

“Effectiveness Of Edmund Jacobson's Progressive Muscle Relaxation Approach On Burnout Levels Among Nursing Staff In Svbp Hospital, At Meerut.”

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ABSTRACT

Introduction: Burnout has recently become a major problem in the nursing profession. Nurses experience higher levels of burnout compared to other health professionals due to greater job-related pressure, long working hours, and the emotional demands of patient care. In addition to physical exhaustion, nurses often face psychological strain from dealing with critically ill patients, high patient-to-nurse ratios, and limited resources. This chronic stress can lead to feelings of depersonalization, reduced job satisfaction, and a diminished sense of personal accomplishment.

Objectives: To assess the effectiveness of Edmund Jacobson's Progressive Muscle Relaxation technique on burnout among nursing staff and to determine the association between burnout levels and selected demographic variables.

Method: A quantitative pre-experimental one-group pre-test and post-test design was adopted. Sixty nursing staff were selected using convenience sampling technique. Burnout was assessed among staff nurses by using the Modified Maslach Burnout Inventory. Participants practiced PMR for 15–20 minutes daily for seven consecutive days in SVBP Hospital Meerut. Data were analysed using descriptive and inferential statistics.

Results: The proportion of nursing staff with high emotional exhaustion decreased from 63% to 20%, while high depersonalization decreased from 76% to 10% following the intervention. High burnout related to personal accomplishment decreased from 50% to 17%. A statistically significant difference was observed between pre-test and post-test scores for emotional exhaustion ($t = 3.8171$, $p = 0.0003$), depersonalization ($t = 9.3436$, $p = 0.0001$), and personal accomplishment ($t = 5.5447$, $p = 0.0001$).

Conclusion: The study concluded that Edmund Jacobson's Progressive Muscle Relaxation technique was effective in reducing burnout among nursing staff. Therefore, this technique is a simple, cost-effective, and non-pharmacological strategy for promoting psychological well-being among nurses.

Keywords: Burnout, Nursing Staff, Progressive Muscle Relaxation, Emotional Exhaustion, Depersonalization, Personal Accomplishment.

INTRODUCTION

The concept of “burnout” was first introduced by American psychologist Herbert Freudenberger. In the International Classification of Diseases, 11th Revision (ICD-11), burnout is defined as an occupational phenomenon rather than a medical diagnosis. ICD-11 describes burnout as a syndrome arising from prolonged workplace stress that has not been effectively managed. It is identified through three key features: persistent feelings of exhaustion or low energy, a growing sense of detachment or negative attitudes toward one's job, and a decline in professional effectiveness. Burnout is widely observed among healthcare professionals. Studies indicate that between 25% and 60% of physicians experience burnout at levels that may impair their personal wellbeing or job performance. Among nurses and midwives, reported rates range from 15% to as high as 85%. These variations depend on factors such as specialty, workload, and working environment. Comparisons across healthcare roles consistently show that nurses tend to report higher burnout levels than physicians and other healthcare workers. Burnout is a psychological syndrome that develops as a consequence of chronic occupational

stress. The concept of burnout has gained considerable attention in healthcare settings because of its adverse effects on healthcare professionals and patient outcomes. Nurses are among the most vulnerable groups due to continuous patient care responsibilities, high workload, shift duties, inadequate staffing, and emotional demands associated with healthcare delivery. The increasing prevalence of burnout among nurses has become a significant concern worldwide. Burnout not only affects the mental and physical health of nurses but also contributes to reduced job satisfaction, increased absenteeism, staff turnover, and compromised quality of patient care. Various interventions have been proposed to reduce burnout and promote psychological well-being among healthcare professionals. Progressive Muscle Relaxation (PMR), developed by Edmund Jacobson, is a relaxation technique that involves systematic contraction and relaxation of muscle groups to reduce physiological tension and stress. PMR has demonstrated effectiveness in reducing anxiety, stress, fatigue, and emotional distress among different populations. Considering the growing burden of burnout among nursing staff and the need for effective stress-management strategies, the present study was undertaken to evaluate the effectiveness of Progressive Muscle Relaxation on burnout among nursing staff working at SVBP Hospital, Meerut.

