoga practice, the results show that before the start of yoga practice, 40% were very much satisfied they had, 40% moderately satisfied and 20% a little satisfied. After yoga practice, 20% reported extreme satisfaction, 60% very much satisfaction and 20% reported moderate satisfaction with the daily energy level they had.
14. **Ability to to relax and enjoy life:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). While all the respondents mentioned that they able to relax and enjoy their lives to a moderate level before the start of yoga practice, after starting yoga, 80% mentioned that relaxed and enjoyed life very much and 20% did this to a moderate level. Yoga is a relaxing and stress relieving practice

because it involves meditation and controlled breathing exercises (Source: <https://www.linkedin.com/pulse/amazing-positive-effects-yoga-your-mind-body-soul-dipam-raval/>). Yoga opens up the blockages at our mind, body, breath and emotions level and takes us to a much higher plane of living (Source: <https://www.linkedin.com/pulse/what-importance-yoga-our-daily-life-mukesh-kumar/>). Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).

15. **How much satisfied with quality of life:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Before starting yoga, 80% respondents reported being satisfied with their quality of life moderately and 20% reported a little satisfaction. But, after starting yoga practice, 20% respondent were extremely satisfied and 80% very much satisfied. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
16. **How quality of life is rated:** Before the start of yoga practice, 80% rated their quality of life as moderate and 20% as somewhat OK. However, after the practice of yoga, all the respondents have rated their quality of life as very good. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
17. **In general, how much satisfied with life:** Before the start of yoga practice, 20% respondents mentioned that they were very much satisfied and 80% moderately satisfied with their life, in general. However, after starting yoga, 80% respondents mentioned that they were very much satisfied and 20% moderately satisfied with their life, in general. Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2).
18. **How much of satisfaction with health:** Even though statistically significant difference was not there between the mean score of this QOL item before and after yoga practice, the data shows that before the start of yoga practice, 80% respondents reported that they had moderate level of satisfaction with their health and 20% reported a little satisfaction. But, after starting yoga, 40% were of the opinion that they were very much satisfied with their health, 40% moderately satisfied and 20% a little satisfied.
19. **How much of satisfaction with abilities:** Statistically significant difference was not observed between the mean score of this QOL item before and after yoga practice. Before the start of yoga practice, 80% respondents reported very much satisfied with their abilities. After yoga practice, 20% reported extreme satisfaction and 60% moderate satisfaction with their abilities.
20. **Feeling contented in life:** Even though statistically significant difference was not there between the mean score of this QOL item before and after yoga practice, before the start of yoga practice, 80% respondents reported moderately contented and 20% a little contented in life. However, after the practice of yoga, 60% have reported very much contented and 40% were moderately contented in their lives.
21. **How often experienced negative feelings such as blue mood, despair, anxiety and depression:** Statistically significant difference exists between the mean score of this QOL item before and after yoga practice, with a comparatively higher score after yoga practice (Table 2). Before the start of yoga practice, 60% respondents experienced negative feelings such as blue mood, despair, anxiety and depression moderately, 20% moderately and 20% experienced it a little. However, after doing yoga, 20% respondents did not experience such negative feelings at all, while 80% experienced it a little only.
22. **To what extent felt that life is meaningful:** Statistically significant difference was not observed between the mean score of this QOL item before and after yoga practice. Before yoga practice 40% respondents reported feeling that life is very much meaningful, while 40% reported that life is moderately meaningful before starting yoga practice. After they did yoga, 60% felt that life is very much meaningful, while 20% felt that life is moderately meaningful.

**Table 2:** Statistical significance of the difference in QOL parameter scores before and after the practice of yoga

QOL parameter	Mean score for the parameter		
	Before yoga practice	After yoga practice	t value
How easily got tired	3.2	4.0	2.14; p <0.05
Difficulty in sleeping	3.0	4.6	6.50; p <0.05
How much enjoyed life	2.8	3.6	2.50; p <0.05
Experiencing positive feelings in life	2.6	3.8	3.80; p <0.01
Able to concentrate	2.6	3.4	2.30; p <0.05
Confidence in oneself	2.8	3.8	3.50; p <0.01
How much of worry	2.8	3.8	3.50; p <0.01
How much feelings of sadness interfered with everyday functioning	3.4	4.2	2.50; p <0.05
How much bothered due to any feelings of depression	3.8	4.4	1.9; p <0.10
How much worried about money	3.8	4.4	1.9; p <0.10
Ability to relax and enjoy life	3.0	3.8	4.0; p <0.01
How much satisfied with quality of life	2.8	4.2	4.9; p <0.01
How quality of life is rated	2.8	4.0	6.0; p <0.01
In general, how much satisfied with life	2.8	3.6	2.5; p <0.05
How often experienced negative feelings such as blue mood, despair, anxiety and depression	3.0	4.0	3.2; p <0.05

Table 3 shows the QOL scores before and after the practice of yoga based on the characteristics of respondents such as Sex, Marital status, Period of yoga practice and whether the respondent

experienced any psychological problem/s during the past six months. Statistically significant difference in QOL scores based on these characteristics was not observed in the study.

