

Mental Health of Yoga Practitioners and People Who Exercise: A Comparative Study from Kerala State, India

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INTRODUCTION

Mental health is a vital component of overall well-being which enables individuals to cope with daily stress, work productively and contribute effectively to society. According to the World Health Organization, mental health refers to a state of well-being, in which, individuals realize their abilities, manage the normal stresses of life and function effectively within their communities. In recent years, due to the fast-paced nature of life, mental health concerns such as stress, anxiety, and depression have increased globally, highlighting the need for effective strategies to promote psychological well-being.

Physical activity has been widely recognized as an important factor in improving mental health. Regular participation in physical exercise is associated with reduced symptoms of depression and anxiety, improved mood, and better emotional regulation. Exercise promotes mental well-being through physiological and psychological mechanisms, including the release of endorphins and improved brain functioning [1]

Among various forms of physical activity, yoga has gained significant attention due to its holistic approach to health. Yoga combines physical postures (asanas), breathing techniques (pranayama), and meditation practices that aim to create harmony between the body and mind. Recent research indicates that yoga practice can reduce stress levels, improve emotional balance, and enhance overall psychological well-being [2]

Although both yoga and general physical exercise have been shown to positively influence mental health, comparative studies examining their effects within the same population are limited, particularly in the Indian context. Therefore, the present study aims to compare the mental health of yoga practitioners and individuals who engage in physical exercise in the State of Kerala, India.

METHODOLOGY

The study was undertaken using an on-line questionnaire among 40 respondents practicing yoga and 40 respondents who are doing exercise. The questionnaire contained the measure of mental health with various mental health feelings [3] and the characteristics of the respondents, namely, sex, age, marital status, period of yoga practice, and period of exercise. The data was analyzed as scores, proportion reporting and through statistical test.

ETHICS STATEMENT

Since data was collected from the respondents voluntarily, and no clinical interventions were involved, formal Institutional Ethics Committee approval was not necessary. Informed consent was obtained from all the respondents and confidentiality was maintained.

RESULTS

Statistical difference in total mental health score of the yoga practitioners was not observed based on their sex, age, marital status and period of yoga practice.

Table 1 shows the range of total mental health score of yoga practitioners under two age groups.

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Table1. Range of total mental health score of yoga practitioners under two age groups

Age group (years)			
14 to 35		42 to 66	
Range of total mental health score* of yoga practitioners	Respondents (%)	Range of total mental health score* of yoga practitioners	Respondents (%)
77.7 - 96.6	50	77.7 - 88.0	50

*as % of the maximum possible total score under the study

Table 2 shows the level of contribution of yoga practice to various mental health feelings.

Table 2. Contribution of yoga practice to mental health feelings

Sl. No.	Mental health feeling	Respondents (%)			
		Level of contribution of yoga practice to the feeling			
		To a great extent	To some extent	Not at all	Total (%)
1	Felt happy	47.5	35.0	17.5	100
2	Felt satisfied	40.0	57.5	2.5	100
3	Felt that something important has to be contributed to the society	37.5	57.5	5.0	100
4	Felt like belonging to a community	37.5	57.5	5.0	100
5	Felt that the society is a good place or is becoming a better place for all people	30.0	70.0	Nil	100
6	Felt that people are basically good	32.5	62.5	5.0	100
7	Felt that the way people in the society works makes sense	25.0	75.0	Nil	100
8	Felt liking most of the aspects of your personality (which indicates character, capabilities, being enjoyable and positive in life etc.)	37.5	57.5	5.0	100
9	Felt good at managing the responsibilities of daily life	35.0	60.0	5.0	100
10	Felt warm and trusting relationships with others	27.5	65.0	7.5	100
11	Felt having experiences that challenged to grow and become a better person in life	40.0	57.5	2.5	100
12	Felt confident to think or express own ideas and opinions	42.5	57.5	Nil	100
13	Felt that life has a sense of direction or meaning	35.0	62.5	2.5	100

Even though age-wise statistically significant difference in total mental health score of people doing exercise was not observed, there exists difference in the proportion of respondents getting almost similar range of total score between two age groups (Table 3).

Table 3. Range of total mental health score of people doing exercise under two age groups

Age group (years)			
14 to 35		42 to 66	
Range of total mental health score* of people doing exercise	Respondents (%)	Range of total mental health score* of people doing exercise	Respondents (%)
47.9 – 77.8	75	45.3-79.5	40

* as % of the maximum possible total score

Statistically significant difference was observed in total mental health score based on the period of exercise (Table 4).

Table 4. ANOVA of total mental health score based on period of exercise

Period of exercise	Mean total mental health score*	F	Statistical significance
Less than 3 months	67.0	2.65	$p < 0.05$
3-6 months	65.4		
6-12 months	75.3		
1-2 years	80.3		
More than 2 years	81.9		

* as % of the maximum possible total score

Statistical difference in total mental health score of people who do exercise was not observed based on their sex and marital status.

Table 5 shows the level of contribution of exercise to various mental health feelings.

