Original Research Article

A Study to Assess Effectiveness of Pamphlets on Stress and Coping Strategies among the Nurses at Selected Hospitals of Dehradun

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ABSTRACT

A study was conducted to assess effectiveness of pamphlets on stress and coping strategies among the nurses at selected hospital, Dehradun. Aim: The aim of the study was to assess effectiveness of pamphlets on stress and coping strategies among the nurses at selected hospital, Dehradun".

Material and method: The methodology- pre experimental one group pre test post test design. The study was conducted at Shri Mahant Indresh Hospital Dehradun and Non-probability convenient sampling technique was used to draw the sample. The sample size is 40. The data collection was done with the help of Modified Four point rating scale. The statistical method for the demographic variables was presented by using frequencies and percentages, Mean and standard deviation was used to describe the frequency and percentage distribution of stress and coping strategies level among nurses, effectiveness of the pamphlet was analyzed using paired. t test, the correlation between post test score level of Stress and Coping Strategies is analyzed using Karl Pearson correlation formula of the coefficient of correlation. To find out the association between the post test score level of stress among nurses with their selected demographic variable by chi- square test.

Results: The result reveals that the mean post test score of level of stress score 15.85 was less than mean pre test of stress score was 23.35. The result also reveals that the mean post test score of coping strategies score 37.02 was higher than the mean pre test of coping strategies score 29.30. The $t_{39}=11.149$ is higher than the table value 2.02 at the 0.05% significance level of stress among nurses and $t_{39}=11.201$ is higher than the table value 2.02 at the 0.05% significance level of coping strategies among nurses.

Conclusion: The study revealed that the distribution of pamphlet is beneficial to develop knowledge about stress and coping strategies.

Keywords: Pamphlet, effectiveness, stress, coping strategies, Nurses, selected hospital

INTRODUCTION

The modern healthcare setting is stressful. It is a complex environment in which health professionals continually have to learn new skills, work long hours, constantly care for ill people and face death, and have high levels of responsibilities and reliance. [1] Nursing is an immensely stressful job. The nurses face with the personal, communicative, and organizational stress that adversely affects their health and job satisfaction. Job stress in the nursing profession has been a global problem. The success in delivering quality patient care depends on the efficiency and motivation of the nursing personnel. [2]

The World Health Organization (WHO 1948) defined work stress as, "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. According to (WHO 1948) stress is seen in almost every work environment but the

negative aspect of it is made prominent when workers consider the support they get from their supervisors and colleagues as inadequate or when they have little or no control over the work process. [3]

Need for the study

A cross sectional study was conducted from March 10 to April 10, 2014 through a census of nurses who are working in Jimma Zone public hospitals, south west Ethiopia. This study indicated an average overall job related stress level of 58.46 ± 12.62. The highest level of job related stress was on the sub scale of dealing with death & dying mean score of 62.94 % followed by uncertainty regarding patient treatment 57.72 % and workload 57.6 %. While job related stress from sexual harassment had the lowest mean score of 46.19 %. [4]

The Royal College of Nursing, which represents about 300,000 NHS nurses said that the number of nurses off with stress rise 17% from 2,188 in 2012 to 2,563 last year. Those who become so stressed they could no longer work were off sick for an average of 51 days. Scotland also saw stress-related sick days among nurses rise, by 34% from 116,735 in 2012 to 156,880 last year. [5]

Objectives

- To assess the pre test and post test level of stress and coping strategies among nurses at selected hospital, Dehradun.
- To determine the effectiveness of pamphlet on level of stress and coping nurses at selected hospitals, Dehradun.
- To find the correlation between post test score of stress and coping strategies among nurses at selected hospital, Dehradun.
- To find out the association between the post test level of stress among nurses at selected hospital with their selected demographical variables. (Age, Sex, Marital status, Professional qualification and Area of current work).