OBJECTIVES OF THE STUDY

1. To assess the pre-test and post-test levels of burnout among nursing staff.
2. To evaluate the effectiveness of Edmund Jacobson progressive muscle relaxation technique on level of burnout among nursing staff.
3. To determine the association between pre-test level of burnout among nursing staff with their selected demographic variables.

METHODOLOGY

A quantitative research approach was adopted for the present study. A pre-experimental one-group pre-test and post-test research design was used to assess the effectiveness of Edmund Jacobson Progressive muscle Relaxation technique on burnout among nursing staff. The study was conducted at SVBP Hospital, Meerut, Uttar Pradesh. The target population comprised nursing staff working in the hospital. A total of 60 nursing staff were selected through a non-probability convenience sampling technique. The study included nursing staff who were willing to participate and available during the period of data collection. Nursing staff who were undergoing any other structured stress-management programme or who were unable to participate in the intervention sessions were excluded from the study. Data were collected using a structured socio-demographic proforma and the Modified Maslach Burnout Inventory (MMBI). The socio-demographic proforma included age, gender, marital status, educational qualification, years of experience, department, shift pattern, and working hours. The MMBI assessed burnout under three domains: Emotional exhaustion Depersonalization, and Personal Accomplishment. After obtaining informed consent from participants, pre-test assessment was conducted using the MMBI. Subsequently, Edmund Jacobson's Progressive Muscle Relaxation technique was administered for 15–20 minutes daily for seven consecutive days. Post-test assessment was conducted using the same instrument after completion of the intervention period. The collected data were analysed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used for descriptive analysis. Paired t-test was used to determine the effectiveness of the intervention, while chi-square test was used to identify associations between burnout levels and selected demographic variables. Statistical significance was considered at $p < 0.05$.

RESULTS

The findings of the study are presented according to the objectives of the study. The data is prepared under the subsequent sections:

Table 1. Frequency percentage Distribution of nursing staff according to demographic characteristics. N = 60

Sr No	Demographic Variables	Categories	Frequency	Percentage
1	Age (in years)	Below 25	2	3.33%
		25-34	40	66.67%
		35-44	14	23.33%

		45-54	4	6.67%
		55 And above	0	0%
2	Gender	Male	6	10%
		Female	54	90%
3	Educational Qualifications	Diploma in nursing	32	53.33%
		B.Sc. Nursing	14	23.33%
		Post Basic B.Sc. Nursing	12	20%
		M.Sc. Nursing	2	3.34%
4	Marital Status	Single	14	23.33%
		Married	46	76.66%
		Divorced	0	0%
		Widowed	0	0%
5	Years of Experience	Less than 1 year	4	6.66%
		1-5 year	22	36.66%
		6-10 year	16	26.66%
		11-15 year	10	16.66%
		More than 15 years	8	13.33%
6	Departments	ICU	12	20%
		Emergency	6	10%
		General Ward	14	23.33%
		Maternity Ward	4	6.66%
		OPD	0	0%
		Other (Specify)	24	40%
7	Shift Pattern	Day Shift	14	23.34%
		Night Shift	0	0.00%
		Rotational	46	76.66%
8	Working hours Per Weeks	Less than 30 hours	4	6.66%

		30-40 hours	32	53.34%
		41-50 hours	24	40%
		More than 50 hours	0	0.00%

Table 2.1 Frequency and percentage distribution of pre-test and post-test level of burnout of emotional exhaustion among nursing staff N=60

S.NO	DOMAIN	PRE-TEST		POST-TEST	
		f	%	f	%
1	EMOTIONAL EXHAUSTION				
	Low level burnout	14	24	28	47
	Moderate level burnout	8	13	20	33
	High level burnout	38	63	12	20
Total		60	100	60	100