**Table 3:** QOL scores after the practice of yoga based on different characteristics of the respondents

Details	Characteristics of the respondents							
	Sex		Marital status		Period of yoga practice (Months)		Experienced psychological problem/s during the past six months	
	Male	Female	Married	Unmarried	5 - 9	13 - 18	Yes	No
Mean QOL score	89.0	92.5	87.3	95.0	84.5	94.3	84.5	94.3

## DISCUSSION

*The responses to various QOL parameters before and after the practice of yoga based on the results presented in Table 2 are discussed below:*

- 1. How easily got tired:** The result on this component of QOL indicates the effect of yoga practice in helping to reduce tiredness of the respondents. Yoga improves the level of “prana” in the body, which increases the energy level and accordingly, reduces tiredness.
- 2. Difficulty in sleeping:** The result on less difficulty in sleeping after the start of yoga practice indicates that yoga has helped in improving sleep for the practitioners. Yoga causes physical and mental exertion, which results in reduced insomnia, less sleep related

disturbances, deeper sleep, and improved sleep efficiency. Adding yoga exercises to the daily routine of older adults can help them achieve better sleep and improve their quality of life.<sup>3</sup>

- 3. How much satisfied with sleep:** The result on satisfaction with sleep after the start of yoga practice indicates its effect in improving this particular QOL item of the practitioners. Improvement in sleep after yoga practice, as mentioned earlier, can be the reason attributed to more satisfaction with sleep observed after the start of yoga practice. Studies have shown that yoga can be beneficial in managing sleep problems such as insomnia.<sup>4</sup>
- 4. How much you enjoyed life:** The result on level of enjoyment in life after the start of yoga practice indicates its effect in improving

this particular QOL item of the practitioners. The effect of yoga in improving the wellbeing of the practitioners<sup>5</sup>, achieving peace of mind<sup>6</sup>, maintaining a positive mental state<sup>7</sup>, improving positive affect and reducing negative affect<sup>8</sup>, improving the resilience ability in life<sup>9</sup>, regulating emotions<sup>10</sup> and improving psychological and physical health parameters of the practitioners<sup>11</sup> have been reported based on studies carried out. All these benefits of yoga practice may be expected to help people in enjoying life in a better manner.

5. **Experiencing positive feelings in life:** The result on experiencing positive feelings after the start of yoga practice indicates its effect in improving this particular QOL item of the practitioners. Madhava Chandran *et al* (2023) have reported that yoga practice contributes to more positive affect and less negative affect in life, indicating the experience of more positive feelings/thoughts and less of negative feelings/thoughts in life. Similarly, another study found that meditation, an adjunctive component of yoga, was helpful in increasing positive emotions and reducing negative emotions of the practitioners.<sup>8</sup>
6. **Ability to concentrate:** The result on the ability to concentrate after the start of yoga practice indicates its effect in improving the concentration ability of the practitioners. The physical practice of yoga is all about linking breath with motion and becoming fully present in mind and body. The practice itself is centred on concentration with focus on breath, alignment, and movement.
7. **Confidence in oneself:** The result on confidence in oneself indicates that yoga practice has enabled in improving confidence in life. Physical forms of yoga alleviate stress, which can sap energy and breed negativity, as well as promote mental resilience and a positive body image, resulting in an overall boost in confidence levels (Source: Yoga for developing self-confidence. <https://aurawellnesscenter.com/2023/10/04/yoga-for-developing-self-confidence/>)
8. **How much of worry:** The result on the QOL item, namely, worry indicates that after starting yoga, worry has reduced for the practitioners. Worry is a component of anxiety symptoms. Worrying is feeling uneasy or being overly concerned about a situation or problem. With excessive worrying, your mind and body go into overdrive as you constantly focus on what might happen. In the midst of excessive worrying, you may suffer with high anxiety. The effect of yoga practice in reducing anxiety has been reported.<sup>12</sup>
9. **How much feelings of sadness interfered with everyday functioning:** The result on sadness interfering with everyday functioning indicates that yoga has helped to alleviate this problem for the practitioners. The positive mindset, which is usually achieved for most of the yoga practitioners may be expected to be the reason for this.
10. **How much bothered due to any feelings of depression:** The result on getting bothered due to feelings of depression indicate the effect of yoga practice in reducing this problem significantly. The influence of yoga in reducing anxiety has already been mentioned. Anxiety is the first stage of depression. Hence, reduction in anxiety can offset any depression problem also.
11. **How much worried about money:** The result on worrying about money shows the influence of yoga practice in reducing such a worry. This may be because, as already mentioned, yoga practice has helped in reducing worries as such.
12. **Having enough energy for everyday life:** The result on availability of energy for everyday life indicates the effect of yoga practice in improving the energy level of the practitioners.
13. **How much of satisfaction with the energy in everyday life:** Availability of energy in everyday life was found to be more after yoga practice, when compared to before its practice.
14. **Ability to to relax and enjoy life:** The ability to relax and enjoy life was better after yoga practice, when compared to before its practice.
15. **How much satisfied with quality of life:** Satisfaction with quality of life was found to be more after yoga practice than before its practice. Results from a study show that yogic practices enhance muscular strength and body flexibility, promote and improve respiratory and cardiovascular function, promote recovery from and treatment of addiction, reduce stress, anxiety, depression, and chronic pain, improve sleep patterns, and enhance overall well-being and quality of life.<sup>13</sup>
16. **How quality of life is rated:** Yoga practice has helped in rating the quality of life as very good by all the respondents. The improved level of satisfaction felt in their quality of life after yoga

