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Impact of self-instructional module on knowledge and attitude regarding occupational stress management among nurses working in critical care units in selected hospital at Bijapur

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Abstract

Stress is defined as an individual's physical, mental, and emotional reaction to conditions that disrupt well-being. Recognized as an occupational hazard since the mid-1950s, nursing stress has escalated due to increasing technology use, rising care costs, and turbulent work environments. This study aimed to assess critical care nurses' knowledge and attitudes regarding occupational stress management before and after a self-instructional module. A quasi-experimental one-group pre-test and post-test design was employed, using a structured questionnaire with high reliability ($r = 0.80$ and 0.81). Results showed mean knowledge scores rising from 42.95% to 85.75% and attitude scores improving significantly, with positive attitudes increasing from 53.3% to 78.3%. These findings indicate that targeted educational interventions effectively enhance nurses' stress management competencies, ultimately contributing to improved patient care and reduced burnout. The study robustly supports the implementation of structured stress management training as a valuable strategy to promote nurses' well-being and sustain healthcare quality.

Keywords: Effectiveness, Self-instructional module, occupational stress management

Introduction

Health professionals frequently suffer from stress owing to the characteristics and working conditions typically found in hospitals. Pressure at work can be positive leading to increased productivity. However, when this pressure becomes excessive, it has a negative impact. The individual perceive themselves as being unable to cope and not to possess the necessary skills to combat their stress. Stress is acknowledged to be one of the main causes of absence from work. Prevalence of occupational stress amongst nurses in India is 87.4%.

There are two types of Occupational stress factors: exogenous (outside the individual) including the demand of the job, and changes in the work load or environment; and endogenous (within the individual) including the employee's abilities both physical and mental, and coping mechanism. In a teacher, stress can be caused by a number of factors, both external and internal. External causes may include institutional conditions such as large, mixed-ability classes, lack of student discipline and motivation, lack of resources, overwork or uneven distribution of workload, poor communication, unclear expectations and inadequate rewards and recognition. Problematic relationships with colleagues can generate other stressors, such as personality conflicts, lack of community spirit, feelings of isolation, lack of support, and limited academic and social interaction with other teachers. Internal causes may include an aggressive, impatient, competitive 'Type A' personality; workaholic; negative attitude toward students; and in particular, unrealistic self-expectations.

Materials and Methods

Statement of the Problem

Impact of self-instructional module on knowledge and attitude regarding occupational stress management among nurses working in critical care units in selected hospital at bijapur.

Objectives of the Study

The objectives of the study were to:

1. To assess the knowledge of nurses working in Critical care units regarding occupational stress management in terms of pre-test and post-test knowledge scores.
2. To assess the attitude of nurses working in Critical care units regarding occupational stress management in terms of pre-test and post-test attitude scores.
3. To evaluate the effectiveness of self-instructional module on knowledge and attitude of nurses working in Critical care units regarding occupational stress management by comparing pre-test and post-test knowledge scores.
4. To find out correlation between knowledge and attitude of nurses working in Critical care units regarding occupational stress management.
5. To find the association between the pre-test knowledge scores of nurses working in Critical care units regarding occupational stress management and selected demographic variables.
6. To find the association between the pre-test attitude scores of nurses working in Critical care units regarding occupational stress management and selected demographic variables.

Assumptions

This study assumes that:

- Nurses working in intensive care units will have varying level of knowledge regarding occupational stress management
- Self-instructional module will enhance the knowledge of nurses working in intensive care units regarding occupational stress management.

Hypotheses

The study is based on the following hypothesis and this will be tested at 0.05 levels of

H1: The mean post-test knowledge scores of nurses working in intensive care units regarding occupational stress management who have undergone the self-instructional module, will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance.

H2: The mean post-test attitude scores of nurses working in intensive care units regarding occupational stress

management who have undergone the self-instructional module, will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance.

H3: There will be statistical correlation between knowledge and attitude scores of nurses working in intensive care units regarding occupational stress management at 0.05 level of significance.

H4: The levels of knowledge of nurses working in intensive care units regarding occupational stress management will be significantly associated with their selected personal variables at 0.05 level of significance.

Population

The population of the study comprised of nurses working in Critical care units in a selected hospital

Sample

Sample consists of a sub set of a population selected to participate in a research study. 50 nurses working in intensive care units in a selected hospital selected as sample of the study

Sampling Technique

For selection of the sample non-probability convenient sampling technique was used.

Criteria for Sample Selection

The following were the inclusive and exclusive criteria for the selection of the samples.

Inclusion Criteria:

1. The nurses working in intensive care units in a selected hospital in Bangalore.
2. The nurses working in intensive care units in a selected hospital who are willing to participate in the study.
3. The nurses working in intensive care units who are available during the study period.