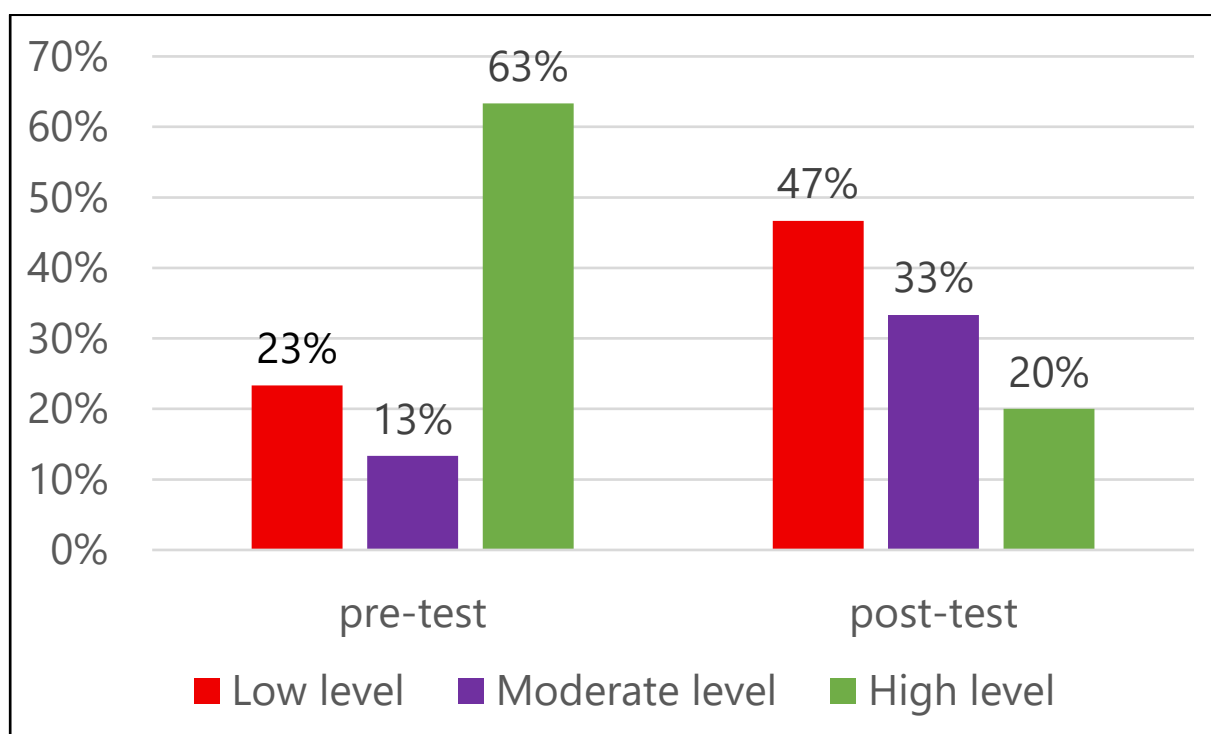


Figure-1 Percentage distribution of level of burnout of Emotional Exhaustion among nursing staff pre-test and post-test.

Table 2.2: Frequency and percentage distribution of pre-test and post-test level of burnout of depersonalization among nursing staff. N=60

S. N	DOMAIN	PRE-TEST		POST-TEST	
		f	%	f	%
2	DEPERSONALIZATION				
	Low level burnout	4	7	12	20
	Moderate level burnout	10	17	42	70
	High level burnout	46	76	6	10
Total		60	100	60	100

