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Stress Management Techniques: Its role on Emotional and Behavioral Symptoms of Stress

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ABSTRACT

Stress manifests in many symptoms. This experimental study focusses on prevalence of emotional and behavioural symptoms of stress and observes for any decrease in these symptoms during post-test. Stress management techniques training program was conducted among Experimental group. Frequently reported emotional symptoms of stress during pre-test in Control group are feeling tense (84.5%), irritability (81%), Anger (77.6%), Restlessness (69%) and moodiness (63.8%) and in Experimental group, feeling tense (83.9%), irritability (80%), restlessness (75%), Anger (64.5%) and depression, moodiness and short temper (51.8%). The behavioural symptoms frequently reported in control group are eating less (58.6%), sleeping too less (48.3%), isolating from others (37.9%), picking fights with others (31%) and over acting (25.9%) and in Experimental group, are eating less (66.1%), sleeping too less (60.7%), isolating from others (39.3%), over acting (28.6%) and pacing (28.6%). In experimental group, for emotional symptoms, when compared to pre-test, the post-test shows significant decrease in moodiness, agitation, restlessness, short-temper, irritability, impatience, feeling tense, feeling overwhelmed, a sense of loneliness, depression and anger ($p<0.05$). In experimental group, there is significant decrease of behavioural symptoms like sleeping too less, isolating from others, procrastinating, neglecting responsibilities, pacing, over doing and over acting ($p<0.05$) in post-test when compared to pre-test. The stress management techniques training program was effective in reducing many emotional and behavioural symptoms of nursing students.

KEYWORDS

Emotional Symptoms, Behavioral Symptoms, Stress, Stress Management Techniques, Nursing Students, Training

INTRODUCTION

'Stress' is a term popularly used in everyone's life. Right from the mother's womb, till entry into grave every one suffers from stress at some point of time. It is an imbalance between coping ability and challenges that one experiences. During stress, our body is activated with involvement of cognitive, emotional, physical and neurological involvement to encounter stressors. When our body cannot cope with stressors, body shows stress manifestation in the form of symptoms of stress.The present study focused on the effectiveness of stress management techniques in reducing emotional and behavioural symptoms of stress.

Syedfatemi (2007) stated that students should be taught of effective coping strategies that reduce the negative effects of stress7.Carolina, D.H, et.al (2015) stated that coping can be defined as a set of strategies that is also used to control physical and emotional reactions of an organism1.Quyen, D.O, stated that the inability to cope with intense emotions in

healthy ways leads adolescents to express their pain and frustration through isolation, violence or self-injury, or to attempt to numb themselves of emotions through isolation, reckless behaviour and alchol or illicit drug use[6].

Costa, E,F, (2014) and Facundes, V,L,(2005) reported that the prevalence of common mental disorders were high among nursing students[2].Fagnani, N. R, et.al, (2004) emphasisedon provision of formal, structural and confidential mental health services in training programs of academic institutions[3].

Objectives of the study:

- To assess the prevalence of emotional and behavioural symptoms of stress
- To compare pre-test and post-test emotional and behavioural symptoms of stress
- To find out the effectiveness of stress management techniques on emotional and behavioural symptoms of stress

Hypothesis:

H_0: There is no association between pre-test and post-test emotional and behavioural symptoms of stress

H1: There is significant decrease in post-test emotional and behavioural symptoms of stress compared to pre-test.

Methods and Materials:

An experimental study design was conducted and out of 114 participants, 58 were randomly assigned to control group and 56 were assigned to experimental group. Experimental group received training in stress management techniques daily for 6 weeks. Pre-test and post-test structured questionnaire was used to collect data like demography, emotional and behavioural symptoms of stress from both experimental and control groups.

Description of the tool:

Demographic data: Data like age, state, year of study, monthly income of the family and number of hours of sleep every day are collected.