Table 5. Contribution of exercise to mental health feelings

Sl. No.	Mental health feeling	Respondents (%)			
		Level of contribution of exercise to this feeling			
		To a great extent	To some extent	Not at all	Total (%)
1	Felt happy	50.0	45.0	5.0	100
2	Felt satisfied	35.0	60.0	5.0	100
3	Felt that something important has to be contributed to the society	32.5	62.5	5.0	100
4	Felt like belonging to a community	32.5	62.5	5.0	100
5	Felt that the society is a good place or is becoming a better place for all people	40.0	60.0	Nil	100
6	Felt that people are basically good	37.5	60.0	2.5	100
7	Felt that the way people in the society works makes sense	25.0	75.0	Nil	100
8	Felt liking most of the aspects of your personality (which indicates character, capabilities, being enjoyable and positive in life etc.)	22.5	72.5	5.0	100

9	Felt good at managing the responsibilities of daily life	25.0	67.5	7.5	100
10	Felt warm and trusting relationships with others	25.0	67.5	7.5	100
11	Felt having experiences that challenged to grow and become a better person in life	35.0	60.0	5.0	100
12	Felt confident to think or express own ideas and opinions	37.5	62.5	Nil	100
13	Felt that life has a sense of direction or meaning	32.5	62.5	5.0	100

Table 6 shows the range of total mental health score of yoga practitioners and people who do exercise.

Table 6. Range of total mental health score of yoga practitioners and people who exercise

Range of total mental health score* of yoga practitioners	Respondents (%)	Range of total mental health score* of people who exercise	Respondents (%)
70.9-78.6	92.5	45.3-79.5	57.5

*as % of the maximum possible total score under the study

DISCUSSION

Mental health of yoga practitioners

The data presented in Table 1 shows that while 50 % of yoga practitioners in the comparatively younger age group 14 to 35 years have total mental health score in the range of 77.7 to 96.6. % of the maximum possible score under the study, 50 % of yoga practitioners in the older age group of 42 to 66 years have total mental health score in the range of 77.7 to 88 % of the maximum possible score only. This implies that young yoga practitioners have achieved better mental health than old people. This could be probably because of age-related factors such as more stress, health conditions, or reduced adaptability to yoga practice. Nevertheless, the high mental health scores of both the age groups establishes the effectiveness of yoga practice in promoting mental health of the practitioners (Table 1).

A high proportion of people have reported that yoga has contributed to the mental health feelings either to a great extent or to some extent (Table 2). Nearly half of them (47.5%) have reported that yoga contributes greatly to feeling happy, while 57.5% report at least some level of contribution of yoga practice to life satisfaction. This reflects that yoga not only promotes immediate positive emotions, but also nurtures a deeper and more sustained sense of contentment in life. Respondents in the range of 2.5 to 17.5 % only have reported that there is no effect of yoga practice on the mental health feelings experienced by

them (Table 2).

From a scientific perspective, these improvements can be attributed to the regulatory effects of yoga on the neurophysiological system. Yogic practices such as asanas, pranayama, and meditation help balance the autonomic nervous system by enhancing parasympathetic activity and reducing sympathetic overactivation. This leads to decreased stress hormone levels, improved emotional regulation, and enhanced mood stability. Furthermore, regular yoga practice has been associated with increased levels of neurotransmitters such as gamma-aminobutyric acid (GABA), which plays a key role in reducing anxiety and promoting relaxation. These physiological changes create a mental state that supports positive emotions such as happiness, satisfaction etc. Overall, the data under this study suggests that yoga contributes not only to hedonic well-being (happiness and pleasure) but also to eudaimonic well-being (meaning, growth, and purpose in life). Hence, yoga can be considered as a holistic intervention that enhances multiple dimensions of mental health, leading to improved happiness, satisfaction, and overall quality of life.

These findings are consistent with previous research. It has been reported that yoga practice increases GABA levels, thereby improving mood and reducing anxiety [4]. Similarly, it has been found that yoga enhances overall well-being, emotional resilience, and life satisfaction [5]. In addition, yoga philosophy emphasizes concepts such as contentment (Santosha), self-awareness, and harmony, which further contribute to a stable and fulfilling mental state.

Research conducted at All India Institute of Medical Sciences, New Delhi, observed that integrated yoga interventions significantly reduced symptoms of depression and improved mental health among participants, highlighting the role of yoga in enhancing emotional stability and well-being [6]. Similarly, studies from the Amrita Institute of Medical Sciences, Kochi, found that meditation-based yoga practices significantly decreased anxiety and depression while improving psychological well-being among healthy individuals [7].

Mental health of people who exercise

Statistically significant difference was observed in total mental health score based on the period of exercise (Table 4). The mean score increases after 6 months of exercise, with the highest score of 81.9 % of the maximum possible score under the study attained by those who have done exercise for more than 2 years (Table 4).

In the case of people who have done exercise for a period of less than 3 months, the total mental health score is in the range of 53.8 to 77.8 % of the maximum possible total score for 70 % of the respondents. For all the respondents with 3 to 6 months of exercise, the total score is in the range of 60.7 to 70 % of the maximum possible score. 83.3 % respondents with 6 to 12 months of exercise have total score in the range of 61.5 to 100. All the respondents with 1 to 2 years of exercise have a total score of 80.3 % of the maximum possible score, while 62 % of those who have exercised for more than 2 years have total mental health score in the highest range of 80.3 to 100 % of the maximum possible score under the study.

