A Study to Assess the Impact of Tele-Yoga among Nurses Working During Covid-19

Dr. (Mrs.) Nisha Naik[1*] Ms. Shubhashree Dhir[2] Dr. (Mrs.) Rupali Salvi[3] Dr. Manisha Rathi[4]

Author: [1]Principal Investigator, Professor, Dr. D. Y. Patil Vidhyapeeth, College of Nursing Pimpri, Pune, Maharashtra.

Co-authors:

[2]CI, Dr. D. Y. Patil Vidhyapeeth, College of Nursing, Pimpri, Pune, Maharashtra.

[3]Professor, Dr. D. Y. Patil Vidhyapeeth, College of Nursing Pimpri, Pune, Maharashtra.

[4]Professor, Dr. D. Y. Patil Vidhyapeeth, College of Physiotherapy Pimpri, Pune, Maharashtra.

ABSTRACT

World health organization had declared COVID-19 as a public health emergency of international concern. Reported on April 26th 2020 four months after outbreak, more than 2,800,000 confirmed cases and almost 200,000 deaths due to SARS-CoV-2. It was also named as Severe Pneumonia with Novel Pathogens on 15th Jan, 2019 by the Taiwan CDC, the Ministry of Health.The number of Covid -19 cases, a rise in the rate of deaths, lack of any specific medicine or vaccine, extensive media coverage, massive workload, lack of personal protective equipment and feeling of of insufficient brace could contribute towards mental burden of such health care staff. Pandemic outbreak increased the demand of health care workers and expected to work for long hours with overwhelming pressure. In SARS-CoV-2 outbreak, 29% of all hospitalized patients were HCWs. Evidence suggests that yoga can be a suitable strategy to enhance individual wellness and reduce stress during the COVID-19 pandemic. It is observed that Sudarshan Kriya Yoga has helped in significant reduction in the level of stress, anxiety and depression among the health care providers. This study designed to investigate the effect of Tele - Yoga on mental Health among Nurses during COVID -19. **Aim:** To identify the impact of Tele-Yoga on Mental Health aspect among Nurses working during COVID - 19. **Objectives:** a). To assess the Mental Health aspect of nurses during COVID -19. b). To assess the effect of Tele-yoga among nurses on their Mental Health aspect. c). To compare the pre-test and post-test score of Tele-yoga on mental Health. **Method:** Pre-experimental non- randomized, one-group pre-test- post-test design, purposive sampling technique is used on a sample size of 100 nurses. **Results:** Mental health aspect score in pre-test 15.6 increased to 16.8 in post-test. **Conclusion:** It was found that Tele Yoga is significantly effective in improving the mental health aspect among nurses treating COVID-19 patients.

Key Words: - COVID-19, Aspect, Mental Health, Evaluate, Tele-Yoga

INTRODUCTION

World health organization had declared COVID-19 as a public health emergency of international concern. Reported on April 26th 2020 four months after outbreak, more than 2,800,000 confirmed cases and almost 200,000 deaths due to SARS-CoV-2. It was also named as Severe Pneumonia with Novel Pathogens on 15th Jan, 2019 by the Taiwan CDC, the Ministry of Health.[1] The number of COVID-19 cases, a rise in the rate of deaths, lack of any specific medicine or vaccine, extensive media coverage, massive workload, lack of personal protective equipment and feeling of insufficient brace could contribute towards mental burden of such health care staff. Pandemic outbreak increased the demand of health care workers and expected to work for long hours with overwhelming pressure. In SARS-CoV-2 outbreak, 29% of all hospitalized patients were HCWs.

These work environment risk various psychological and mental illnesses as well as physical and emotional distress among medical staff. To date, in India, there had been about six lakhs twenty two thousand cases of COVID-19 with death rate of eighteen thousand two hundred and near about every day 20,000 people are been tested positive. Yoga is an ancient way of living in harmony with oneself (body, emotion and intelligent) and nature. The word Yoga means to connect, unite or yoke.[3] Yoga is a spiritual and ascetic discipline which includes breath control, simple meditation and adoption of specific body postures practiced for health and relaxation. [4]

Lifestyle based on Yoga involves positive behavioural modifications (yamas and niyamas), practices of physical posture (asanas), breath regulation (pranayama), control of senses (pratyahara) and technique of meditation (dharana, dhyana and samadhi).[3] Evidence suggests that yoga can be a suitable strategy to enhance individual wellness and reduce stress during the COVID-19 pandemic. In a study it is observed that Sudarshan Kriya Yoga has helped in significant reduction in the level of stress, anxiety and depression among the health care providers.[2] There is sufficient evidence for integrated yoga therapy in anxiety, mood and psychiatric disorders .[11][12] Researchers evaluated the mental health of health care workers dealing with COVID-19 patients. Hence, this study designed to investigate the effect of Tele - Yoga on mental Health among Nurses during COVID -19.

