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Original Research Paper

Psychiatric Nursing

A COMPARATIVE STUDY: EFFECTIVENESS OF MINDFULNESS (GUIDED) MEDITATION AND PROGRESSIVE MUSCLE RELAXATION TECHNIQUE TO REDUCE STRESS AND ANXIETY AMONG NURSING OFFICERS

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ABSTRACT Stress levels among healthcare professionals are rising due to several factors. Health care by its nature includes very stressful situations and it is impossible to remove these completely. Just because regularly facing traumatic and stressful situations also significantly contributes to rising anxiety levels among healthcare workers. Cumulative trauma often goes unnoticed and it's not always clear when support or intervention is needed. To compare the effectiveness of mindfulness (Guided)meditation(MM) and progressive muscle relaxation technique(PMR) to reduce stress and anxiety among nursing officers. Quasi-experimental study, 60 nurses were selected using convenience sampling. Data collection tools included the valid and reliable Hamilton Anxiety Rating Scale and Questionnaire of Stressors in Nursing. The collected data were analyzed by using SPSS with a significance level of 5% was performed using spearman's, t- test and chi-square test (0.05). The results showed, Nurses who participated in MM and PMR experienced significantly reduction in anxiety and stress level after the interventions. The correlation analysis suggested, after the intervention of MM showing weak-correlation($r=0.067$; $p<0.725$) while PMR demonstrating a moderate positive correlation($r=0.45$; $p<0.013$). The finding emphasized that anxiety and stress have partial correlation. MM is highly effective in reduction of stress while PMR is highly effective in reduction of anxiety among nursing officers

KEYWORDS : Stress, Anxiety, Mindfulness Meditation, Progressive Muscle Relaxation Technique(s), Nurses

INTRODUCTION

Healthcare professionals are experiencing increased stress levels due to variables including elevated demand for medical services, limited staffing, recurrent exposure to traumatic incidents, and inadequate support systems. The epidemic has exacerbated these issues by intensifying workloads, amplifying the fear of infection and transmission, and complicating access to mental health help.

Chronic stress among healthcare professionals mostly results in weariness, which significantly contributes to burnout. Fatigue renders employees exhausted and overwhelmed, diminishing their effectiveness and engagement. Burnout is a psychological state characterized by emotional tiredness, feelings of detachment or depersonalization, and a reduced sense of personal accomplishment. This diminishes job satisfaction, increases the likelihood of workplace injuries, and may compel healthcare workers to resign or retire prematurely. Consequently, addressing occupational stress is essential to safeguard the welfare of healthcare personnel and the standard of patient care.

Anxiety is a condition characterized by apprehension, fear, and discomfort, which may result in perspiration, tension, restlessness, and palpitations. It is frequently an instinctive reaction to stress. Health care inherently involves highly stressful conditions, and it is impossible to eliminate them entirely. Regular exposure to traumatic and stressful situations considerably exacerbates anxiety levels among healthcare workers; nevertheless, identifying the appropriate moment or method to address this issue can be difficult. Cumulative trauma frequently remains unrecognized, and the necessity for support or action is not always evident. Complementary medications denote treatment methods that exist beyond traditional medical techniques. These therapies are utilized in conjunction with conventional treatments to augment their efficacy. They can alleviate emotions, mitigate anxiety, and improve general health and well-being.

Nursing is a tough career that entails both physical and emotional labor. Nurses frequently encounter high-pressure situations, including extended working hours, shift assignments, crucial patient care, emotional strain, resource scarcity, and staffing shortages. These variables greatly exacerbate stress and anxiety levels among nurses.[1] In this comparative study, assess the effectiveness of mindfulness (guided) meditation(MM) and progressive muscle relaxation technique(PMR) to reduce stress and anxiety among nursing officers in selected hospital of DNH & DD has Objectives to compare the effectiveness of MM and PMR in reduction of stress and anxiety among nursing officers, also to assess the correlation between stress and anxiety levels among nursing officers before and after the intervention with MM and PMR & to determine the association between stress and anxiety levels with selected demographical data of nursing officers.