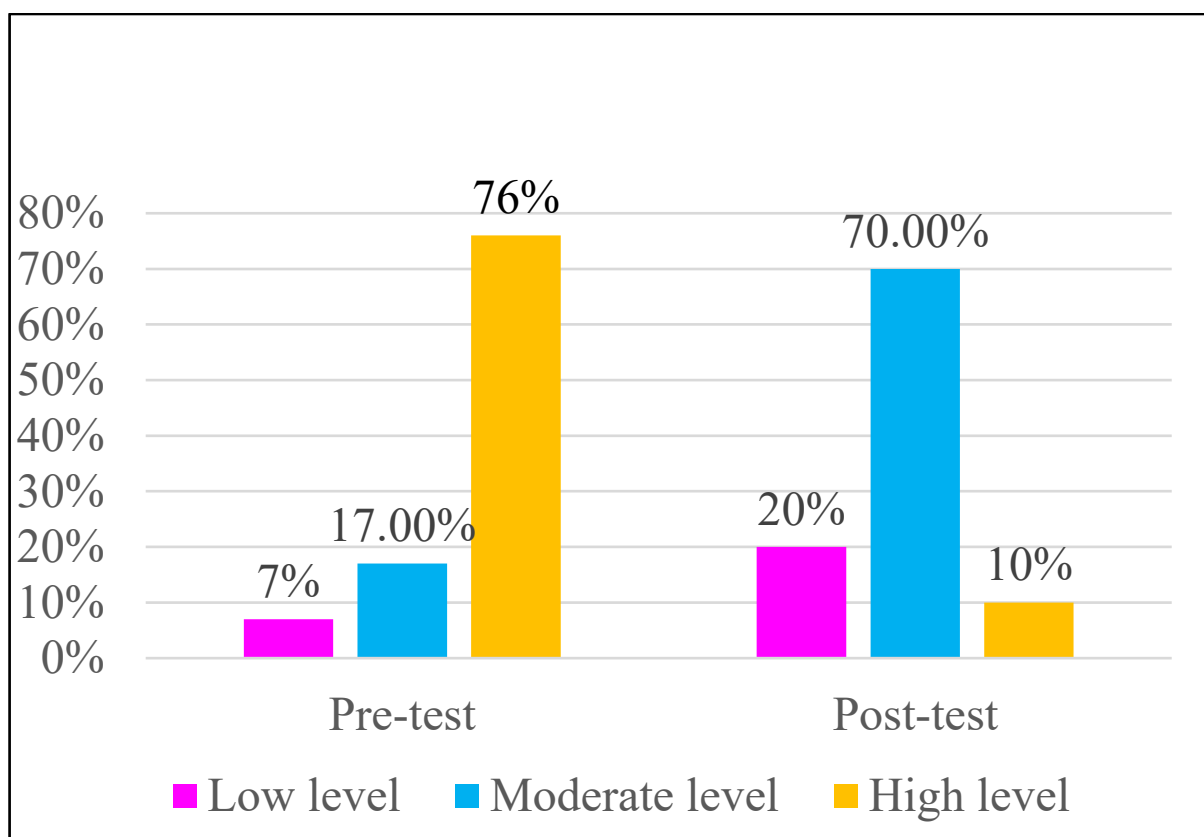


Figure-2: Percentage distribution level of burnout of Depersonalization among nursing staff pre-test and post.

Table 2.3: Frequency and percentage distribution of pre-test and post-test level of burnout of personal accomplishment among nursing staff. N=60

S.NO	DOMAIN	PRE-TEST		POST-TEST	
		f	%	f	%
3	PERSONAL ACCOMPLISHMENT				
	Low level	6	10	32	53
	Moderate level	24	40	18	30
	High level	30	50	10	17
Total		60	100	60	100