NEED OF THE STUDY

Safe & effective guidance and counseling to the frontline workers (Nurses) during COVID-19 Pandemic is very essential. Tele-Yoga on mental health status can leverage an innovative response during the COVID-19 pandemic but may provide a long-lasting solution to balance their personal and professional life.

National Library of Medicine 2016 March-2016 Feb published a research on Health Care Workers Emotions, Perceived Stressors and Coping Strategies during MERS- CoV Outbreak. A cross sectional descriptive survey was conducted in a tertiary care hospital among 150 HCW who were working in high risk areas during the MERS- CoV outbreak occurred in Jeddah Saudi Arabia. The survey evaluated hospital staff emotions, perceived stressors, factors that could reduce stress, coping strategies and motivators to work in future outbreak. It was found that working in such situations with extra work load was very stressful among the HCW. The main sentiments were centered upon fear of personal safety, wellbeing of colleagues and their family members.

Research published in International Journal of Mental Health 22 April 2022 on Burnout and Psychological distress among nurses working in primary health care clinics in West Bank-Palestine. A quantitave cross sectional survey design was applied using a self-administered questionnaire. The questionnaire pack has Maslach Burnout Inventory (MBI) and the General Health Questionnaire (GHQ 28). The tool evaluated the level of burnout and psychological distress among 295 midwives and nurses working in Palestinian government PHC in north of the West Bank. The distress and burnout prevalence were 10.6% among 207 participants. 36.7 % were found to be high level burnout in the aspect of emotional exhaustion, 14% participants were found to be in a state of depersonalization, 17.9% in the area of reduced personal accomplishment. The research proved the 22.6% had a positive score in GQH-28, this indicates that there is very existence of psychological distress among the nurses and midwives working in MERS- CoV outbreak.

Hence tele-yoga was the need of hour for health care workers especially nurses who were handling the COVID-19 patients.

AIM OF THE STUDY

Aim of the study is to identify the mental health aspect among the nurses who were treating COVID-19 patients in the hospitals and to administer Tele-Yoga, measure its impact on Mental Health aspect among the same population.

MATERIAL AND METHODS

The researcher has adopted the pre-experimental non- randomized, one-group pretest- post-test design. Purposive sampling technique was used to select the experimental group. The sample size of the study constituted 100 nurses who were willing to participate in the study were sent the details of Tele-Yoga and the tool for the study. 30 Minutes of Tele-yoga sessions was conducted twice a day, 5 days/week for 4 weeks. The pre-test was conducted with the help of prepared tool before intervention and posttest was conducted after 4 weeks of pretest to assess the impact of Tele-yoga on Mental Health among staff Nurses during Covid-19 pandemic. The tool consisted of two sections. Section I: Demographic Profile, which consisted Personal profile. Personal profile had 7 items of the sample's information such as, gender, age in years, marital status, family type, number of children, duration of experience in COVID ward and presence of co morbidities. Section II: Assessment Of Mental Health Status with 5 Point Likert Scale. (Standardized WHO - 5 Well-being Index). It includes 4 domains Social, Emotional, Physiological. Each domain consists of 6 questions, total 18 items. The mental health status is assessed on the 1st day before performing Tele - Yoga, and again assessed on the 8th day after performing Tele - Yoga twice a day till 7th day in a

row. The content validity was determined by 06 experts from different specialties. Reliability was assessed using test-retest method. Pearson's correlation coefficient of the tool was found to be r = 0.84.

The main study was conducted in Dr. D. Y. Patil Hospital and Research Centre, Pune-18. The data was analyzed by using descriptive and inferential statistics.

RESULT

The data was analysis and interpreted to examine the aspect of mental health and effect of Tele-Yoga among nurses working during COVID-19 in selected hospital Pune city under the following section.

Section I: Description of samples (nurses) based on their Demographic Profile

Section II: Analysis of data related to Mental Health Aspect of Nurses during COVID -19

Section III: Analysis of the data related to the effect of Tele-yoga On Mental Health among nurses working during COVID-19

Section IV: Analysis of data related to comparison of pre-test and post-test score of Tele-yoga on mental Health

Section I: Description of samples (nurses) based on their Demographic Profile

Description of samples (nurses) based on their personal characteristics in terms of frequency and percentages were like 22% of the nurses was males and 78% of them were females. 40% of them had age 20-25 years, 43% of them had age 26-30 years, 6% of them had age 31-35 years and 11% of them had age above 35 years. 38% of them were married and 62% of them were unmarried. 84% of them had nuclear family and 16% of them had joint family. 78% of them did not have children, 8% of them had one child and 14% of them had two children. 20% of them had 4 months experience of COVID ward, 11% of them had 5 months of experience of COVID ward, 24% of them had 6 months experience of COVID ward and 45% of them had more than 6 months experience in COVID ward. 17% of them had diabetes, 1% of them had thyroid disease, 36% of them had diabetes and thyroid and 46% of them did not have any comorbidity.

