



IMPACT OF YOGA PRACTICES ON THE NATURE OF ILLNESS AMONG HEALTH CARE WORKERS WHO RECOVERED FROM COVID 19 – A RETROSPECTIVE STUDY

Community Medicine

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ABSTRACT

BACKGROUND: Limited knowledge is available related to the impact of yoga practices on the nature of illness among the health care workers who recovered from Covid-19.

OBJECTIVE: To study the impact of yoga practices on the nature of illness among health care workers who recovered from Covid-19.

METHODS: This is a retrospective study, conducted in a non-Covid tertiary health care hospital. All the health care workers of all the categories who recovered from Covid-19 during April 2020 to March 2021 were included in the study. Nature of Covid-19 illness among recovered health care workers who were practicing yoga and those who were not practicing was compared using statistical test.

RESULTS: 69 health care workers suffered from Covid-19 during the study period. All these health care workers recovered from the disease. 23(33.33%) health care workers were practicing yoga like asana, pranayama and dhyana. Yoga practices were more prevalent among subjects who were equal to or more than 40 years of age and in subjects who were graduate and above ($p < 0.05$). 82.61% subjects among practicing yoga while, 26.09% subjects among not practicing yoga, were asymptomatic ($p < 0.05$). 82.61% subjects among practicing yoga and 36.96% subjects among not practicing yoga, were home or institution quarantined ($p < 0.05$). It is observed that, more number of subjects among practicing yoga were asymptomatic and were home or institution quarantined compared to the subjects who were not practicing yoga.

Of the 23 health care workers who were practicing yoga, only 05(21.74%), while of the 46 who were not practicing yoga, 17(36.96%), were having post Covid symptoms. Thus, more number of subjects among not practicing yoga were having post-Covid symptoms compared to those who were practicing yoga. Of the 69 health care workers, 18(26.09%) were having co-morbidities like hypertension or diabetes or both. More number of subjects among who were suffering from hypertension and or diabetes and were not practicing yoga were admitted to Dedicated Covid Health Centre or Dedicated Covid Hospital compared to the subjects who were practicing yoga.

CONCLUSION: Yoga practices had some positive impact on the nature of illness among health care workers who recovered from Covid -19. The regular practice of yoga may help to reduce the severity of the Covid -19.

KEYWORDS

Yoga Practices, Health Care Workers, Covid-19

INTRODUCTION

Today, the world is facing with the problem of Covid-19 pandemic caused by infection of SARS CoV-2, a novel corona virus. There is a lot of morbidity and mortality due to this viral disease around the world. Health care workers are working hard day and night to control this pandemic. Because of their nature of work, they are at risk of contracting this infection. After reviewing the literature related to benefits of yoga practices in prevention and control of Covid-19, this retrospective study was planned to find whether health care workers who recovered from Covid-19 were practicing yoga, to assess the nature of their illness with reference to symptoms of Covid-19, status of quarantine and hospitalization, duration of stay in hospital, the presence of post-Covid symptoms and to compare the nature of illness among those who were practicing yoga and those who were not practicing yoga.

'Yoga Darshan' is one of the six Aastika Darshana of Indian philosophy, written and compiled by the great Sage Patanjali, has its own epistemological method, which assume the ontology and metaphysics of the closely correlated Samkhya Darshan, an art and science of healthy living, a discipline based on an extremely subtle science which leads to a perfect harmony between mind and body, individual consciousness and universal consciousness. It is an applied science, a systematized discipline to bring harmony between man and the nature, is the most precious gift of the Indian culture to the world.⁽¹⁾ Maharshi Patanjali, in Yoga Darshan (Sutra 1.2), defined, 'Yoga' means 'Chitta Vritti Nirodha'.⁽²⁾ It is the stoppage of mind fluctuations. This state is achieved by way of Abhyasa and Vairagya. For this, Maharshi Patanjali suggested Ashtanga Yoga i.e. Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. Resolution by United Nations General Assembly realized that, Yoga is a comprehensive and holistic approach to promote health and well-being.⁽³⁾