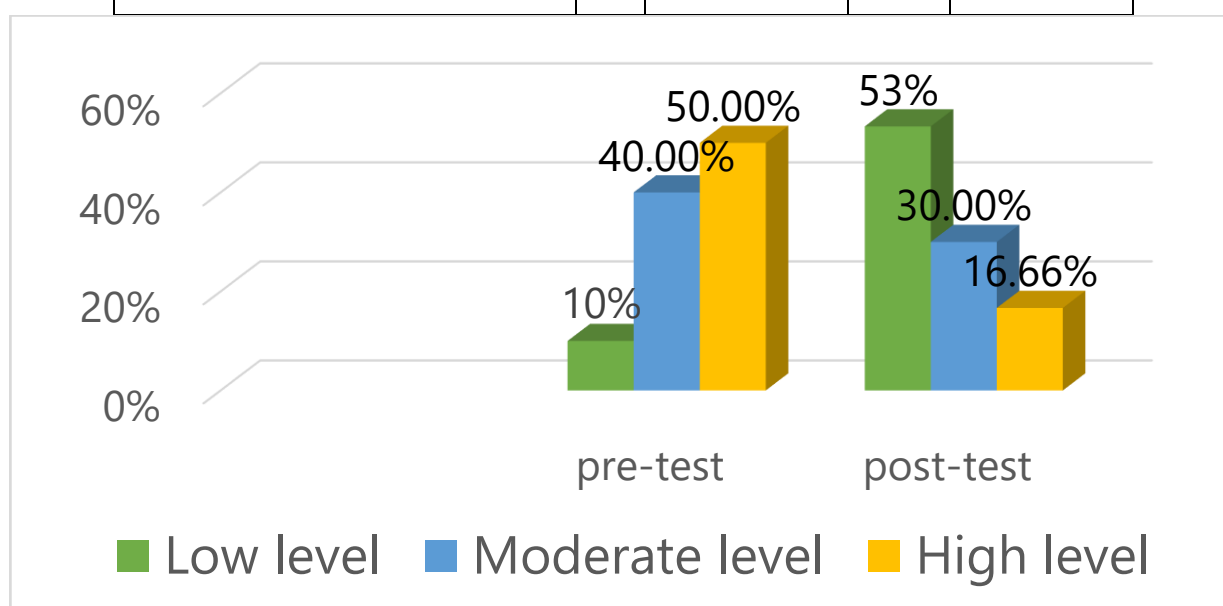


Figure-3: Percentage distribution of level of burnout of Personal accomplishment among nursing staff pre-test and post.

EFFECTIVENESS OF EDMUND JACOBSON'S PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON THE LEVEL OF BURNOUT AMONG NURSING STAFF.

Table 3.1 Effectiveness between pretest and post test score of emotional exhaustion among nursing staff N=60

TEST	MEAN	SD	MD	t-value	P-value	df	level of significant 0.05%
PRE-TEST	27.50	7.94	5.30	3.8171	0.0003	59	S
POST-TEST	22.20	7.79					

t (59) = ±2.001 at p < 0.05, S = Significant at p < 0.05 level of significance

Table 3.2 Effectiveness between pretest and post test score of depersonalizations among nursing staff N=60

TEST	MEAN	SD	MD	t-value	P-value	df	level of significant 0.05%
PRE-TEST	13.97	4.27	5.40	9.3436	0.0001	59	S
POST-TEST	8.57	2.82					

t (59) = ± 2.001 at p < 0.05, S = Significant at p < 0.05 level of significance

Table 3.3 Effectiveness between pretest and post test score of personal accomplishment among nursing staff N=60

TEST	MEAN	SD	MD	t-value	P-value	df	level significant 0.05%	of
PRE- TEST	32.63	5.16	4.73	5.5447	0.0001	59	S	
POST-TEST	37.37	5.92						

t (29) = ±2.001 at p < 0.05, S = Significant at p < 0.05 level of significance

Table 4.1 association between pre-test level of burnout of emotional exhaustion and selected demographic variables among nursing staff. N=60

Demographic Variables	χ^2 (df)	p-value	Remark
Age (in years)	15.908 (8)	0.014	S
Gender	1.186 (2)	0.74	NS
Educational Qualifications	8.036 (6)	0.23	NS
Marital Status	4.013 (6)	0.01	S
Years of Experience	8.132 (8)	0.85	NS
Departments	12.133 (10)	0.14	NS
Shift Pattern	0.337 (4)	0.84	NS
Working Hours per Week	2.622 (6)	0.62	NS

Table 4.2 Association between pre-test level of burnout of depersonalization and selected demographic variables among nursing staff. N=60

Demographic Variables	Experimental Group χ^2 (df)	p-value	Remark
Age (in years)	15.36 (8)	0.01	S
Gender	1.642 (2)	0.44	NS
Educational Qualifications	25.95 (6)	0.04	S
Marital Status	2.835 (6)	0.24	NS
Years of Experience	18.92 (8)	0.015	S
Departments	20.86 (10)	0.007	S
Shift Pattern	16.25 (4)	0.0002	S
Working Hours per Week	4.059 (6)	0.39	NS

