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"Impact of a Workplace-Based Structured Teaching Program on Knowledge of Mental Health Resources and Burnout Prevention among Hospital Nursing Staff: A Quasi-Experimental Study."

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Abstract

Background: Nurses face high rates of occupational stress and burnout. Knowledge of available mental health resources and strategies for burnout prevention is critical for well-being and retention. This study evaluated the effect of a workplace-based structured teaching program (STP) on nurses' knowledge of mental health resources and burnout prevention strategies.

Methods: A quasi-experimental one-group pretest–posttest study was conducted among 132 nurses at Krishna Super Speciality Hospital, Kanpur. A structured teaching program (STP) of four weekly sessions addressed burnout recognition, mental health resources, self-care, and peer support. Data were analyzed using paired *t*-test and repeated-measures ANOVA.

Results: Mean knowledge scores increased from 10.8 ± 3.6 (43.2%) at baseline to 18.4 ± 3.1 (73.6%) post-intervention ($p < 0.001$), with retention at 16.2 ± 3.7 (64.8%) after three months. Confidence in accessing mental health resources improved from 28% to 76%.

Conclusion: The STP significantly enhanced and sustained nurses' knowledge and confidence regarding mental health resources and burnout prevention. Incorporating such programs into workplace wellbeing initiatives is recommended.

Keywords: burnout, nursing staff, mental health, structured teaching program, workplace intervention

Introduction

Burnout among healthcare professionals characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment remains a major challenge globally[1]. Nurses are particularly vulnerable due to high workloads, shift patterns, emotional labor, and staffing pressures. Burnout adversely affects patient safety, staff retention, and individual mental and physical health[2]. Knowledge about how to recognize burnout, available mental health resources, and practical prevention strategies is a necessary first step toward help-seeking and organizational change.

Workplace based educational interventions can raise awareness, normalize help-seeking and bridge gaps between staff and available supports[3]. This study aimed to measure the impact of a structured teaching program (STP) delivered at the hospital on nursing staff's knowledge of mental health resources and strategies to prevent burnout.

Objectives

1. To evaluate the effect of the Structured Teaching Program (STP) on nursing staff knowledge regarding mental health resources and burnout prevention immediately post-intervention.
2. To assess knowledge retention at three months after the STP.
3. To measure changes in self-reported confidence in accessing mental health resources and intention to use help-seeking behaviors.

Hypotheses

H_1: Knowledge scores will be significantly higher immediately after the STP compared with baseline (pretest).

H_2: Knowledge scores at 3 months will remain significantly higher than baseline (pretest).

METHODS

Study design- A quasi-experimental single-group pretest–posttest research design was used for this study with a 3-month follow-up.

Setting and participants

The study was conducted in Krishna Super Speciality Hospital**,** Kanpur (U.P.). Inclusion criteria: registered nurses and nursing assistants employed for at least 3 months and willing to attend the STP. Exclusion criteria: currently on long-term leave or on extended medical/sick leave, or having participated in similar training in the previous 6 months.

Sample and Sampling Technique

The study included a total of 132 nursing staff working in hospital departments such as medical, surgical, intensive care, pediatric, and other specialty units. Participants were selected using a convenience sampling technique based on their availability and willingness to participate.

Inclusion criteria were:

- Registered nursing staff currently employed in the selected hospital.
- Willing to provide informed consent and participate in all stages of the study (pretest, posttest, and follow-up).
- Able to read and understand the study materials in English or Hindi.

Exclusion criteria included:

- Staff on long-term leave or those who had participated in prior structured training on mental health or burnout prevention within the last 6 months.

A total of 132 participants were recruited, of which 120 completed the immediate posttest and 110 completed the 3-month follow-up assessment, resulting in an 83% retention rate**.**

Consent

Participants were invited via staff email, posters in wards, and department meetings. Written informed consent was obtained. Participation was voluntary and non-participation would not affect employment.