Covid-19 has been declared as Global Health Emergency by World Health Organisation considering its highly spreading nature. This viral disease mostly affects people with low immunity, above 60 years of age and with co-morbidities. Such people are more prone for a severe and critical exhibition of Covid-19. Also, there is high mortality rate in such people. Children and pregnant women are also getting affected by this infection. As of there is no standard established line of treatment

for the management of Covid-19, it becomes imperative to enhance the immunity and soundness of the respiratory system, which is most commonly affected system by this viral infection. Considering the current situation and need-based scenario, to boost the immune system is the best and ultimate way to combat this pandemic.⁽⁴⁾

Yoga practices like asana, pranayama and dhyana described in Yoga Darshan by Maharshi Patanjali, in Hatha Yoga Pradipika by Maharshi Swatmaram and in other yogic literature, are useful in boosting the immune status of the body and improving the strength of the lungs. Yoga practices, as non-invasive techniques, can work as supportive and preventive therapy for Covid-19, a severe acute respiratory syndrome.^(4, 5, 6, 7) Practice of yoga can reduce stress, promote mental health and thus, it will help to decrease susceptibility to SARS CoV-2. It will also help to boost the immunity.^(8, 9, 10, 11) In addition to the standard methods in modern medicine, yoga could be effective and useful traditional and complementary practice for prevention and post recovery management of Covid-19. Today the concept of prevention of diseases has become broad based. Yoga practices can work very well at primordial, primary, secondary and tertiary level of prevention.^(10, 11, 14)

MATERIALS AND METHODS

This retrospective study was conducted in a non-Covid tertiary health care hospital in Mumbai Metropolitan Region. All the health care workers of all the categories, who recovered from Covid-19 during April 2020 to March 2021, were included in the study. The purpose of the study was explained to all the participants and their consent was obtained before recording the data. Information of the study subjects with reference to age, sex, education, date of diagnosis of Covid-19, presence of co-morbidity, yoga practices, symptoms, place of management, duration of stay in Dedicated Covid Health Center (DCHC) or Dedicated Covid Hospital (DCH) and post-Covid symptoms were recorded in the structured, pre-designed and pre-tested proforma with the help of face to face or telephonic interview. The data was analysed using Microsoft excel. Tables are used to represent the data. Standard error of difference between two proportions test was applied and results were interpreted at 5% level of significance.

RESULTS AND DISCUSSION

Total 69 health care workers suffered from Covid-19 during the study period. All these health care workers recovered from the disease. 39(56.52%) were males and 30(43.48%) were females. 55(79.71%) subjects were 40 years and above, while 14(20.29%) were less than 40 years of age. 51(73.91%) were graduate and above, while 18(26.09%) were studied less than graduation. 18(26.09%) subjects were having co-morbidities like hypertension or diabetes or both. Of the 69 health care workers, 23(33.33%) were practicing yoga like asana, pranayama and dhyana, while 46 (66.66%) were not practicing yoga.

Of the 23 subjects who were practicing yoga, 04 (17.39%) were between 18 to less than 40 years of age, while 19 (82.61%) were between 40 to 58 years of age ($p < 0.05$). 09(39.13%) were males while 14(60.87%) were females. 3(13.04%) were not graduate, while 20(86.96%) were graduate and above ($p < 0.05$). 07(30.43%) were having co-morbidity like hypertension and or diabetes mellitus while 16(69.57%) were without co-morbidity (Table - 1). Of the 23 subjects who were practicing yoga, 19(82.61%) while of the 46 who were not practicing yoga, only 12(26.09%) were asymptomatic ($p < 0.05$). Thus, of the 23 subjects who were practicing yoga, only 04(17.39%) while of the 46 who were not practicing yoga, 34(73.91%) were symptomatic and having mild or moderate or severe symptoms ($p < 0.05$) (Table - 2).