Emotional and behavioural Symptoms: This category consists of 12 specified emotional symptoms and 16 specified behavioural symptoms of stress. The students need to mark either YES or NO against the box provided according to their perception of presence or absence of symptoms.

Data Analysis: Categoral data of the study was reported as frequencies.Chi-square is used to find the significant association between pre-test and post-test symptoms in experimental group and control group.

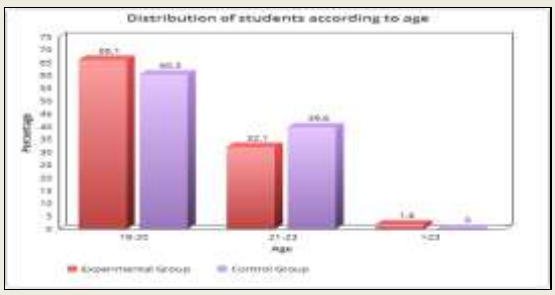

Fig-1 Percentage distribution according to age

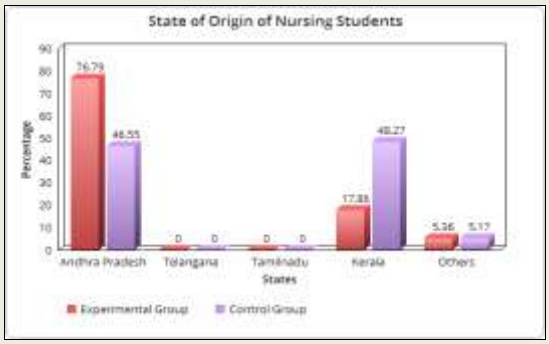

Fig 2 Percentage distribution according to state of origin

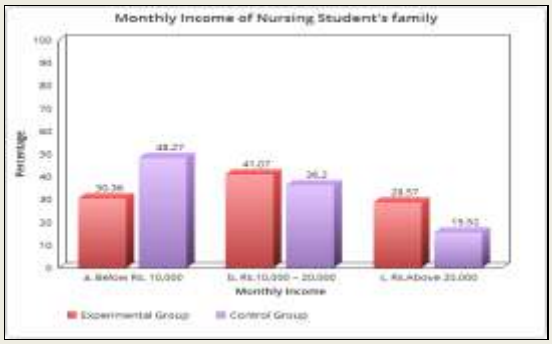

Fig 4 Percentage distribution according to Monthly income of the family

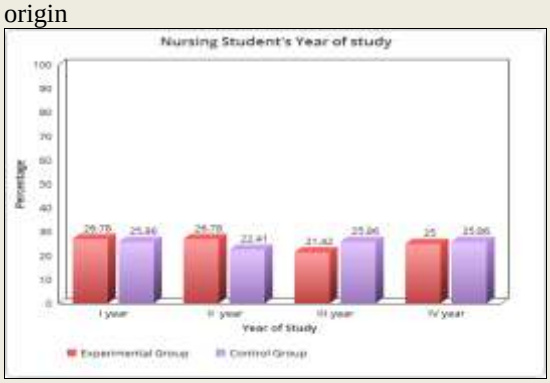

Fig 3 Percentage distribution according to Year of Study

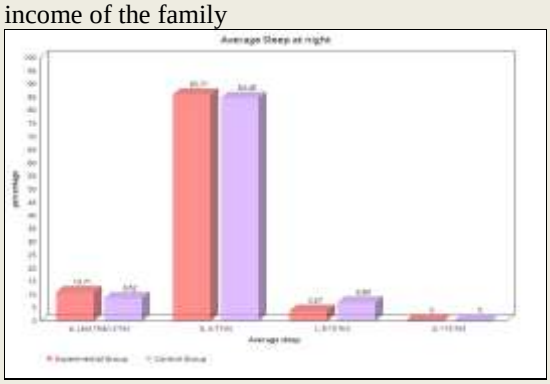

Fig 5 Distribution of Nursing students according to average sleep at night

Table 1 Frequency and Percentage distribution of symptoms during pre-test in Control group and Experimental group