Intervention: Structured Teaching Program (STP)

The STP was co-designed by clinical psychologists, nurse educators, and occupational health staff. It consisted of four weekly interactive modules (60–90 minutes each):

1. **Understanding burnout:** Definitions, signs and symptoms, risk factors, brief overview of the Maslach Burnout Inventory concepts[1].
2. **Mental health resources local and digital:** Overview of employee assistance programs, occupational health, counseling services, crisis lines, national helplines, online cognitive-behavioral resources, and peer support networks[2].
3. **Practical prevention and self-care:** Sleep hygiene, stress management techniques, brief mindfulness exercises, workload prioritization, boundary-setting, time management[3].
4. **Organizational strategies and help-seeking:** escalation pathways, confidentiality and stigma reduction, team-based resilience-building, managerial responsibilities, and creating supportive workplace culture[4].

Teaching methods included short lectures, case vignettes, role-play, small-group discussions, and a take-home resource booklet and quick-reference flowchart for accessing help.

Outcome measures

Primary outcome: Knowledge of mental health resources and burnout prevention assessed with a 25-item multiple-choice questionnaire developed for this study and reviewed by experts. Items covered recognition of burnout symptoms (7 items), available resources and referral pathways (9 items), and prevention/management strategies (9 items). Each correct answer scored 1 point (0–25). The instrument underwent face and content validation with subject experts and pilot testing (Cronbach's alpha = 0.78).

Secondary outcomes: Self-reported confidence in accessing resources (Likert scale 1–5); intention to seek help measured by a 3-item scale; satisfaction with training (post-only).

Data collection- Participants completed the questionnaire at three time points: pretest, immediate posttest, and 3-month follow-up. Demographic data (age, gender, years of nursing experience, department, previous mental health training) were collected at baseline (pretest).

Ethical considerations- Ethical approval was obtained from the Institutional Ethics Committee of Krishna Super Speciality Hospital, Kanpur (U.P.). Participant confidentiality was maintained; data were de-identified before analysis. Participants expressing distress were offered one-to-one referral to occupational counseling. Data analysis- Data were analyzed using SPSS. A two-tailed $p < 0.05$ was considered statistically significant.

RESULTS

Table 1. Participant Characteristics of Nursing Staff (n = 132)

S. No.	Variable	n	%
1	**Age (years)**		
	21-25 Year	75	57%
	26-30 Year	28	21%
	31-35 Year	15	11%
	> 36 Year	16	12%
2	**Gender**		
	Female	113	86%
	Male	19	14%
3	**Years of professional experience**		
	1-3 Year	68	52%
	4-6 Year	34	26%
	7-9 Year	18	14%
	>10 Year	12	9%
4	**Department**		
	Medical	42	32%
	Surgical	37	28%
	ICU	24	18%
	Pediatrics	13	10%
	Others (e.g., OPD, OT, Psychiatry)	16	12%

5	**Previous mental health training**		
	Yes	24	18%
	No	108	82%
6	**Completed all assessments**		
	Baseline (pretest)	132	100%
	Immediate posttest	120	91%
	3-month follow-up	110	83%

Table 2. Knowledge Scores on Mental Health Resources and Burnout Prevention (n = 110–132)

Time Point	Mean ± SD	Mean%	Calculated F-value
Baseline (pretest)	10.8 ± 3.6	43.20%	210.3 ($p < 0.001$)
Immediate Posttest	18.4 ± 3.1	73.60%	
3-Month Follow-up	16.2 ± 3.7	64.80%	

The table-2. depicts the comparison of mean knowledge scores and corresponding mean percentages of nursing staff regarding mental health resources and burnout prevention at three time intervals—baseline (pretest), immediate posttest, and 3-month follow-up.

At baseline (pretest), the mean knowledge score was 10.8 ± 3.6 (43.2%), indicating inadequate knowledge before the intervention. Following the structured teaching program, the mean score increased markedly to 18.4 ± 3.1 (73.6%), demonstrating a substantial gain in knowledge immediately after the training. At the 3-month follow-up, the mean score slightly decreased to 16.2 ± 3.7 (64.8%), suggesting partial retention of knowledge over time.