Hypotheses (Level of significance <0.05%)

- H1- There is a significant difference between the pre test and the post test

level of stress and coping strategies among nurses at selected hospital, Dehradun.
- H2-There is a significant Correlation between post test level of stress and coping strategies among nurses at selected hospital, Dehradun.
- H3- There is a significant association between the post test score among nurses with their selected demographical variables. (Age, Sex, Marital status, Professional qualification and Area of current work)

Conceptual framework

The research approach used for this study was Quantitative approach and chosen pre experimental one group pre test post test design. The conceptual frame work for this study based on Modified Model Of Stufflebeam's Evaluation Model (2003).

METHODOLOGY

- **Research approach-** A quantitative research approach was used for this study.
- **Research design-** The research design was pre experimental one group pre test – post test design
- **Independent variable –** In this study independent variable refers to the pamphlet regarding stress and coping strategies.
- **Dependent variable –** In this study dependent variables refers to the stress and coping strategies among nurses.
- **Extraneous variables:** An uncontrolled variable that greatly influences the result of the study is called an extraneous variable. In this study demographic variable refers to Age, Sex, Marital status, Professional qualification and Area of current work.
- **Setting-** This study was conducted in Shri Mahant Indiresh Hospital, Dehradun..
- **Sample size-** The sample size for the study was 40 nurses working in Shri Mahant Indiresh Hospital, Dehradun

- **Sampling technique-** The sampling technique was non probability convenient sampling technique
- Statistical method for the demographic variables was presented by using frequencies and percentages, Mean and standard deviation was used to describe the stress and coping strategies and effectiveness of the pamphlet was analyzed using paired t test. Correlation between Stress and Coping Strategies is analyzed using Karl Pearson correlation formula. Association between the post test level of stress among nurses with their selected demographic variables. (Age, Sex, Marital status, Professional qualification and Area of current work) tested using chi-square test Results.

Tool

The tool was divided into three sections-
Section A- Demographic Variables Section
Section B: Modified Four point rating scale for stress
Section C: Modified Four point rating scale for coping strategies

Content validity and reliability

The content validity will be obtained from experts in the field of psychiatric nursing (4), psychiatrist (1).The reliability of knowledge score obtained by Karl Pearson's correlation coefficient formula in posttest between stress and coping strategies was $r = -0.470**$ and found to be moderately negative correlation.

Ethical consideration

Formal permission was obtained from the administrative authority of Shri Mahant Indiresh hospital, Dehradun. Informed consent was obtained from the subjects with orally and written form after explaining about purpose of the study and maintaining confidentiality for the collected data.

Data collection process

The data was collected by self administered technique. The pre test had conducted and administration of intervention (Pamphlet) with brief explanation had done on same day. After seven days post test had conducted.

RESULTS

Findings related to Frequency and percentage distribution of socio demographic variables

Table no. 4.1- Frequency and percentage distribution of demographic variable of nurses.   N=40

S/NO	Demographic Variables	Frequency n=40	Percentage (%)
1.	Age(Years)		
	20-23	16	40
	24-27	19	47.5
	28-31	3	7.5
	32-35	2	5
2.	Sex		
	Female	33	82.5
	Male	7	17.5
3.	Professional Qualification		
	ANM	2	5
	GNM	20	50
	Basic BSC Nursing	16	40
	Post Basic BSC Nursing & above	2	5
4.	Marital Status		
	Unmarried	30	75%
	Married	10	25%
	Divorced	0	0
	Separated	0	0
5.	Designation		
	Junior Nurse	31	77.5
	Senior Nurse	7	17.5
	Ward In-charge / Head Nurse	2	5
6.	Area Of Current Work		
	General Ward	27	67.5
	Private Ward	3	7.5
	Emergency Ward	3	7.5
	Critical Ward	7	17.5

	Table to be continued…		
7.	Daily Working Hours		
	6-8	38	95
	8-10	2	5
	10-12	0	0
	12 &Above	0	0
8.	Total Years of Experience		
	< 1 Year	15	37.5
	1-2 Year	13	32.5
	3-4 Year	10	25
	5 Year	2	5
9.	Experience in Current Area Of Work		
	< 1 Year	17	42.5
	1-2 Year	16	40
	3-4 Year	7	17.5
	5 Year	0	0
10.	Type of Family		
	Nuclear Family	29	72.5
	Joint Family	10	25
	Extended Family	1	2.5
	Single Parents	0	0