As observed in the case of the yoga practitioners, a substantial proportion of people who do exercise have also reported that exercise has contributed to the mental health feelings either to a great extent or to some extent (Table 5). When compared to the other mental health feelings, a higher proportion of respondents (50 %) have reported that exercise has contributed to a great extent of happiness for them. The release of endorphins and other mood-enhancing neurotransmitters during physical activity might explain this relatively higher impact on happiness compared to other psychological domains. Respondents in the range of 2.5 to 7.5 % only have reported that there is no effect of exercise at all on the mental health feelings experienced by them (Table 5).

Regular participation in exercise improves emotional stability, reduces stress, and enhances mood through physiological mechanisms such as the release of endorphins and improved brain functioning. Recent research highlights the important role of physical activity in promoting psychological well-being and overall life satisfaction. A study conducted at the Amrita Institute of

Medical Sciences, Kochi, reported that adequate levels of physical activity among adolescents were associated with better physical and psychological health outcomes, indicating that active lifestyles contribute positively to overall well-being [8]. Similarly, a study has demonstrated that participation in structured sports and physical activity programs significantly improves psychological well-being and performance outcomes [9]. These findings suggest that engagement in regular physical activity not only enhances physical fitness but also contributes to greater happiness and life satisfaction.

Even though marital status-wise statistical difference in the total mental health score of people who exercise was not observed, 57.2 % of unmarried people get total mental health score in the range of 61.5 to 77.8 % of the maximum possible total score only, while 57.6 % of married people get total mental health score in the comparatively higher range of 70 to 88.9 % the maximum possible total score.

Comparison of the mental health of yoga practitioners and those who do exercise

Statistically significant difference was not observed between the total mental health score of yoga practitioners (mean score of 78.1) and people who do exercise (mean score of 76.3). Similarly, no statistically significant difference was observed in the scores of various mental health items between yoga practitioners and people who do exercise.

However, majority of the yoga practitioners (92.5 %) have a total mental health score in the range of 70.9 to 78.6 % of the maximum possible score, while majority of those who do exercise (57.5 %) have a comparatively lower score in the range of 45.3 to 79.5 % of the maximum possible score only (Table 6). Further, the narrow and higher range of mental health score observed among a higher proportion of yoga practitioners suggests a more stable and uniformly positive mental health outcome. On the other hand, the wider range of score of respondents who do exercise reflects some level of inconsistency in mental health outcomes, with some individuals experiencing lower levels of mental well-being. This implies that yoga has contributed to comparatively better mental health than exercise for the practitioners. This may be attributed to the holistic nature of yoga, which integrates physical movement with breath regulation, mindfulness, and meditative awareness, thereby addressing both physiological and psychological dimensions of health simultaneously. Yoga practices, particularly pranayama and meditation enhance self-awareness, emotional regulation, and parasympathetic activation, leading to more sustained improvements in mental health. In contrast, while exercise is effective in improving physical fitness and also contributes to mental

health through mechanisms such as release of endorphins and stress reduction, it may not sufficiently address deeper cognitive and emotional processes. Based on case studies of individuals, who have practiced meditation (an integral component of yoga) and exercise, their positive effects on physical and mental health for all of them has been reported [10].

CONCLUSION

The study revealed that young yoga practitioners have achieved better mental health than old people. . Nevertheless, the high mental health scores of both the age groups establishes the effectiveness of yoga in promoting mental health of the practitioners. A high proportion of people have reported that yoga has contributed to the mental health feelings either to a great extent or to some extent. Statistically significant difference was observed in total mental health score based on the period of exercise. The mean score increases after 6 months of exercise, with the highest mean score of 81.9 % of the maximum possible score under the study attained by those who have done exercise for more than 2 years. 62 % of those who have exercised for more 2 years have total mental health score in the highest range of 80.3 to 100 % of the maximum possible score. As in the case of yoga practitioners, a substantial proportion of people who do exercise have also reported that exercise has contributed to the mental health feelings either to a great extent or to some extent. Even though marital status-wise statistical difference in the total mental health score of people who do exercise was not observed, 57.2 % of unmarried people get total mental health score in the range of 61.5 to 77.8 % of the maximum possible total score only, while 57.6 % of married people get total mental health score in the comparatively higher range of 70 to 88.9 % the maximum possible total score. Statistically significant difference was not observed between the total mental health score of yoga practitioners and people who do exercise. Statistically significant difference was also not observed in the scores of various mental health items between yoga practitioners and people who do exercise. However, majority of the yoga practitioners (92.5 %) have a total mental health score in the range of 70.9 to 78.6 % of the maximum possible score, while majority of those who do exercise (57.5 %) have a comparatively lower score in the range of 45.3 to 79.5 % of the maximum possible score only. This implies that yoga has contributed to comparatively better mental health than exercise for the practitioners under this study.

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