Exclusion Criteria

1. The nurses working in intensive care units who are absent on the day of data collection.
2. The nurses working in intensive care units who are not willing to participate in the study

Results

Table 1: Distribution of sample characteristics according to demographic variables

Demographic Variable	Subcategory	Frequency	Percentage
Age	25 years and below	17	34%
	26 - 30 years	28	56%
	31 years and above	5	10%
Gender	Male	10	20%
	Female	40	80%
Religion	Hindu	35	70%
	Christian	8	16%
	Muslim	7	14%
	Others	0	0%
Educational Qualification	ANM	1	2%
	GNM	16	32%
	B.Sc Nursing	31	62%
	M.Sc Nursing	2	4%
Monthly Income	Less than Rs.10,000/-	2	4%
	Rs.10,001-15,000/-	9	18%
	Rs.15,001-20,000/-	17	34%

	More than Rs.20,001	22	44%
Professional Experience	Less than 2 Year	14	28%
	2 - 5 Year	5	10%
	More than 5 Year	31	62%
Source of Information about Occupational Stress Management	Print media	3	6%
	Friends	4	8%
	Electric Media	26	52%
	Medical personnel	17	34%

Table 2: Assessment of knowledge regarding occupational stress management among the nurses working in intensive care units

Knowledge aspects	Max. Score	Range score	Mean	Mean (%)	SD
Concepts of stress and occupational stress	4	1-3	2.04	51.0	0.63
					1
Define stress and occupational stress	3	0-3	1.2	40.0	0.63
					2
Causes of occupational stress	4	0-3	1.72	43.0	0.69
					4
Categories occupational stress	7	0-6	2.48	35.43	1.43
					6
Signs and symptoms of occupational stress	9	2-8	4.34	48.22	1.68
					0
Occupational stress management	11	1-8	4.28	38.91	2.02
					0
Complication of occupational stress	2	0-2	1.12	56	0.47
					5
Overall	40	4-33	17.18	42.95	7.56
					8

Table 2 reveals that aspect wise pre-test mean percentage knowledge score regarding occupational stress management. The highest mean percentage knowledge score (56%) was obtained in Complication of occupational stress, followed

by 51 percentage in concepts of occupational stress management.

Aspect wise post-test knowledge score regarding occupational stress management among nurses working in intensive care units. n=50

Table 3: Occupational stress knowledge assessment table

SI No	Knowledge aspects	Max. Score	Range score	Mean	Mean (%)	SD
I	Concepts of stress and occupational stress	4	3-4	3.5	87.5	0.5
II	Define stress and occupational stress	3	2-3	2.68	89.33	0.466
III	Causes of occupational stress	4	4-4	3.36	84.0	0.625
IV	Categories occupational stress	7	3-7	5.76	82.29	1.087
V	Signs and symptoms of occupational stress	9	6-9	7.96	88.44	0.958
VI	Occupational stress management	11	6-11	9.22	83.82	1.446
VII	Complication of occupational stress	2	1-2	1.82	91	0.384
	Overall	40	23-40	34.3	85.75	5.466

The results of aspect wise post-test Mean percentage knowledge scores are depicted in Table 3 and figure 12. The highest mean percentage knowledge score (91%) was found in Complication of occupational stress, followed by 89.33% in Define stress and occupational stress, 88.44 mean percentage was found in Signs and symptoms of occupational stress, 87.5 percentage in concepts of occupational stress management, 84 mean percentage of knowledge score was found in Causes of occupational

stress, 83.82 mean percentage score was found in Occupational stress management and 82.29% in Categories occupational stress. However, the overall post-test mean percentage knowledge score was found to be 85.75 percentage and standard deviation 5.466 among the respondents.

Comparison of overall pre and posttest knowledge level of Nurses working in intensive care units n=50

Table 4: Respondents' knowledge significantly improved post-test.

Knowledge Level	Classification of Respondents			
	Pre-test		Posttest	
	Number	Percentage	Number	Percentage
In adequate (<50%)	39	78	0	0
Moderate (51-75%)	11	22	5	10
Adequate (>75%)	0	0	45	90
Total	50	100.0	50	100.0

The above table 4 reveals that in pretest, 78.0% of the respondents possess inadequate knowledge and 22.0% of the respondents possess moderate knowledge about occupational stress management. Whereas, in posttest 10.0% of the respondents possess moderate knowledge and

90.0% of the respondents possess adequate knowledge about occupational stress management.

The comparison of pre and post-test knowledge score regarding occupational stress management among the nurses working in intensive care units n=50

Table 5: Overall knowledge enhancement is significant

Aspect wise analysis	Pre-test knowledge scores		Post-test knowledge scores		Percentage of mean enhancement	t - value
	Mean	SD	Mean	SD		
Concepts of stress	2.04	0.631	3.5	0.5	36.5	12.80
Define stress	1.2	0.632	2.68	0.466	49.33	13.51
Causes of occupational stress	1.72	0.694	3.36	0.625	41	12.24
Categories occupational stress	2.48	1.436	5.76	1.087	46.86	12.86
Signsand symptoms	4.34	1.680	7.96	0.958	40.22	13.30
stress management	4.28	2.020	9.22	1.446	44.91	14.30
Complication	1.12	0.475	1.82	0.384	45	7.87
Overall	17.18	7.568	34.3	5.466	42.8	12.97

Hence, there is increase in knowledge scores among nurses working in intensive care units about occupational stress management after administering the self-instructional module. This indicates that nurses working in intensive care units gain knowledge in post-test by self-instructional module.