Finding related to Frequency and percentage distribution of pre and post test level of stress level among nurses.
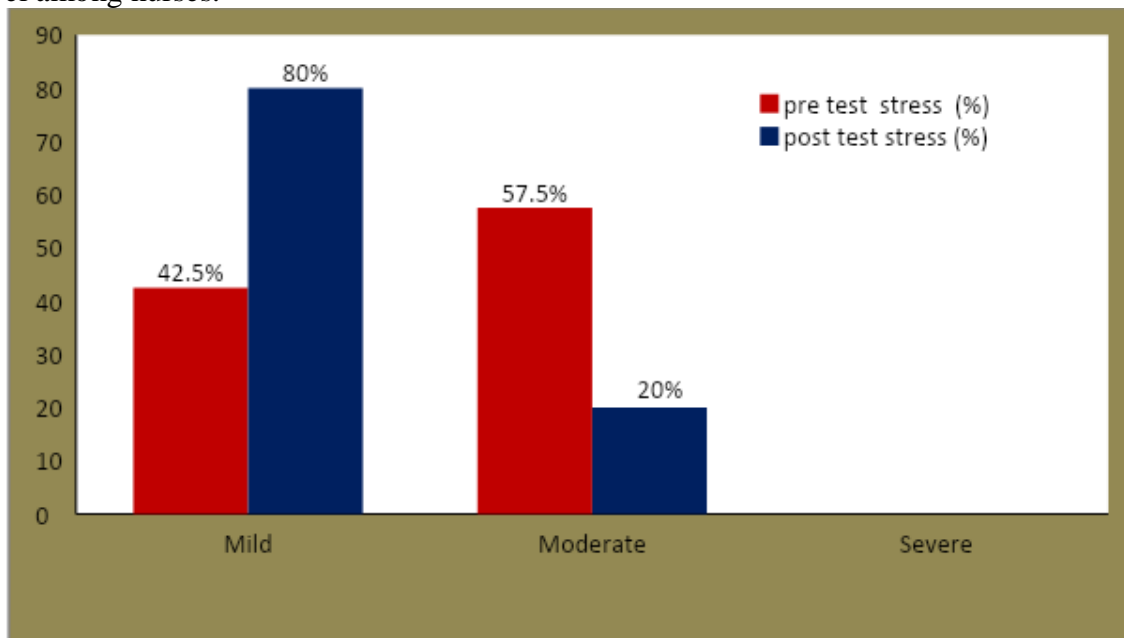

Table 4.2 Comparison of the Frequency and percentage distribution between pre test and post test level of stress among nurses.

N=40

Level of stress	Pre test		Post test	
	Frequency n=40	Percentage	Frequency n= 40	Percentage
Mild	17	42.5%	32	80%
Moderate	23	57.5%	8	20%
Severe	0	0	0	0
Total	40	100%	40	100%

Table 4.2 Display the pre test level of stress among nurses that shows 57.5% nurses have moderate level of stress 42.5% nurses have mild level of stress and in post test 80% nurses have mild level of stress and 20% nurses have moderate level of stress.