Section II: Analysis of data related to Mental Health Aspect of Nurses during COVID -19

Table 1: Mental Health Aspect of Nurses during COVID -19

N=100

Quality of life	Pre-test	
	Frequency	%
Poor (score 0-8)	0	0%
Average (score 9-16)	61	61%
Good (Score 17-25)	39	39%

Analysis of data related to Mental Health Aspect of Nurses during COVID -19 before giving intervention.

The mental health aspects of nurses during COVID -19 were 61% of the nurses had average quality of life and 39% of them had good quality of life during COVID-19.

Section III: Analysis of data related to effect of Tele yoga On Mental Health

Table 2: Effect of Tele yoga On Mental Health Aspect of Nurses during COVID -19

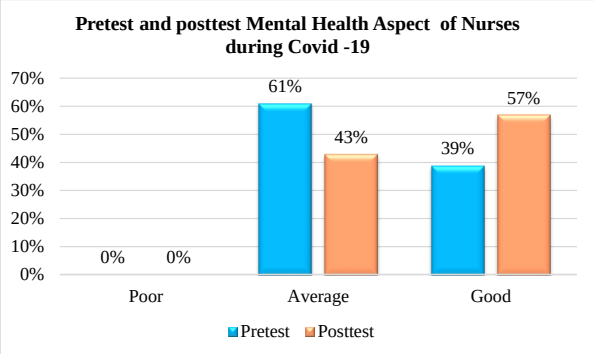
N=100

Quality of life	Pre-test		Post-test	
	Frequency	%	Frequency	%
Poor (score 0-8)	0	0%	0	0%
Average (score 9-16)	61	61%	43	43%
Good (Score 17-25)	39	39%	57	57%

Analysis of data related to effect of Tele yoga On Mental Health

FIG I: Pre-Test and Post-test Mental Health Aspect of Nurses

N=100

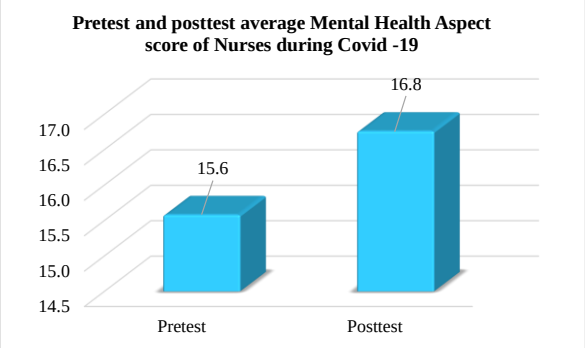


The analysis of data related to the effect of Tele - yoga on Mental Health was like in pre-test, 61% of the nurses had average quality of life and 39% of them had good quality of life during COVID-19. In post-test, 43% of the nurses had average quality of life (score 9-16) and 57% of them had good quality of life (score 17-25) during COVID-19.

Section IV: Analysis of data related to comparison of pre-test and post-test score of Tele-yoga on mental Health

Fig II: Comparison of pre-test and post-test score on mental Health

N=100



Comparison of pre-test and post-test score on mental Health aspect among nurses.

Researcher had applied paired t-test for the comparison of pre-test and post-test score of Tele-yoga on mental Health among nurses during COVID-19. Average mental health score in pre-test was 15.6 which increased to 16.8 in post-test. T-value for this test was 9.5 with 99 degrees of freedom. Corresponding p-value was small (less than 0.05), null hypothesis is rejected. Average mental health score in post-test was significantly high as compared to that in pre-test. It is evident that the Tele - Yoga is significantly effective in improving the mental health of nurses during COVID-19.

DISCUSSION

A similar article published in International Journal of Social Psychiatry by M. Vajpeyee et. all 2022, on Yoga and music intervention to reduce depression, anxiety and stress during COVID-19 outbreak among 240 health care workers by using depression anxiety and stress scale 42. Of all 209 participants 50.23% had symptoms of depression, 40.19% and 34.92% reported anxiety and stress respectively. Majority of the participants with abnormal score exhibited improved DASS-42 score on combined interventions of Yoga and music compared to the control group.[5] In this current study as Tele-Yoga was administered among 100 nurses working in COVID-19 wards, the post-test score of effect Tele-Yoga on mental health aspect was hence suggesting that Tele-Yoga was effective on mental health aspect among nurses. As per the frequency 78% of the participants were female nurses, 43% of the participants from the age group of 26 - 30 yrs., 62% of the participants were unmarried, 84% of the participants belonged to nuclear family, mostly who had worked in the COVID wards more than 6 months and highest frequency had no comorbidities. Even this high frequency of demographic profiles could lead in the improvement in the Mental Health Aspect.