A repeated-measures ANOVA revealed a statistically significant difference across the three time points ($F = 210.3$, $p < 0.001$), indicating that the structured teaching program had a highly significant positive effect on improving and sustaining knowledge of mental health resources and burnout prevention among nursing staff.

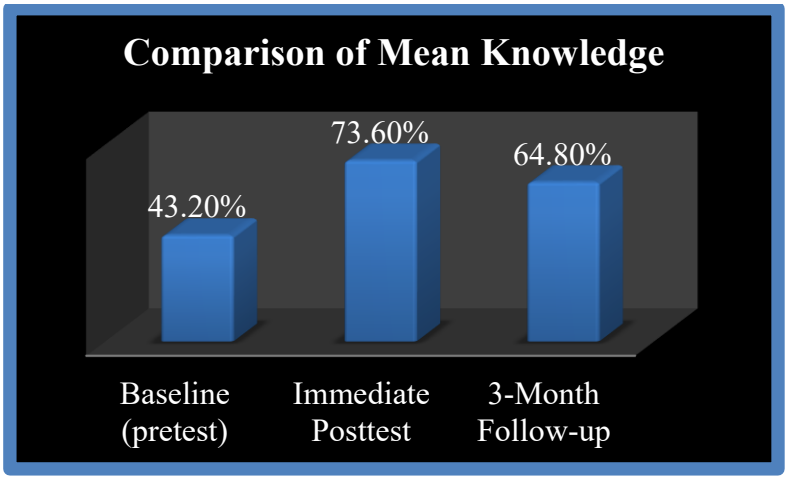

Figure 1: Comparison of Mean Knowledge Percentage among Nursing Staff at Baseline, Immediate Posttest, and 3-Month Follow-up

The graph illustrates the trend in mean percentage scores of nursing staff knowledge regarding mental health resources and burnout prevention at three time intervals baseline (pretest), immediate posttest, and 3-month follow-up.

At baseline (pretest), the mean percentage was 43.20%, indicating inadequate knowledge before the intervention. Following the structured teaching program, there was a substantial increase to 73.60% at the immediate posttest, showing a significant improvement in participants' understanding of the topic. At the 3-month follow-up, the mean percentage slightly decreased to 64.80%, suggesting partial retention of knowledge over time.

Table 3. Confidence in Accessing Mental Health Resources (n = 110–132)

Confidence Level	Baseline (pretest) (%)	Immediate Posttest (%)	3-Month Follow-up (%)
Low	72 (54.5)	22 (18.3)	34 (30.9)
Moderate/High	37 (28.0)	91 (75.8)	70 (63.6)
Missing/Not reported	23 (17.5)	7 (5.8)	6 (5.5)

The table 3. illustrates changes in the confidence levels of nursing staff in accessing mental health resources across three assessment periods baseline (pretest), immediate posttest, and 3-month follow-up.

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At baseline (pretest), only 28.0% of participants reported moderate to high confidence, while a majority (54.5%) expressed low confidence in utilizing mental health resources. Following the structured teaching program, the proportion of participants with moderate to high confidence increased substantially to 75.8%, while those with low confidence dropped to 18.3%, indicating a significant positive shift immediately after the intervention.

At the 3-month follow-up, 63.6% of participants maintained moderate to high confidence, although there was a slight decline compared to the immediate posttest. The proportion with low confidence increased modestly to 30.9%, suggesting some reduction in confidence over time but still reflecting a clear improvement from baseline (pretest).

Discussion

This STP produced large and clinically meaningful gains in nursing staff knowledge about mental health resources and burnout prevention, with partial retention at 3 months. The pattern sharp improvement immediately after training with some attenuation over time is typical for educational interventions and highlights the need for booster sessions or ongoing supports.

Conclusion

A workplace-based structured teaching program significantly improved nursing staff knowledge of mental health resources and burnout prevention strategies immediately after training, with sustained gains at 3 months. Hospitals should incorporate such programs within broader staff wellbeing initiatives.

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