Variables	**Control Group (N=58)**		**Experimental Group (N=56)**	
	Pre-Test		**Pre-Test**	
	n	**%**	**n**	**%**
Emotional Symptoms of Stress:				
Moodiness	37	63.8	29	51.8
Agitation	9	15.5	19	33.9
Restlessness	40	69.0	42	75.0
Short Temper	18	31.0	29	51.8
Irritability	47	81.0	45	80.4
Impatience	21	36.2	21	37.5
Feeling tense	49	84.5	47	83.9
Feeling overwhelmed	13	22.4	18	32.1
A sense of loneliness	29	50.0	24	42.9
Depression	34	58.6	29	51.8
Anger	45	77.6	36	64.3
Others	0	0	4	8.9
Behavioural Symptoms				
Eating more	6	10.3	10	17.9
Eating less	34	58.6	37	66.1
Sleeping too much	12	20.7	14	25.0
Sleeping too less	28	48.3	34	60.7
Isolating from others	22	37.9	22	39.3
Procrastinating	4	6.9	15	26.8
Neglecting responsibilities	14	24.1	13	23.2
Substance abuse	0	0	1	1.8
Nail biting	14	24.1	12	21.4
Pacing	6	10.3	16	28.6
Teeth grinding	5	8.6	3	5.4

Over doing	11	19.0	15	26.8	
Over acting	15	25.9	20	35.7	
Picking fights	18	31.0	8	14.3	
Hair pulling	6	10.3	15	26.8	
Others	0	0	1	1.8	

Table 2 Comparison between pre-test and post-test Emotional symptoms of stress in Control and Experimental groups

Emotional Symptoms		**Control Group (N=58)**				χ^2	**P-value**	**Experimental Group (N=56)**				χ^2	**P-value**
		Pre-Test		**Post-Test**				**Pre-Test**		**Post-Test**			
		n	**%**	**n**	**%**			**n**	**%**	**n**	**%**		
Moodiness	Present	37	63.8	28	48.3	2.83	0.09	29	51.8	18	32.1	4.44	0.035*
	Absent	21	36.2	30	51.7			27	48.2	38	67.9		
Agitation	Present	9	15.5	13	22.4	0.90	0.34	19	33.9	4	7.1	12.31	0.0004*
	Absent	49	84.5	45	77.6			37	66.0	52	92.9		
Restlessness	Present	40	69.0	37	63.8	0.35	0.55	42	75.0	21	37.5	16.00	0.00006*
	Absent	18	31.0	21	36.2			14	25.0	35	62.5		
Short Temper	Present	18	31.0	14	24.1	0.69	0.40	29	51.8	12	21.4	11.12	0.0008*
	Absent	40	69.0	44	75.9			27	48.2	44	78.6		
Irritability	Present	47	81.0	41	70.7	1.70	0.19	45	80.4	17	30.4	28.33	<0.01*
	Absent	11	19.0	17	29.3			11	19.6	39	69.6		
Impatience	Present	21	36.2	23	39.7	0.15	0.70	21	37.5	5	8.9	12.82	0.00034*
	Absent	37	63.8	35	60.3			35	62.5	51	91.0		
Feeling tense	Present	49	84.5	52	89.7	0.69	0.40	47	83.9	18	32.1	30.83	<0.01*
	Absent	9	15.5	6	10.3			9	16.0	38	67.8		
Feeling overwhelmed	Present	13	22.4	4	6.9	5.58	0.01*	18	32.1	2	3.6	15.58	0.00007*
	Absent	45	77.6	54	93.1			38	67.9	54	94.4		
A sense of loneliness	Present	29	50.0	22	37.9	1.72	0.19	24	42.9	5	8.9	16.80	0.000042*
	Absent	29	50.0	36	62.0			32	57.1	51	91.0		
Depression	Present	34	58.6	34	58.6	0.00	1.0	29	51.8	12	21.4	11.12	0.0008*
	Absent	24	41.4	24	41.4			27	48.2	44	78.6		
Anger	Present	45	77.6	44	75.9	0.82	1.0	36	64.3	18	32.1	11.59	0.00066*
	Absent	13	22.4	14	24.1			20	35.7	38	67.9		
Others	Present	0	0	0	0	-	-	4	7.1	0	0	5.23	0.07
	Absent	58	100	58	100			52	92.9	56	100		

