

Analysis of the effect of yoga practice on anxiety during the COVID-19 pandemic

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Abstract

The objective of this study was to analyse the effect of yoga practice on anxiety experienced by people during the COVID - 19 pandemic period. It was conducted among 220 randomly selected yoga practitioners having minimum of six months yoga practice from Kozhikode District of Kerala, India through a questionnaire containing the GAD-7 anxiety scale (Spitzer *et al.*, 2006). Data was analysed as frequencies and scores using statistical techniques. The results reveal that even though anxiety has increased during the COVID-19 pandemic period when compared to before its occurrence, yoga has helped the practitioners in managing it. In the previous month of yoga practice, which is during the pandemic period, a total of 67.8% male and 55.6% of female yoga practitioners report either anxiety less than half of the time or no anxiety at all. Sex and the level of anxiety of the yoga practitioners before the pandemic significantly influence the anxiety experienced by them during the pandemic period. The results of the study indicate the usefulness of yoga practice to reduce the anxiety of people during the pandemic period, which may otherwise lead to psycho-somatic disorders, if the pandemic continues and increases in severity in the days to come.

Keywords: COVID -19, anxiety, yoga

1. Introduction

The fast, competitive, stressful nature of today's life is a common phenomenon in the society now. This is contributing significantly to psychiatric problems such as anxiety, depression etc. Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure. High anxiety makes the individual incapable of leading a healthy and peaceful life. The end result of prolonged anxiety neurosis is depression, which is a severe psychological problem. Mostly, people have stigma in consulting psychiatrists for such problems. Psychiatric drugs also have various negative side effects in the long run. This is where safe relaxation practices like yoga, meditation, art of living etc. assume significance. Yoga is a form of integrated mind-body medicine that improves wellbeing, mostly the stress related illnesses (Atkinson *et al.*, 2009) [1]. Pranayama and Meditation practices in yoga calm the mind to enhance higher self-awareness and lessen anxiety, resulting in better quality of life. Yoga is relevant under the COVID 19 period to help people overcome stress, anxiety etc. arising out of the uncertainty created by the pandemic.

In this context, a study was undertaken by WEDO (NGO) based at Kozhikode, Kerala, India in collaboration with Satyananda Yoga Research Centre, Kozhikode, Kerala to analyse the effect of yoga practice on the anxiety of people

during the COVID - 19 pandemic period.

2. Methodology

The study was carried out during the COVID-19 pandemic period in June 2020 among 220 randomly selected hatha yoga practitioners having minimum of six months of yoga practice (which includes the month of study) from Kozhikode District of Kerala, India. They were interviewed using a questionnaire containing the characteristics of the respondents such as sex, marital status, education and the average anxiety level before the COVID - 19 pandemic. The GAD-7 anxiety scale with four-point responses (Spitzer *et al.*, 2006) [3] during the previous month of yoga practice (which falls during the COVID-19 pandemic period) was used to study anxiety, which was scored through the Likert method. The sum of scores of the responses was taken as the total anxiety score of the respondents. A low anxiety score indicates more of anxiety and vice versa. The data was analysed as frequencies and scores using statistical techniques.

3. Results

Table 1 shows the characteristics of the yoga practitioners such as sex, marital status, education and the average anxiety level before COVID - 19 pandemic.

Table 1: Characteristics of the yoga practitioners

Characteristic	Category	Respondents (%)
Sex	Female	28.2
	Male	71.8
Marital status	Married	87.7
	Unmarried	12.3
Education status	6-10 std.	4.5
	+2/Pre-Degree	11.4
	Degree	38.2
	PG	22.2
	Professional Course	10.5
	Ph.D.	13.2
Anxiety level before the COVID - 19 pandemic	Very high	4.1
	High	9.1
	Moderate	36.4
	Less	20.4
	Very Less	19.1
	Nil	10.9

Table 2 shows the frequency of experience of anxiety during the previous month of yoga practice, which is during the COVID – 19 pandemic period.