Table 4.3 Association between pre-test level of burnout of personal accomplishment and selected demographic variables among nursing staff. N=60

Demographic Variables	Experimental Group χ^2 (df)	p-value	Remark
Age (in years)	13.907 (8)	0.03	S
Gender	1.111 (2)	0.57	NS
Educational Qualifications	14.595 (6)	0.024	S
Marital Status	5.031 (6)	0.08	NS
Years of Experience	16.836 (8)	0.03	S
Departments	15.571 (10)	0.049	S
Shift Pattern	9.503 (4)	0.008	S
Working Hours per Week	11.31 (6)	0.023	S

A total of 60 nursing staff participated in the study. The majority of participants belonged to the age group of 25–34 years. Most participants were female and married. Regarding educational qualification, the majority had completed diploma-level nursing education. With respect to professional experience, most participants had 1–5 years of work experience. The majority were working in rotational shifts and reported working 30–40 hours per week. Participants were distributed across various departments including general wards, intensive care units, emergency departments, maternity units, and other specialty units. In the frequency and percentage distribution of burnout levels among nursing staff during the pre-test and post-test phases across the domains of emotional exhaustion, depersonalization, and personal accomplishment. The pre-test findings indicated higher levels of burnout, with the majority of participants demonstrating high emotional exhaustion (63%), high depersonalization (76%), and high burnout related to personal accomplishment (50%) Following

the implementation of Edmund Jacobson's Progressive Muscle Relaxation technique, the post-test findings revealed a shift toward lower burnout levels. The proportion of participants with low emotional exhaustion increased to 47%, low depersonalization increased to 20%, and low burnout related to personal accomplishment increased to 53%. These findings indicate an overall reduction in burnout among nursing staff following the intervention. The effectiveness of Progressive Muscle Relaxation was evaluated using the paired t-test. A statistically significant difference was observed between pre-test and post-test emotional exhaustion scores ($t = 3.8171$, $p = 0.0003$). A statistically significant difference was observed between pre-test and post-test depersonalization scores ($t = 9.3436$, $p = 0.0001$). A statistically significant difference was observed between pre-test and post-test personal accomplishment scores ($t = 5.5447$, $p = 0.0001$). These findings indicate that Edmund Jacobson's Progressive Muscle Relaxation technique was effective in reducing burnout among nursing staff. Table 4.1 showed the association between pre-test levels of emotional exhaustion and selected demographic variables among nursing staff. The findings revealed that there was a statistically significant association between emotional exhaustion and age and marital status, as the p-value was less than the significance level of 0.05. No statistically significant association was found between emotional exhaustion and gender, educational qualification, years of experience, department, shift pattern, and working hours per week, as the p-values were greater than 0.05. Hence, the research hypothesis was accepted for age and marital status and rejected for the remaining demographic variables.

Table 4.2 showed a statistically significant association between pre-test depersonalization and age, educational qualification, years of experience, department, and shift pattern, as the p-values were less than 0.05. No statistically significant association was observed between depersonalization and gender, marital status, and working hours per week, as the p-values were greater than 0.05.

Hence, the research hypothesis was accepted for age, educational qualification, years of experience, department, and shift pattern, whereas it was rejected for gender, marital status, and working hours per week.

The Table 4.3 showed a statistically significant association between pre-test personal accomplishment and age, educational qualification, years of experience, department, shift pattern, and working hours per week, as the p-values were less than the significance level of 0.05.

No statistically significant association was found between personal accomplishment and gender and marital status, as the p-values were greater than 0.05.

Hence, the research hypothesis was accepted for age, educational qualification, years of experience, department, shift pattern, and working hours per week, whereas it was rejected for gender and marital status.

DISCUSSION

The findings of the present study are strongly supported by previous research that demonstrated the effectiveness of relaxation-based interventions in reducing burnout among nurses and healthcare professionals. In the present study, after the implementation of the intervention for 15–20 minutes daily for 7 days among 60 staff nurses, a significant reduction was observed in all dimensions of burnout. High emotional exhaustion decreased from 63% to 20%, high depersonalization decreased from 76% to 10%, and high burnout related to reduced personal accomplishment decreased from 50% to 17%, indicating the effectiveness of the intervention in improving nurses' psychological well-being.