Table 3 Comparison between pre-test and post-test Behavioural symptoms of stress in Control and Experimental groups

Behavioural Symptoms		Control Group (N=58)				χ^2	P-value	Experimental Group (N=56)				χ^2	P-value
		Pre-Test		Post-Test				Pre-Test		Post-Test			
		n	%	n	%			n	%	n	%		
Eating more	Present	6	10.3	10	17.2	1.16	0.28	10	17.9	9	16.1	0.06	0.80
	Absent	52	89.7	48	82.8			46	82.1	47	83.9		
Eating less	Present	34	58.6	26	44.8	2.21	0.13	37	66.1	29	51.8	2.36	0.13
	Absent	24	41.4	32	55.2			19	33.9	27	48.2		
Sleeping too much	Present	12	20.7	11	19.0	0.05	0.81	14	25.0	10	17.9	0.85	0.35
	Absent	46	79.3	47	81.0			42	75.0	46	82.1		
Sleeping too less	Present	28	48.3	26	44.8	0.14	0.70	34	60.7	17	30.4	10.40	0.0012*
	Absent	30	51.7	32	55.1			22	39.3	39	69.6		
Isolating from others	Present	22	37.9	17	29.3	0.97	0.32	22	39.3	2	3.6	21.21	0.000004*
	Absent	36	62.1	41	70.9			34	60.7	54	96.4		
Procrastinating	Present	4	6.9	5	8.6	0.12	0.72	15	26.8	3	5.4	9.53	0.0020*
	Absent	54	93.1	53	91.4			41	73.2	53	94.6		

Neglecting responsibilities	Present	14	24.1	9	15.5	1.36	0.24	13	23.2	5	8.9	4.24	0.03*
	Absent	44	75.9	49	84.5			43	76.8	51	91.1		
Substance abuse	Present	0	0	3	5.2	3.08	0.2	1	1.8	0	0	1.01	0.50
	Absent	58	100	55	94.8			55	98.2	56	100		
Nail biting	Present	14	24.1	8	13.8	2.02	0.16	12	21.4	11	19.6	0.05	0.81
	Absent	44	75.9	50	86.2			44	78.6	45	80.4		
Pacing	Present	6	10.3	5	8.6	0.10	0.75	16	28.6	2	3.6	12.98	0.000316*
	Absent	52	89.7	53	91.4			40	71.4	54	96.4		
Teeth grinding	Present	5	8.6	5	8.6	0.00	1.0	3	5.4	4	7.1	0.15	0.69
	Absent	53	91.4	53	91.4			53	94.6	52	92.9		
Over doing	Present	11	19.0	5	8.6	2.61	0.10	15	26.8	5	8.9	6.09	0.013*
	Absent	47	81.0	53	91.3			41	73.2	51	91.1		
Over acting	Present	15	25.9	17	29.3	0.17	0.68	20	35.7	7	12.5	8.25	0.0040*
	Absent	43	74.1	41	70.7			36	64.3	49	87.5		
Picking fights	Present	18	31.0	14	24.1	0.69	0.40	8	14.3	7	12.5	0.08	0.78
	Absent	40	68.9	44	75.9			48	85.7	49	87.5		
Hair pulling	Present	6	10.3	8	13.8	0.33	0.57	15	26.8	13	23.2	0.19	0.66
	Absent	52	89.7	50	86.2			41	73.2	43	76.8		
Others	Present	0	0	0	0	-	-	1	1.8	0	0	1.39	1.00
	Absent	58	100	58	100			55	98.2	56	100		

