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A STUDY TO EVALUATE THE EFFECTIVENESS OF MINDFULNESS MEDITATION ON PANDEMIC INDUCED FACTORS INFLUENCING STRESS AND ANXIETY AMONG STAFF NURSES WORKING IN COVID-19 UNIT IN CARMEL HOSPITAL AND MAJ HOSPITAL, ALUVA AT KERALA

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ABSTRACT

A study to evaluate the effectiveness of Mindfulness Meditation on pandemic induced factors influencing stress and anxiety among staff nurses working in COVID-19 Unit in Carmel hospital and MAJ hospital, Aluva at Kerala. True experimental study design was used. This study consists of 60 samples out of which 30 belongs to Experimental group and 30 belongs to control group of staff nurses were selected by using simple random sampling and lottery method. Stress level was assessed by structured questionnaire and anxiety level was assessed Hamilton anxiety assessment scale was used. Descriptive and inferential statistics were used to analyze the data. Regarding with the stress, in experimental group, mean and standard deviation is 17.03 ± 9.83 and mean percentage is 40.56 where as in control group, mean and standard deviation is 29.60 ± 5.22 and mean percentage is 70.48. The differential frequency is 29 and calculated 't' value is 7.98 which is greater the table value of $p < 0.01$. Regarding with anxiety, in experimental group, mean and standard deviation is 19.80 ± 8.06 and mean percentage is 35.36 whereas in control group, mean and standard deviation is 35.73 ± 7.76 and percentage is 63.81. Differential frequency is 29 and calculated 't' value is 0.06 which is greater the table value of $p < 0.01$. This shows that there was significant difference in test value of Experimental and Control group. Mindfulness Meditation was effective in reducing the stress and anxiety among staff nurses working in COVID-19 Unit.

KEYWORDS

Stress, Anxiety, Mindfulness meditation and Staff nurses working in COVID-19 unit.

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INTRODUCTION

Nurses are playing vital role in fighting against COVID-19. Nurses are exposed to various infectious diseases, including those transmitted through the blood or other body fluids and airborne infectious agents. During the COVID-19 pandemic, nurses faced highest rate of risk among all the health care

team in some countries. This pandemic situation caused not only morbidity and mortality but also psychological and social problems. High level of expectations for spreading from infected persons to nurses, spreading of virus to family members, frequent exposure to infected persons and for many reasons, nurses are getting stress and anxiety. Nurses are playing vital role in fighting against COVID-19. Nurses are exposed to various infectious diseases, including those transmitted through the blood or other body fluids and airborne infectious agents. During the COVID-19 pandemic, nurses faced highest rate of risk among all the health care team in some countries. This pandemic situation caused not only morbidity and mortality but also psychological and social problems. High level of expectations for spreading from infected persons to nurses, spreading of virus to family members, frequent exposure to infected persons and for many reasons, nurses are getting stress and anxiety.

Significance and need for the study

World Health Organization indicated that COVID-19 can be an independent risk factor for stress in healthcare workers. In a research in 2020 in China on mental health of healthcare workers who were exposed to COVID-19, the findings showed that 50.4% of them reported depression symptoms, 44.6% anxiety, 34% insomnia and 71.5% symptoms of distress. The findings of another study titled "Work Stress among Chinese Nurses to Support Wuhan for Fighting against COVID-19" showed that the mean self-reported stress and anxiety scores were 32.19 ± 7.56 and 39.91 ± 12.92 respectively and the multiple regression analysis showed that having a child in the family, working hours per week and anxiety were the main factors increasing the nurses' stress. In Southern India a study has conducted among staff nurses working in COVID-19 Unit. In this study they reported that among 387 nurses, prevalence of anxiety was 63.3%, depression level was 56.05% and stress level was 36.17%.

Statement of the Problem

A study to evaluate the effectiveness of Mindfulness Meditation on pandemic induced factors influencing stress and anxiety among staff nurses working in

COVID-19 Unit in Carmel hospital and MAJ hospital, Aluvaat Kerala.

Objectives

To assess the level of pandemic induced factors influencing stress and anxiety among staff nurses in experimental and control group.

To evaluate the effectiveness of mindfulness meditation on stress and anxiety among staff nurses in experimental and control group.