Of the 23 health care workers who were practicing yoga, 19 (82.61%) asymptomatic while of the 46 who were not practicing yoga, only 17 (36.96 %), which include asymptomatic and mild symptomatic, were home or institution (Dedicated Covid Care Centre, DCCC) quarantined ($p < 0.05$). 05(13.16%) mild symptomatic subjects who were not practicing yoga were institution quarantined i.e. admitted to DCCC. Thus, of the 23 health care workers who were practicing yoga, only 04 (17.39%) symptomatic while of the 46 who were not practicing yoga, 29(63.04%) symptomatic were admitted to Dedicated Covid Health Centre (DCHC) /Dedicated Covid Hospital (DCH) ($p < 0.05$). As far as the duration of stay in Dedicated Covid Health Center or Dedicated Health Hospital is concerned, of the 04 health care workers who were practicing yoga, 03(75.00%) while of the 29, who were not practicing yoga, 22(75.86%) were admitted for 10 days and more (Table - 2).

Of the 23 health care workers who were practicing yoga, only 05(21.74%) while of the 46 who were not practicing yoga, 17(36.96%) were having post Covid symptoms like persistent cough, chest pain, increased fatigue, anxiety, depression, sleep disturbances etc (Table - 2). After acute Covid-19 illness, recovered patients may continue to report wide variety of symptoms and complications. A holistic and comprehensive approach is required for follow-up care and wellbeing of all such recovering patients. At the community level, such patients should be advised to participate in the group sessions of yoga and meditation while taking all due precautions like physical distancing.⁽¹⁵⁾ Of the 69 participants, 12(17.39%) were suffering from hypertension. Of the 12 hypertensive subjects 03(25.00%) were practicing yoga while 09(75.00%) were not practicing yoga. Of the 03 subjects who were practicing yoga, 02(66.67%) were institution quarantined and 01(33.33%) was admitted to the Dedicated Covid Hospital. Of the 09 subjects who were not practicing yoga, 01(11.11%) was institution quarantined and 08(88.88%) were admitted to the Dedicated Covid Health Centre or Dedicated Covid Hospital. Of the 69 participants, 13(18.84%) were suffering from diabetes. Of the 13 diabetics, 04(30.77%) were practicing yoga while 09(69.23%) were not practicing yoga. 01(25.00%) subject who was practicing yoga and 01(11.11%) who not practicing yoga was institution quarantined. While 03(75.00%) subjects who were practicing yoga and 08(88.88%) who were not practicing yoga, were admitted to Dedicated Covid Health Centre or Dedicated Covid Hospital.

Min Du et al.⁽⁴⁶⁾ observed that the pooled prevalence of diabetes was 10% in Covid-19 patients in China. Nearly one in ten Covid-19 patients has diabetes. Diabetes is associated with a higher risk of severe illness and death. Targeted early intervention is needed in Covid-19 patients with diabetes. Francisco J Barrera et al.⁽⁴⁷⁾ observed that the overall prevalence of diabetes and hypertension in Covid-19 patients was 12% and 17% respectively. In severe Covid-19, the prevalence of diabetes and hypertension was 18% and 32% respectively. The risk of intensive care unit admission and mortality for patients with diabetes or hypertension who developed Covid-19 is increased compared with those without these co-morbidities.

SUMMARY

In the present study, it is observed that, the more number of subjects among practicing yoga were asymptomatic and were home or

institution quarantined compared to the subjects who were not practicing yoga. More number of subjects among not practicing yoga were having post-Covid symptoms compared to those who were practicing yoga. Also, more number of subjects among who were suffering from hypertension and or diabetes and were not practicing yoga were admitted to Dedicated Covid Health Centre or Dedicated Covid hospital compared to the subjects who were suffering from hypertension and or diabetes and were practicing yoga. Yoga practices had some positive impact on the nature of illness among health care workers who recovered from Covid -19. The regular practice of yoga may help to reduce the severity of the COVID-19.