MATERIALS AND METHODS

This is a quasi-experimental (two group pre-test post-test design) study was conducted in 2025 at selected hospital of Dadra and Nagar haveli, Silvassa where 60 samples of nursing officers selected by non-probability convenient sampling technique. The inclusion criteria for nurses were informed consent, presence during the data collection period, and moderate stress and anxiety scores or a combination of mild anxiety with moderate stress or mild stress with moderate anxiety as determined by standardized assessment tools. A diagnosed with psychiatric disorder or undergoing psychiatric treatment, currently practicing or previously exposed to any form of relaxation techniques, such as MM and PMR, discontinue the participation were excluded.

A well designed and validated expert data collection tool was used dividing in different sections in which the first section of the document included socio demographic details such as age, gender, marital status, type of family, educational qualification, monthly income, years of experience, shift status, nature of appointment, mode of transportation and

religion collected. Second section of the document include standardized tool, Hamilton Anxiety Rating Scale. Questionnaire Of Stressors in Nursing consists of 24 items. The scoring is 25-56:Mild-stress, 57-88:Moderate-stress, 89-120:Severe-stress. Each item is scored on a scale of 1-5, with 1-'Strongly disagree' and 5-'Strongly agree'. A pre- test was done by using those tools. Then divided samples into two group as per criteria. Intervention of MM for 15-20 minutes(5Days) was given to one group(n=30) and progressive muscle relaxation technique PMR for 15-20 minutes(5Days) was given to another group(n=30) of nursing officers who were in moderate stress and mild anxiety. On 6th day, a post test was done and result found that all of nursing officers were in mild stress and mild anxiety. The collected data were analyzed by using SPSS, the data were descriptively analyzed and inferential analysis with a significance level of 5% was performed using spearman's, t-test and chi-square test(0.05).

Table – 1 Frequency and Percentage Distribution

SN	Demographic data		MM(N=30)		PMR(N=30)	
			f	%	f	%
1	Age	21-30yr	16	53.3	11	36.67
		31-40yr	11	36.7	12	40
		41-50yr	3	10	7	23.33
		51-60yr	0	0	0	0
2	Gender	Female	30	100	30	100
		Male	0	0	0	0
		Other	0	0	0	0
3	Marital Status	Married	25	83.3	27	90
		Unmarried	5	16.7	3	10
		Separated/ Divorced	0	0	0	0
		Widow	0	0	0	0
4	Type of family	Nuclear	17	56.7	20	66.67
		Joint	13	43.3	10	33.33
		Extended	0	0	0	0
5	Religion	Hindu	21	70	19	63.33
		Muslim	4	13.3	3	10
		Christian	5	16.7	8	26.67
		Other	0	0	0	0
6	Educational Qualification	G.N.M	23	76.7	20	66.67
		B.Sc. Nursing	5	16.7	8	26.67
		P.B.B Sc. Nursing	2	6.67	1	3.333
		M.Sc. Nursing	0	0	1	3.333
7	Monthly Income	10000-20000	11	36.7	7	23.33
		20001-30000	11	36.7	10	33.33
		30001-40000	1	3.33	2	6.667
		>40000	7	23.3	11	36.67
8	Years of Experience	<1yr	0	0	1	3.333
		1-5yr	11	36.7	11	36.67
		6-10yr	10	33.3	4	13.33
		11-15yr	6	20	4	13.33
		>15yr	3	10	10	33.33
9	Nature of appointment	Permeant	8	26.7	11	36.67
		Contract	22	73.3	19	63.33
10	Shift status	Shift Duty	27	90	22	73.33
		General Shift	3	10	8	26.67
11	Mode of transportation	Private/Own Vehicle	27	90	27	90
		Public	3	10	3	10

Table 1 shows that: Frequency and percentage distribution of nursing officers according to the demographic variables in MM and PMR,100% are female nursing officer. In the type of family, 30 nursing officers in MM group, the highest, 56.67 % are living in nuclear family and 43.33% are living in joint family. 30 nursing officers in PMR group, the highest, 66.67% are living in nuclear family and 33.33% are living in joint family. In shift status wise distribution, 30 nursing officers in MM group, the majority, 90% has shift duty and10% has general shift. 30 nursing officers in PMR group, the highest, 73.33% has shift duty and 26.67% has general shift.