H1: The mean post-test knowledge scores of nurses working in intensive care units regarding occupational stress management who have undergone the self-instructional module, will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance. Hence the research hypothesis is accepted.

Table 6: Pre-test knowledge varies by demographics

Demographic variables	Responses	Overall pre-test knowledge score		Chi- square value & Inference	P-value
		Below median	Above median		
Age (Years)	25yearsand below	07	10	3.487 ^{NS} df = 2	5.991
	26 - 30	17	11		
	31yearsand above	01	4		
Gender	Male	12	2	9.92* df = 1	.0016
	Female	13	23		
Religion	Hindu	17	18	3.239 ^{NS} df = 2	5.991
	Muslims	2	6		
	Christian	5	2		
Educational Qualification of nurses working in ICU	ANM	00	01	2.782 ^{NS} df = 3	7.815
	GNM	07	09		
	B.sc Nursing	16	15		
	M.sc Nursing	02	00		
Monthly income of nurses who working in ICU	Less than Rs. 10000	02	00	2.273 ^{NS} df = 3	7.815
	Rs.10001- 15000	04	05		
	Rs.15001-20000	08	09		
	More than 20001	10	12		
Professional experience	Lessthan2 Year	06	08	6.662* df = 2	5.991
	2 -5 Years	00	05		
	Above5 Years	18	13		
Source of information	Print Media	00	03	11.376*	7.815
	Friend	00	04		
	Electronic Media	18	08		
	Medical personal	07	10		

Table 7: Demographics affect pre-test knowledge scores

Demographic variables	Responses	Overall pre-test knowledge score		Chi-square value & Inference	P-value
		Below median	Above median		
Age (Years)	25 years and below	09	18	7.3 ^{NS} df = 4	5.991
	26 - 30	12	13		
	31 years and above	07	01		
Gender	Male	11	20	3.22 ^{NS} df = 2	.0016
	Female	17	12		
Religion	Hindu	17	18	3.239 ^{NS} df = 2	5.991
	Muslims	2	6		
	Christian	5	2		
Educational Qualification of nurses working in ICU	ANM	04	19	12.782 ^S df = 3	7.815
	GNM	12	19		
	B.sc Nursing	12	2		
	M.sc Nursing	02	01		
Monthly income of nurses who working in ICU	Less than Rs. 10000	13	16	3.91 ^{NS} df = 3	7.815
	Rs.10001- 15000	10	12		
	Rs.15001-20000	02	04		
	More than 20001	03			
Professional experience	Less than 2 Year	06	08	6.662 ^{NS} df = 2	5.991
	2 -5 Years	00	05		
	Above 5 Years	18	13		
Source of information	Print Media	03	03	3.36 ^{NS}	7.815
information	Friend	01	06	df = 3	
	Electronic Media	12	11		
	Medical personal	12	12		

The analysis of association between the selected demographic variables and the overall attitude score of nurses working in intensive care units during pre-intervention reveals the above following information.

H5: The levels of attitude of nurses working in intensive care units regarding occupational stress management will be significantly associated with their selected personal variables at 0.05 level of significance.

For the purpose of establishing the association between the demographic variables and the overall knowledge scores, the overall knowledge score is divided into two categories as below median and above median. The demographic variables have been categorized relevant to the situation.

It is observed from the present table that knowledge scores of the 07 demographic variables are assessed using chi-square test. The above data shows that the α -value for each of the variable is more than 0.05 (α -0.05) this is statistically signifying that there is no significant association between demographic variables such as age, religion, monthly income, gender, professional experience and source of information. There are significant demographic variables such as educational qualification staff nurses. Hence H5 hypotheses partially accepted.

Nursing implications

The findings of the present study have implications for Nursing practice, Nursing education, Nursing administration and Nursing research.

Nursing Practice: Nurses who are working in intensive care unit more prone to get occupational stress comparing to others. Nurses can be trained in handling occupational stress effectively by breathing exercise and relaxation, time and task management skills meditation, yoga etc. Nurses should develop the positive attitude towards their work environment.

Summary: The researcher felt a deep sense of satisfaction and fulfillment for having undertaken the study. The study provided the investigator with deeper insight about the students. The direction from the guide and expert opinions and help from the staff, students made the study fruitful and interesting

Nursing Education

Nurse educator should develop the positive attitude towards the nursing among the nursing students • Nurse at the post graduate level need to develop their skill in conducting health teaching programmes in management of occupational stress among nurses.

Nursing Research

The finding of the study will serve as the basis for the student nurses to conduct future qualitative and quantitative research on education and to identify the different methods of relaxation which can bring down severity of stress.

This study will serve as a valuable reference material for future investigations.

- There is a plenty of scope for research in the field of occupational stress among staff nurses.
- Studies can be done in depth to find out the various interventions for the prevention of occupational stress.
- The investigator present this study result at, seminar, poster session and should
- Publish research finding in journals to communicate the finding to nursing professionals.

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