Table - 1 Prevalence of Yoga practices among the Subjects (n= 69)

Variables		No of Subjects(n=69)		No of Subjects practicing Yoga (n=23)	
		N	%	N	%
Age in years	18 to < 40	14	20.29	04	17.39
	40 to 58	55	79.71	19	82.61
				Z =3.13	p<0.05
Sex	Male	39	56.52	09	39.13
	Female	30	43.48	14	60.87
				Z=1.04	p>0.05
Education	< Graduation	18	26.09	03	13.04
	≥ Graduation	51	73.91	20	86.96
				Z =3.55	p<0.05
Co-morbidity	Present	18	26.09	07	30.43
	Absent	51	73.91	16	69.57
				Z=1.88	p>0.05

Table - 2 Impact of Yoga practices on the nature of Covid – 19 illness among the Subjects (n=69)

Variables		Subjects practicing Yoga (n=23)		Subjects not practicing Yoga (n=46)		Z value	P value
		N	%	N	%		
Symptoms	Asymptomatic	19	82.61	12	26.09	3.68	P<0.05
	Symptomatic	04	17.39	34	73.91	2.03	P<0.05
Place of management	Home/Institution	19	82.61	17	36.96	3.13	P<0.05
	quarantine (DCCC)						
	DCHC/DCH	04	17.39	29	63.04	2.18	P<0.05
Duration of stay in DCHC/DCH	< 10 days	01	25.00	07	24.14	0.02	p>0.05
	≥ 10 days	03	75.00	22	75.86	0.03	p>0.05
Post Covid symptoms	Present	05	21.74	17	36.96	0.70	p>0.05
	Absent	18	78.26	29	63.04	1.15	p>0.05

REFERENCES

- Bavaskar Yogita et al, Physical activity, Exercise and Health, IAPSM's Text book of Community Medicine, Editor-in - Chief A.M.Kadri, Jaypee Brothers Medical Publishers, First edition, 2019:60-63.
- Dixit Shrinivas, Bharatiya Tatvadhyan, Phadke Prakashan, Kolhapur, 13th Edition, 2017, Page - 269.
- Basavaraddi V., Common Yoga Protocol, 3rd edition, 2017, Morarji Desai National Institute of Yoga, Ministry of AYUSH, Govt. of India.
- Anil Patange & Punam Sawarkar, Role of Yoga for the prevention and management of COVID19-A review. International Journal of Research in Pharmaceutical Sciences, 11(SPL1), 2020:1720-1724.
- National Clinical Management Protocol based on Ayurveda and Yoga for management of COVID -19, 2020, Ministry of AYUSH, www.ayush.gov.in
- Nagendra HR, Yoga for COVID-19, International Journal of Yoga, 2020, 13(2):87-88.
- Abel AN et al, The effects of regular yogic practice on pulmonary function in healthy individuals: a literature review. Journal of Alternative and Complementary Medicine 2013; 19(3):185-190.
- Guidelines for Ayurveda practitioners for COVID- 19, 2020, available at <https://www.ayush.gov.in/docs/ayurved-guideline.pdf>
- Maxwell L. et al, Self-reported mental health predicts acute respiratory infection. WJM, 2015, 114(3):100-104.
- Tillu Girish et al, Public Health Approach of Ayurveda & yoga for Covid-19 prophylaxis. Journal of Alternative & Complementary medicine 2020; 26(5):360-364.
- Gurav R.B., Yoga and Covid-19, International Journal of Scientific Research, 10(1), 2021:23-24.
- Woodyard C, Exploring the Therapeutic effects of yoga and its ability to increase quality of life. International Journal of Yoga, 2011, 4(2):49-54.
- Sengupta P., Health impacts of Yoga and Pranayam: A state of the Art review. International Journal of Preventive Medicine, 2012, 3(7):444-458.
- Park K., Text book of Preventive and Social Medicine, Banarasidas Bhanot, 24th edition, 2017:45-46.
- Post COVID Management Protocol, 2020, Ministry of Health and Family Welfare, Directorate General of Health Services, Government of India. www.mohfw.gov.in
- Min Du et al, Prevalence and impact of diabetes in patients with COVID-19 in China. World Journal of Diabetes, 11(10), 2020:468-480.
- Francisco J Barrera et al, Prevalence of Diabetes and Hypertension and their associated Risks for Poor Outcomes in Covid-19 Patients. Journal of the Endocrine Society, 4(9), 2020:1-16.