To find out association between the pre-test level of stress and anxiety among staff nurses with their selected demographic variables in experimental and control group.

Hypothesis

H1

There will be significant difference between the mean post-test level of stress and anxiety after administration of mindfulness meditation among staff nurses working in COVID 19 Unit.

H2

There will be significant association between stress and anxiety and demographic variables before and after administration of mindfulness meditation among staff nurses working in COVID -19 Unit.

METHODOLOGY

Research approach: Quantitative research approach

Research design: True experimental design (pre-test and post-test control group design).

Sampling technique: Simple Random sampling technique- lottery method.

Sample size: The sample size consists of 60 staff nurses, 30 in experimental and 30 in control group.

Setting: The research setting was Carmel Hospital and MAJ Hospital, Aluva at Kerala, with 1500 beds. The total number of staff nurses working in that hospital was 300. Around 60 staff nurses were providing care for the COVID-19 patients.

Description of research tool and technique

Section A: Demographic Profile

This section consists of 9 items pertinent to Staff nurses such as age in years, gender, educational status, marital status, no of children, place of residence, working experience, duration of duty, and willingness to care for COVID-19 patients.

Section B: Self structured Rating Scale to Assess the Level of Stress among Staff Nurses working in COVID - 19 Unit

It consists of Rating Scale to assess the level of Stress. It has 14 items.

Score Interpretation

The tool consists of 14item and each items consist of 5 ratings. The rating is follows

0-Strongly Disagree

1-Somewhat Disagree

2-Agree

3-Somewhat Agree

4-Strongly Agree

Interpretation

Normal – 0

Mild level of stress – 1-14

Moderate level of stress – 15-28

Severe level of stress – 29-42

Section C: Hamilton Anxiety Rating Scale

It consists of Rating Scale to Assess the Level of Anxiety. It has 14 items.

Score Interpretation

The tool consists of 14item and each items consist of 5 ratings. The rating is follows

0-Normal

1-Mild

2-Moderate

3-Severe

4-Very Severe

Interpretation

Normal – 0

Mild level of anxiety – 1-17

Moderate level of anxiety - 18-24

Severe level of anxiety – 25-30

Very severe level of anxiety – 31-56

Inclusion criteria

Study includes staff nurses

Who are working in COVID-19 unit.

Registered nurses (B.Sc Nursing and DGNM).

Both male and female nurses.

Exclusion criteria

Study excludes the staff nurses.

Who are absent on the day of data collection period.

Who are all already practicing any other techniques to reduce stress and anxiety.

Who are all under the psychiatric treatment.

Data collection method

The data was collected from 60 staff nurses in Carmel hospital and MAJ hospital, Aluvaat Kerala by Simple Random sampling technique. Sample for experimental group was selected from Carmel Hospital, Aluva at Kerala and samples for control group was selected from M A J Hospital. Pre-test was conducted for the staff nurses by administering Rating Scale to assess the level of stress and Hamilton anxiety rating scale to assess the level of stress and anxiety. After the pre-test, Mindfulness Meditation was taught to the group of staff nurses in experimental group for the period of 25-30 minutes. There was no intervention was given to control group. Evaluation of Mindfulness meditation was done after seven days by the mean of post-test by assessing their level of anxiety and stress by using same rating scale to assess the level of stress and Hamilton anxiety rating scale.

There was 4 shifts for the staff nurses. Staff nurses were approached at in morning 8am and night 8pm. Morning session was conducted for 2 shift nurses and night session was conducted for remaining 2 shift peoples.

RESULTS AND DISCUSSION

The present study was done to evaluate the effectiveness of mindfulness meditation on pandemic induced factors influencing stress and anxiety among staff nurses working in COVID-19 unit in selected hospital, at Kerala. The findings of the study revealed that mindfulness meditation was effective on significant reduction in the level of stress and anxiety among staff nurses working in COVID 19 Unit. There was significant association found between the stress and anxiety with selected demographic variables in experimental group and control group.

Discussion

Regarding with stress, in experimental group, the pre-test mean score is 30.33 ± 6.68 and mean percentage is 7.22% whereas in post-test mean score is 17.03 ± 9.83 and mean percentage 40.56%. The mean difference is 31.66. In control group, the pre-test mean score is 29.67 ± 5.18 and mean percentage is 70.63 % whereas in post-test 29.60 ± 5.22 and

mean percentage is 70.48%. The mean difference is 0.15.