practice as mentioned earlier has contributed to this response by the yoga practitioners.

17. ***In general, how much satisfied with life:*** Satisfaction with life, in general was found to have improved after yoga practice as compared to before its practice. Factors such as less tiredness felt, less problem with sleep, better enjoyment of life, more of positive feelings experienced, better concentration and confidence, less worry etc. achieved after yoga practice (as already mentioned earlier) would have probably prompted the yoga practitioners to feel very much satisfied with their life.
18. ***How much of satisfaction with health:*** The result indicates that after yoga practice, the satisfaction with health has improved, when compared to before its practice. Improvement in both physical and psychological health parameters was observed after yoga practice.<sup>11</sup>
19. ***How much of satisfaction with abilities:*** Satisfaction with one's abilities has improved after yoga practice, as compared to before yoga practice. Better positive outlook in life, more of concentration and confidence, less worry etc. achieved through yoga practice, as mentioned earlier in this report could have contributed to improving abilities for the yoga practitioners, which would have led o feeling more satisfied with their abilities in life. Practicing yoga regularly can help lower cortisol levels in the body which helps to reduce feelings of anxiety and depression. It also increases endorphins which can make us feel happier and more relaxed. Additionally, it improves our breathing patterns which helps us become more mindful of our bodies' reactions to stressful situations (<https://www.linkedin.com/pulse/how-yoga-can-help-you-succeed-professional-life-masha-liokumovich/>). Such psychological benefits can also be expected to help in building one's abilities in various walks of life.
20. ***Feeling contented in life:*** Improvement in feeling contented in life was observed after starting yoga practice, as compared to before its practice. Concepts such as self satisfaction, life satisfaction and well-being are interest criteria of WHO in the definition of mental health, which are associated with positive emotions like joy, peace and happiness.<sup>14</sup> The positive mindset created through yoga practice could have contributed to better level of contentment for the yoga practitioners in the present study.
21. ***How often experienced negative feelings such***

***as blue mood, despair, anxiety and depression:***

The influence of yoga practice in reducing negative feelings such as blue mood, despair, anxiety and depression is evident from the results of the study. Yoga practice improves one's mental state, thus reducing psychological problems to a considerable extent.

22. ***To what extent felt that life is meaningful:*** The influence of yoga in improving the feeling that life is meaningful is evident from the results of the study. Less of tiredness, less problems with sleep, more enjoyment in life, experiencing more positive feelings and less of negative feelings/emotions, better confidence in life, feeling more contented in life, more satisfied with one's abilities and health, better quality of life etc. attained through the practice of yoga for the respondents under this study would have probably contributed to making life more meaningful for the yoga practitioners.

Difference in scores under two categories of the characteristics of the respondents, namely, sex, marital status, period of yoga practice, and whether the respondent experienced any psychological problem/s during the past six months was observed (Table 3), even though statistically significant difference in the scores was not observed. Females got a higher QOL score than males, Unmarried yoga practitioners got a higher score than married respondents, 13 to 18 months of yoga practice resulted in a comparatively higher QOL score than 8 to 9 months of yoga practice, and those who did not report psychological problem/s during the past six months got a higher QOL score than those who had such problem.

## CONCLUSIONS

The study has shown the influence of yoga practice in improving the Quality of Life (QOL) of the respondents with statistically significant difference in the QOL scores before and after the practice of yoga. Those positive QOL parameters, which contribute to increasing QOL of the yoga practitioners have improved after the practice of yoga, while the negative parameters, which contribute to a reduction in QOL have reduced after yoga practice. Unmarried yoga practitioners got a higher score than married respondents, higher period of yoga practice resulted in a comparatively higher QOL score than lesser period of practice, and those who did not report psychological problem/s during the past six months got a higher QOL score than those who had such problem.

Conducting such studies by yoga training centres and disseminating the findings to more people through seminars and other awareness programmes would probably help in improving the number of people practicing measures such as yoga.

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