Table 2: Anxiety experienced during the previous month of yoga practice

Frequency of experiencing anxiety	Respondents (%)	
	Male	Female
Less than half of the time	36.9	31.8
Over half of the time	15.5	17.4
Nearly every day	16.7	27.0
Not at all	30.9	23.8

Table 3 shows the categorisation of total anxiety score of the respondents during the previous month of yoga practice

based on Mean and Standard Deviation (SD).

Table 3: Categorisation of the anxiety score of the respondents during the previous month of yoga practice

Detail	Category*	Anxiety level	Respondents (%)
Total Anxiety Score	Low	High	15.0
	Medium	Moderate	64.1
	High	Low	20.9
	Total		100

*using Mean and 1 SD

Table 4 shows the test of significance of the mean anxiety score during the previous month of yoga practice with respect to two characteristics of the yoga practitioners.

Table 4: Test of significance of anxiety score

Characteristic	Category	Mean anxiety score during the previous month of yoga practice	Test statistic value	P-value
Sex	Female	27.2	3249*	0.00
	Male	31.5		
Anxiety level before the COVID -19 pandemic	Very high	21.7	11.072**	0.026
	High	27.8		
	Moderate	29.5		
	Less	29.6		
	Very Less	33.6		
	Nil	33.5		

*Mann Whitney u test

** Kruskal-Wallis chi-squared test

4. Discussion

71.8% of the yoga practitioners were males and 28.2% females, 87.7% were married, 38.2% had Degree and 22.2% had PG qualification. A total of 75.9% respondents reported moderate to very less anxiety only before the COVID - 19 pandemic (Table 1), even though 81.8% of respondents were falling in the medium to high anxiety groups (when categorised based on Mean and SD values of the anxiety scores) during the previous month of yoga practice, which is during the COVID-19 pandemic period. Madhava Chandran *et al.* (20% 20) [2] reported that the anxiety of people has increased during the COVID-19 pandemic in Kerala.

However, it should be noted that during the pandemic period, 36.9% of male yoga practitioners and 31.8% of females report anxiety less than half of the time only during the previous month of yoga practice, while 30. 9% males

and 23.8% female yoga practitioners do not report any anxiety at all (Table 2). Further, through categorization of the anxiety scores during the pandemic period based on mean and standard deviation, 20.9% yoga practitioners have low anxiety and 64.1% have moderate anxiety only, while only 15% yoga practitioners are having high anxiety (Table 3). Hence, even though anxiety has increased when compared to before the pandemic period, practice of yoga has helped people to manage it for people. Vijayaraghavan *et al.* (2020) [4] observed that due to yoga practice, people have up to two times less mental stress, when compared to before yoga practice.

Table 4 shows that there exists statistically significant difference between the mean anxiety score of males and females during the previous month of yoga practice (which is during the COVID – 19 pandemic period), with females

having more anxiety than males due to a comparatively lower score. The anxiety level of the respondents before the pandemic also significantly influences the mean anxiety score during the pandemic period, which is the lowest (indicating very high anxiety) for respondents reporting very high anxiety before the pandemic (Table 4). However, when the pre-pandemic anxiety level decreases from very high to no anxiety, the anxiety level during the pandemic period also reduces on account of an increase in the mean anxiety score (Table 4).

5. Conclusions

Even though the anxiety of people has increased when compared to before occurrence of the COVID-19 pandemic, the study has shown the effectiveness of yoga practice in managing it. In the previous month of yoga practice which is during the pandemic period, 36.9% of male yoga practitioners and 31.8% of females report anxiety less than half of the time only, while 30.9% males and 23.8% female yoga practitioners do not report any anxiety at all. Hence, practices such as yoga, meditation etc. should be promoted among the public through on-line and contact classes whenever possible in order to overcome psychological stressors induced by the present COVID -19 pandemic, which could otherwise lead to psycho-somatic disorders also in the long run. It will also be worthwhile for the Government to establish mechanisms for on-line training on such practices through institutions such as Residents' Associations etc., which would be comparatively more effective in mobilising people. This will hopefully have more takers under the present context of the unabated spread of the pandemic, which may be creating uncertainty among people.

6. References

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