Finding related to Frequency and percentage distribution between pre test and post test level of coping strategies among nurses.
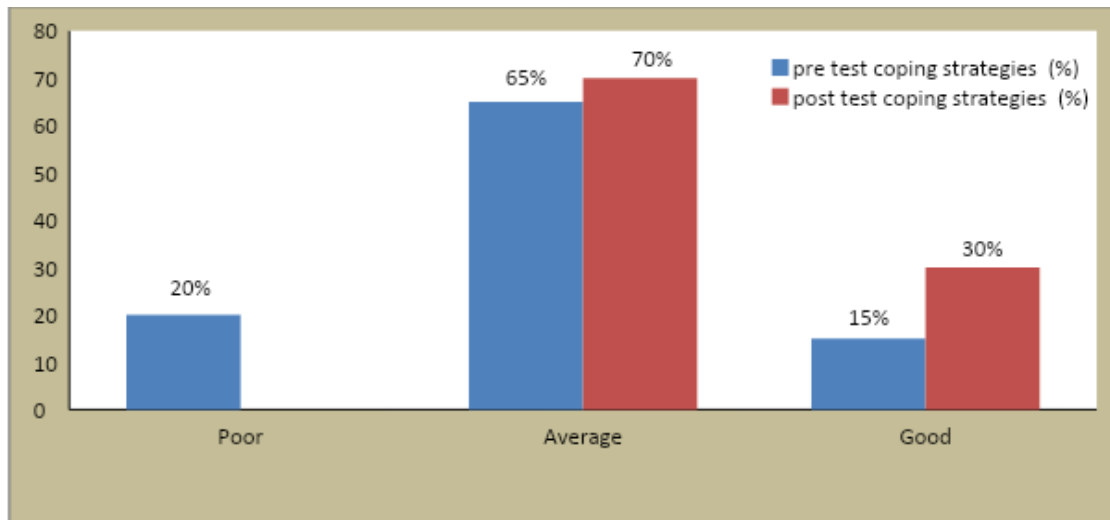
Figure-4.12 The Cylindrical diagram showing the Comparison of the Frequency and percentage distribution of pre test and post test level of coping strategies among nurses.

Level of coping strategies	Pre test		Post test	
	Frequency n=40	Percentage	Frequency n=40	Percentage
Poor	8	20%	0	0%
Average	26	65%	28	70%
Good	6	15%	12	30%
Total	40	100%	40	100%

N=40

Table 4.3 Display the pre test level of coping strategies among nurses, that shows 65% nurses have average level of coping strategies, 20% nurses have poor level of coping strategies, and 15% nurses have good level of coping strategies and in post test level of coping strategies among nurses, 70% nurses have average level of coping strategies and 30% nurses had good level of coping strategies.

Findings related to effectiveness of pamphlet on stress and coping strategies among nurses

Table 4.4 Paired t- test for Mean pre test and Mean post test level of stress among nurses .   N=40

SL. No	Level of stress	Mean	Standard deviation	Mean difference	Calculated t value	Df	Table value	Inference
1.	Pre test	23.35	9.12	7.5	11.149*	39	2.02	S*
2.	Post test	15.85	7.13					

Table 4.4 shows that the mean pre test score of stress is 23.35 and mean post test score of stress is 15.85. The difference between pre test and post test of stress score is significant. Paired t test is calculated to analyze the difference between pre test and post test of stress among nurses which reveals that the calculated value (t_{39}-11.149) which is more than tabulated value (2.02) there for null hypothesis is rejected and research hypothesis is accepted.

Table 4.5 Paired t- test for Mean pre test and Mean post test level of coping strategies among nurses. N=40

SL. No	Level of coping strategies	Mean	Standard deviation	Mean difference	Calculated t value	Df	Table value	Inference
1.	Pre test	29.30	9.61	-7.725	11.201*	39	2.02	Significance*
2.	Post test	37.02	7.44					

Table 4.5 shows that the mean pre test score of coping strategies is 29.30 and mean post test score of coping strategies is 37.02. The difference between pre test and post test of

coping strategies score is significant. Paired t test is calculated to analyze the difference between pre test and post test of coping strategies among nurses which reveals that the calculated value (t_{39}-11.201) which is more than tabulated value (2.02) there for null hypothesis is rejected and research hypothesis is accepted.

Association between the post test level of stress among nurses with their selected demographic variables

The Chi- square analysis was carried out to determine the association between post test level Stress and selected demographic variables. The association between stress and sex, (x^2value = 20.692196, df=2) was significantly associated at P<0.05 level. This indicates there is significance association between the post test score of stress among nurses with their sex. Therefore null hypothesis is rejected and research hypothesis is accepted.