RESULTS

Paired 't' test between pre-test and post-test of mindfulness (Guided) meditation in reduction of stress and anxiety among nursing officers. Pre-test anxiety mean and SD score is 13.9±3.58 while post-test anxiety mean and SD score is 5.03±1.88. Pre-test anxiety mean% is 24.82 while post-test anxiety mean% is 8.98. Anxiety mean difference is 8.9, 't' value 13.83 and p-value <0.001. There was a statistically significant reduction in anxiety levels after mindfulness meditation. Pre-test stress mean and SD score is 75.7±5.9 while post-test stress mean and SD score is 44.96±3.28. Pre-test stress mean% is 63.08 while post-test stress mean% is 37.47. Stress mean difference is 31, 't' value 28.81 and p-value <0.001. There was a highly significant reduction in stress levels post-intervention. Paired 't' test between pre-test and post-test of progressive muscle relaxation technique in reduction of stress and anxiety among nursing officers. Pre-test anxiety mean and SD score is 11±4.08 while post-test anxiety mean and SD score is 4.5±2.4. Pre-test anxiety mean% is 20.17 while post-test anxiety mean% is 8.03. Anxiety mean difference is 6.5, 't' value 15.91 and p-value p<0.001. There was a There was a highly significant reduction in anxiety levels after progressive muscle relaxation technique. Pre-test stress mean and SD score is 72.13±8.37 while post-test stress mean and SD score is 46.33±3.16. Pre-test stress mean% is 60.11 while post-test stress mean% is 38.61. Stress mean difference is 26, 't' value 23.63 and p-value <0.001 There was a highly significant reduction in stress levels post-intervention.

MM and PMR group, 't' value of anxiety in MM group 13.83, p-value <0.001 and PMR group 15.91, p-value <0.001. It shows that PMR is highly effective in reduction of anxiety than MM. On other hand, 't' value of stress in MM group 28.81, p-value <0.001 and PMR group 23.63, p-value <0.001. It shows that of MM is highly effective in reduction of stress than PMR.

The correlation between stress and anxiety levels among nursing officers before and after the intervention with MM. The correlation of anxiety and stress before MM was weak negative correlation. (r= -0.292; p<0.117). The correlation of anxiety and stress after the MM was no correlation. (r=0.067; p<0.725). While the correlation between stress and anxiety levels among nursing officers before and after the intervention with PMR. The correlation of anxiety and stress before the PMR was Moderate positive correlation. (r=0.527; p<0.003). The correlation of anxiety and stress after the progressive muscle relaxation technique was Moderate positive correlation. (r=0.45; p<0.013).

The association between level of stress with demographical data of nursing officers such as age (χ^2=7.21; p value- 0.03 p<0.05), types of family (χ^2=3.86; p value- 0.04 p<0.05) and nature of appointment (χ^2=5.21; p value- 0.02, p<0.05) have the significant association with level of stress. Other demographic data not have association with level of stress like gender, marital status, religion, education qualification, monthly income, year of experience, shift status, mode of transportation.

The association between level of anxiety with demographical data of nursing officers such as shift status (χ^2=6.24; p value-0.01 p<0.05) have the significant association with level of anxiety. Other demographic data not have association with level of anxiety like age, gender, marital status, type of family, religion, education qualification, monthly income, year of experience, nature of appointment, mode of transportation.

CONCLUSIONS

Each and every nursing officer who has become part of the service has had some level of stress and anxiety related to their family problem, personal problem, professional area, etc. MM is highly effective in the reduction of stress, while PMR is highly effective in the reduction of anxiety among nursing officers; in a nutshell, stress and anxiety are reduced with both interventions.

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