Table 4 Comparison between Post-test Emotional symptoms of stress among Control and Experimental groups

Emotional Symptoms		Control Group (N=58)		Experimental Group (N=56)		χ^2	P-value
		Post-Test		Post-Test			
		n	%	n	%		
Moodiness	Present	28	48.3	18	32.1	3.08	0.08
	Absent	30	51.7	38	67.9		
Agitation	Present	13	22.4	4	7.1	5.24	0.02*
	Absent	45	77.6	52	92.9		
Restlessness	Present	37	63.8	21	37.5	7.89	0.004*
	Absent	21	36.2	35	62.5		
Short Temper	Present	14	24.1	12	21.4	0.12	0.73
	Absent	44	75.9	44	78.6		
Irritability	Present	41	70.7	17	30.4	18.55	0.000017*
	Absent	17	29.3	39	69.6		
Impatience	Present	23	39.7	5	8.9	14.52	0.000139*
	Absent	35	60.3	51	91.0		
Feeling tense	Present	52	89.7	18	32.1	39.76	<0.01*
	Absent	6	10.3	38	67.9		
Feeling overwhelmed	Present	4	6.9	2	3.6	0.63	0.42
	Absent	54	93.1	54	94.4		
A sense of loneliness	Present	22	37.9	5	8.9	13.26	0.0002*
	Absent	36	62.0	51	91.0		
Depression	Present	34	58.6	12	21.4	16.37	0.000052*
	Absent	24	41.4	44	78.6		
Anger	Present	44	75.9	18	32.1	21.95	0.000003*
	Absent	14	24.1	38	67.9		
Others	Present	0	0	0	0	-	-
	Absent	58	100	56	100		

Table 5 Comparison between post-test behavioral symptoms of stress among Control and Experimental groups

Behavioural Symptoms	Control Group	Experimental Group (N=56)	χ^2	P-value

		(N=58)					
		Post-Test		Post-Test			
		n	%	n	%		
Eating more	Present	10	17.2	9	16.1	0.03	0.87
	Absent	48	82.8	47	83.9		
Eating less	Present	26	44.8	29	51.8	0.05	0.80
	Absent	32	55.2	27	48.2		
Sleeping too much	Present	11	19.0	10	17.9	0.02	0.87
	Absent	47	81.0	46	82.1		
Sleeping too less	Present	26	44.8	17	30.4	2.54	0.11
	Absent	32	55.1	39	69.6		
Isolating from others	Present	17	29.3	2	3.6	13.59	0.0002*
	Absent	41	70.9	54	96.4		
Procrastinating	Present	5	8.6	3	5.4	0.46	0.49
	Absent	53	91.4	53	94.6		
Neglecting responsibilities	Present	9	15.5	5	8.9	1.15	0.90
	Absent	49	84.5	51	91.1		
Substance abuse	Present	3	5.2	0	0	2.98	0.73
	Absent	55	94.8	56	100		
Nail biting	Present	8	13.8	11	19.6	0.70	0.40
	Absent	50	86.2	45	80.4		
Pacing	Present	5	8.6	2	3.6	1.26	0.23
	Absent	53	91.4	54	96.4		
Teeth grinding	Present	5	8.6	4	7.1	0.09	0.77
	Absent	53	91.4	52	92.9		
Over doing	Present	5	8.6	5	8.9	0.003	0.95
	Absent	53	91.3	51	91.1		
Over acting	Present	17	29.3	7	12.5	4.84	0.02*
	Absent	41	70.7	49	87.5		
Picking fights	Present	14	24.1	7	12.5	2.58	0.109
	Absent	44	75.9	49	87.5		
Hair pulling	Present	8	13.8	13	23.2	1.68	0.19
	Absent	50	86.2	43	76.8		
Others	Present	0	0	0	0	-	-
	Absent	58	100	56	100		

DISCUSSION

Emotional Symptoms: In the present study the top five frequently reported emotional symptoms of stress during pre-test in Control group (Tab-2) are feeling tense (84.5%), irritability (81%), Anger (77.6%), Restlessness (69%) and moodiness (63.8%). In experimental group, feeling tense (83.9%), irritability (80%), restlessness (75%), anger (64.5%) and depression, moodiness and short temper (51.8%).