DISCUSSION

The main finding of the study is nurses stress mean pre test score is 23.35. In pre test of stress 42.5% of nurses have mild level of stress and 57.5% of nurses had moderate level of stress. In stress mean post test score is 15.85. In post test 80% of nurses have mild level of stress and 20% of nurses had moderate level of stress. The mean value of post test of stress score 15.85 was lesser then the pre test level of stress 23.35 and mean value of post test level of coping strategies score 37.02 is higher than the mean pre test level of coping strategies score 29.30 among nurses. Like similar study Ms.Palak Patel and Sumandeep Vidyapeeth had conducted the conducted a study to assess the Effectiveness Of Progressive Muscle Relaxation Therapy on Level Of Stress Among Staff Nurses Working In Selected Hospitals at Vadodara City." The findings of the study revealed that in pre test most of the nurses 53.3% had moderate stress, 40.0% had mild stress and 6.7% had severe stress. In post test most of the nurses had mild stress 73.3 % and no stress 26.7. [6]

The paired t test value for the pre test and post test value of stress is 11.149 at P< 0.05 level and The paired t test value for the pre test and post test value of stress is 11.201 higher than the table value 2.02 at the 0.05 of significant level. It shows that the pamphlet was effective on reduction of stress and improvement of coping strategies among nurses. Like similar study Tayebe Mehrabi, Fatemeh Azadi, Saeid Pahlavanzadeh 2011, conducted a quasi-experimental study on the effect of yoga on coping strategies among intensive care unit nurses in Alzahra Hospital, Iran .34 female nurses working in ICU after Yoga exercises were administrated two sessions a week for 8 weeks in the study group. Coping strategies related questionnaire was filled before and after intervention. The results of statistical tests showed that the mean score of problem focuses strategy was 13.68 before intervention, whereas it reached 16.53 after that and independent *t* test showed a significant difference ($P < 0.001$). With regard to emotion focus, the mean score before intervention was 13.50, whereas it changed to 12.97 after intervention and the independent t test showed a significant difference (P = 0.014). The mean scores for state-trait focus changed from 11.97 before intervention to 14.68 after and the independent t test showed a significant difference ($P < 0.001$). It can be concluded that 8-week Yoga exercises could significantly affect stress coping strategies. [7]

The correlation results show that there is moderate negative correlation between the post test level of stress and Coping Strategies among nurses. The association of post test level of stress with their selected demographic variable using by chi-square and test reveals that there is significance association between the post test score of stress among nurses with their sex.

Recommendations
1. The same study can be repeated in large sample.

2. The same study can be done in different the different setting such as colleges.
3. The study can be done as a comparative study between rural and urban hospital.
4. The study can be done different age group of sample.

CONCLUSION

The study shows that in pre test level of stress is more and coping strategies is less but after introduction of pamphlets the level of stress was reduced and coping strategies had improved. So this shows that pamphlet is one of the effective methods to increasing knowledge regarding stress and coping strategies. On other hand, the study is enriching a novel experience for the novice investigator in the field of research.

REFERENCES

1. Gholamzadeh S, Sharif F Rad FD(2015). Sources of occupational stress and coping strategies among nurses who work in Admission and Emergency Departments of Hospitals related to Shiraz University of Medical Sciences. Iran Journal Nurses Midwifery Res. 2011. 16(1): 41–46.
2. Somayehramezanli ,Afifehrahmanian Koshkaki et al " A Study of the Coping Strategies Used by Nurses Working in the Intensive Care Units of Hospitals", International Journal of Current Microbiology and Applied Sciences,Volume 4, Number 4, pp. 157-16
3. WHO. 1948. "Summary report on proceedings, minutes and final acts of the International Health Conference held in New York" .19 June to 22 July 1946.
4. https://bmcnurs.biomedcentral.com/articles/ 10.1186/s12912-016-0158-2
5. http://www.theguardian.com/society/2015/ja n/17/nurses-nhs-stress-leave-staff-breaking-point
6. Ms.Palak Patel. A Study to Assess the Effectiveness Of Progressive Muscle Relaxation Therapy on Stress among Staff Nurses Working In Selected Hospitals at Vadodara City. IOSR-JNHS. 2014. Volume 3, Issue 3; PP 34-59
7. Tayebe Mehrabi, Fatemeh Azadi,1 Saeid Pahlavanzadeh,2 and Niloofar Meghdadi3, "The effect of yoga on coping strategies among intensive care unit nurses Tayebe Mehrabi," Iran J Nurs Midwifery Res. 2012 Sep-Oct; 17(6): 421–424.

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