Regarding with anxiety, in experimental group, in pretest 32.50 ± 10.47 and mean percentage is 58.04 whereas in post-test 19.80 ± 8.06 and mean percentage is 35.36. The differential frequency is 22.68. In control group, in pretest 35.43 ± 8.25 and mean percentage is 63.27 whereas in 35.73 ± 7.76 and mean percentage is 63.81.

The differential frequency is 0.54. In experimental group, mindfulness meditation reduced the anxiety when compared to the control group. Thus it become evident that mindfulness meditation reduced the anxiety among the staff nurses in experimental group.

Table No.1: Distribution of level of stress in experimental and control group among staff nurses N=60

S.No	Level of Stress	Experimental Group				Control Group			
		Pre-test		Post-test		Pre-test		Post-test	
		F	%	F	%	F	%	F	%
1	Normal	0	0	5	16.7	0	0	0	0
2	Mild level of stress	2	6.7	9	30.0	0	0	0	0
3	Moderate Level of stress	11	36.7	15	50.0	13	43.3	13	43.3
4	Severe level of stress	17	56.7	1	3.3	17	56.7	17	56.7
5	Total	30	100.0	30	100.0	30	100.0	30	100.0

Table No.2: Distribution of level of anxiety in experimental and control group among staff nurses N=60

S.No	Level of Anxiety	Experimental Group				Control Group			
		Pre-test		Post-test		Pre-test		Post-test	
		F	%	F	%	F	%	F	%
1	Normal	0	0	1	3.3	0	0	0	0
2	Mild	2	6.7	12	40.0	0	0	0	0.0
3	Moderate	5	16.7	9	30.0	1	3.3	1	3.3
4	Severe	11	36.7	7	23.3	12	40.0	10	33.3
5	Very Severe	12	40.0	1	3.3	17	56.7	19	63.3
6	Total	30	100.0	30	100.0	30	100.0	30	100.0

Table No.3: Mean, standard deviation, ‘t’ value on post- test score on stress and anxiety among staff nurses in experimental and control g

S.No	Variables	Group	Maximum Score	Mean (X)	Mean (%)	SD	Df	‘t’ test
1	Stress	Experimental Group	37	17.03	40.56	9.83	29	7.98
		Control Group	37	29.60	70.48	5.22		
2	Anxiety	Experimental Group	43	19.80	35.36	8.06	29	10.06
		Control Group	50	35.73	63.81	7.76		

Significant at P<0.01 level

NURSING IMPLICATIONS

Nursing Practice

Nurses can identify the importance of Mindfulness Meditation use as an adjuvant to pharmacological therapy in reducing stress and anxiety. Nurses can demonstrate the Mindfulness Meditation and encourage the patients to practice it, those who are suffering from stress and anxiety.

Nursing Education

In service education program should be conducted for nurses and help them to gain knowledge regarding Mindfulness meditation. Provide exposure to various non pharmacological measures and therapies and update the nursing curriculum.

Nurse educator can encourage students to make new ideas in managing the stress and anxiety.

NURSING RESEARCH

The findings of the study can help to improve the scientific body of professional knowledge upon which further research can be conducted.

NURSING ADMINISTRATION

The nurse manager should take initiatives to make protocol of mindfulness meditation for patients with stress and anxiety.

Educate the public regarding the importance of various non pharmacological measures to improve the stress and anxiety.

RECOMMENDATIONS

A true experimental study can be done to evaluate the effectiveness of Mindfulness Meditation on different psychological problems.

A study can be done on the effect of various non pharmacological therapies on stress and anxiety.

CONCLUSION

The present study was done to evaluate the effectiveness of mindfulness meditation on pandemic induced factors influencing stress and anxiety among staff nurses working in COVID-19 unit in selected

hospital, at Kerala. The findings of the study revealed that mindfulness meditation was effective on significant reduction in the level of stress and anxiety among staff nurses working in COVID 19 Unit. There was significant association found between the stress and anxiety with selected demographic variables in experimental group and control group.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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