Another similar study done by Khatereh Rostami et. all 2019 on effect of yoga on the quality of life of nurses working in intensive care units. This was a randomized controlled clinical trial of a preventive intervention of three weekly sessions of yoga exercise among nurses working in ICU, experimental (n=35) and 35 control (n=35). The base line score of quality of life increased from 62.3 to 70.7 on the first month and got improved continuously. Hence the yoga exercise was effective in improving the quality of life among nurses working in ICU. [6] In the current study after practising Tele-yoga the average mental health score increased from 15.6 to 16.8 among nurses during COVID-19.

CONCLUSION

The spread of COVID-19 was extremely high and working during COVID-19 was extremely stressful among health care workers because of heavy

workload and fear of spread of the disease among themselves in work place. This study was conducted in order to assess the impact of Tele-Yoga among 100 nurses who worked in the hospitals of Pune city, Maharashtra during COVID-19 on Mental Health aspect among nurses working with COVID-19 patients more than 4 months. Pre-experimental non-randomized, one-group pre-test- post-test design was used using Purposive sampling technique for the selection of experimental group. A self-structured section I demographic questionnaire in and section II Standardized WHO - 5 Well-being Index tool was used to assess the mental health aspect. In pre-test the mental health aspect was like 61% had an average quality of life and 39% had good quality of life during COVID - 19. After the administration of Tele-Yoga the post-test results improved such as 43% had average quality of life, 57% of nurses displayed good quality of life. Hence based on data collected and statistical analysis the study concludes that the application of Tele-yoga among nurses was significant in improving the mental health aspect in domains such as social, emotional, physiological.

REFERENCES

1. Wu, Y.-C., Chen, C.-S., & Chan, Y.-J. (2020). Overview of the 2019 novel Coronavirus (2019-nCoV): The pathogen of Severe Specific Contagious Pneumonia (SSCP): The pathogen of severe specific contagious pneumonia (SSCP). Journal of the Chinese Medical Association: JCMA, 83(3), https://doi.org/10.1097/JCMA.0000000000000270
2. Kanchibhotla, D., Saisudha, B., Ramrakhyani, S., & Mehta H, D. (2021). Impact of a yogic breathing technique on the well-being of healthcare professionals during the COVID-19 pandemic. Global Advances in Health and Medicine, 10, 2164956120982956. https://doi.org/10.1177/2164956120982956
3. Newlyn E. The 8 limbs of yoga explained [Internet]. Ekhart Yoga. 2017 [cited 2022 Aug 29]. Available from: https://www.ekhartyoga.com/articles/philosophy/the-8-limbs-of-yoga-explained
4. Isaacson C. Principles of Yoga. London, England: Thorsons; 1996
5. Vajpeyee M, Tiwari S, Jain K, Modi P, Bhandari P, Monga G, et al. Yoga and music intervention to reduce depression, anxiety, and stress during COVID-19 outbreak on healthcare workers. Int J Soc Psychiatry [Internet]. 2022;68(4):798–807. Available from: http://dx.doi.org/10.1177/00207640211006742
6. 6.Rostami K, Ghodsbin F. Effect of yoga on the quality of life of nurses working in intensive care units. Randomized controlled clinical trial. Invest Educ Enferm [Internet]. 2019 [cited 2022 Aug 29];37(3). Available from: https://pubmed.ncbi.nlm.nih.gov/31830404/
7. Cocchiara RA, Peruzzo M, Mannocci A, Ottolenghi L, Villari P, Polimeni A, et al. The use of yoga to manage stress and burnout in healthcare workers: A systematic review. J Clin Med [Internet]. 2019;8(3):284. Available from: https://www.mdpi.com/2077-0383/8/3/284/pdf
8. Coronavirus disease (COVID-19) – World Health Organization [Internet]. Who.int. [cited 2022 Nov 3]. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019
9. Report on release of “advisory on Tele-yoga services” [Internet]. Gov.in. [cited 2022 Nov 3]. Available from: https://yoga.ayush.gov.in/ministryofayush/1595399247.pdf
10. Kavoor AR. COVID-19 in people with mental illness: Challenges and vulnerabilities. Asian J Psychiatr [Internet]. 2020;51(102051):102051. Available from: http://dx.doi.org/10.1016/j.ajp.2020.102051
11. Baspure S, Jagannathan A, Kumar S, Varambally S, Thirthalli J, Venkatasubramanain G, et al. Barriers to yoga therapy as an add-on treatment for schizophrenia in India. Int J Yoga [Internet]. 2012;5(1):70–3. Available from: http://dx.doi.org/10.4103/0973-6131.91718
12. Govindaraj R, Varambally S, Gangadhar BN. Yoga for schizophrenia: Patients’ perspective. Int J Yoga [Internet]. 2015;8(2):139–41. Available from: http://dx.doi.org/10.4103/0973-6131.154077