The present study results are different to the study results of Pratibha, P, K[5] that the frequently reported emotional symptoms are worry (50.9%), tiredness (40.6%), Anger (39.6%), crying (21.7%) and loneliness (19.8%). In an another study of corral, M, et.al [3](2011) the participants reported the presence of mind and body tiredness, frequent irritability, pessimism, moodiness, antisocialism and rudeness.

Behavioural Symptoms: In the present study, the top five frequently reported

symptoms during pre-test in control group (Tab-3) are eating less (58.6%), sleeping too less (48.3%), isolating from others (37.9%), picking fights with others (31%) and over acting (25.9%). In Experimental group, the top five behavioural symptoms of stress during pre-test are eating less (66.1%), sleeping too less (60.7%), isolating from others (39.3%), over acting (28.6%) and pacing (28.6%).

It is similar to study of Prathiba, P, K,[5]that the prevalence of sleep disorder is 34.1% in United Kingdom and 63.7% in Egypt. In UK the prevalence of weight gain/weight loss is 39.4% and in Egypt it is 55.2%.

Comparison of pre-test and post-test symptoms of stress in Experimental and Control group.

Emotional Symptoms: In experimental group, post-test symptoms when compared to pre-test, (Tab-4) there is significant decrease in moodiness, agitation, restlessness, short-temper, irritability, impatience, feeling tense, feeling overwhelmed, a sense of loneliness, depression and anger ($p<0.05$). But in control group there is no significant decrease in emotional symptoms except feeling overwhelmed ($p<0.05$).

Behavioural symptoms: In experimental group, (Tab-5) there is significant decrease of behavioural symptoms like sleeping too less, isolating from others, procrastinating, neglecting responsibilities, pacing over doing and over acting ($p<0.05$). There is no significant decrease in behavioural symptoms like eating more, eating less, sleeping too much, substance abuse, teeth grinding, picking fights and hair pulling. This may be because all these behavioural symptoms needs long term therapy, where the present study collected data immediately after 6 weeks. In depth investigation of the causes are required.

Comparison of post-test emotional and behavioural symptoms of stress between experimental and control group:

Emotional symptoms: There was significant decrease of emotional symptoms like agitation, restlessness, irritability, impatience, feeling tense, a sense of loneliness, depression and anger($p<0.05$). There are no significant decrease in symptoms like moodiness, short temper and feeling overwhelmed ($p>0.05$)

Behavioural symptoms: There was significant difference of behavioural symptoms only in isolating from others and over acting ($p<0.05$) where as there is no significant difference in any other symptoms like eating more, eating less, sleeping too much, sleeping less, procrastinating, neglecting responsibilities, substance abuse, nail biting, pacing, teeth

grinding, over doing, picking fights, hair pulling etc ($p>0.05$).

CONCLUSION

Warbah, L. (2007) reported that stress due to various causes could lead to psychological and psychosomatic illness. Students are vulnerable to sleep disorders, eating disorders and other psychosomatic illness. It was also reported that psychological distress, poor adjustment and coping result in poor academic performance among students[8]. Stress is increasing among student nurses. This has led to increase in physical, psychological, emotional, inter relational and communication problems among student nurses. There is a need for research in assessing psychosomatic illness among nurses that contribute to policy decisions that will improve the work-life balance for nursing students. Since nursing is a profession with constant stressors, nursing students cannot escape from the consequences of stress. These study findings can help the clinical practitioners, teachers, administrators, supervisors and researchers to identify the symptoms of stress,that need to be tackled immediately to improve mental and physical health.

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