These findings are consistent with the study conducted by Kumaresan N. Sebastian et al. (2022), who carried out a quasi-experimental study among 30 participants with burnout syndrome. The experimental group received Jacobson's Relaxation Technique along with Bhattarika Pranayama, while the control group received diaphragmatic breathing and chest expansion exercises. Using the Maslach Burnout Inventory and the Wilcoxon Signed Rank Test, the researchers found a significant reduction in burnout levels in the experimental group compared with the control group. Similar to the present study, the findings indicate that relaxation-based interventions are effective in alleviating burnout symptoms.

The results of the present study also agree with the findings of Rahmayanti AD. KR Putra et al. (2021), who conducted a quasi-experimental pre-test and post-test study among 50 nurses working in medical-surgical wards. Burnout was measured using the Maslach Burnout Inventory (MBI 2016). The study revealed a significant decrease in emotional exhaustion and depersonalization and an increase in personal accomplishment following Progressive Muscle Relaxation (PMR) programs. These outcomes closely resemble the present study findings, where improvements were observed across all three dimensions of burnout, supporting the role of PMR and related relaxation techniques in reducing nurse burnout. The present study findings are supported by the research conducted by Semerci R. Gulnur Ozturk et al. (2020), who performed a one-group quasi-experimental study among 30 nurse managers. Participants received Jacobson's Progressive Muscle Relaxation once weekly for eight weeks. The results demonstrated a significant reduction in compassion fatigue ($p < 0.01$) and burnout scores ($p = 0.01$) after two months of intervention. Although the duration and participant characteristics differed from the present study, both studies showed that relaxation interventions effectively reduce burnout and improve emotional well-being among nursing professionals.

Overall, the findings of the present study are in agreement with these supportive studies, confirming that relaxation-based interventions such as Progressive Muscle Relaxation, Jacobson's Relaxation Technique, and breathing exercises are effective strategies for reducing emotional exhaustion and depersonalization while enhancing personal accomplishment among nurses. These interventions can therefore be recommended as practical and cost-effective approaches for managing burnout in healthcare settings.

NURSING IMPLICATIONS

NURSING PRACTICE

Progressive Muscle Relaxation may be incorporated into routine nursing practice as a simple and cost-effective strategy to reduce occupational stress and burnout.

NURSING EDUCATION

Education regarding stress management and relaxation techniques should be included in undergraduate and postgraduate nursing curricula.

NURSING ADMINISTRATION

Hospital administrators should develop structured employee wellness programmes that incorporate relaxation-based interventions to enhance staff well-being and job satisfaction.

NURSING RESEARCH

Further studies using randomized controlled designs and larger sample sizes are recommended to strengthen the evidence regarding the effectiveness of Progressive Muscle Relaxation in reducing burnout.

RECOMMENDATIONS

1. Similar studies may be conducted with larger sample sizes.
2. Multicentre studies may be undertaken to improve generalizability.
3. Comparative studies may be conducted using different stress-management interventions.
4. Longitudinal studies may be conducted to assess long-term effectiveness.
5. Similar studies may be conducted among other healthcare professionals.

LIMITATIONS

- The study was conducted in a single hospital setting.
- A non-probability convenience sampling technique was used.
- The study lacked a control group.
- The intervention period was limited to seven days.
- Generalization of findings may be limited.

CONCLUSION

The study concluded that Edmund Jacobson's Progressive Muscle Relaxation technique was effective in reducing burnout among nursing staff. Significant improvements were observed in emotional exhaustion, depersonalization, and personal accomplishment following the intervention. The findings support the use of Progressive Muscle Relaxation as a simple, non-pharmacological, and cost-effective intervention for promoting psychological well-being among nursing professionals. Incorporating relaxation techniques into workplace wellness programmes may contribute to improved job satisfaction, enhanced professional performance, and better quality of patient care.

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