



RESEARCH ARTICLE

ARE COPING STRATEGIES AFFECTED BY STRESS MANAGEMENT TECHNIQUES AMONG NURSING STUDENTS?

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ABSTRACT

As nursing students commonly experience stress, they encounter stress either adaptive or maladaptive. This experimental study investigated the prevalence of coping strategies and its changes on introduction of stress management techniques training program for six weeks daily among nursing students. The study on comparison between pre-test and post-test coping strategies observed that in experimental group, there is significant increase in usage of coping strategies of post-test like positive interpretation ($p=0.025$), Mental disengagement ($p=0.013$), Focus on end ($p=0.045$), denial ($p=0.006$), Behavioural disengagement ($p=0.005$), use of emotional social support ($p=0.04$) and acceptance ($p=0.04$). There is no significant increase in the usage of coping strategies like use of instrumental social support, active coping, religious coping, humor, restraint, substance use, suppression of competing activities and planning. On Comparison between post-test coping strategies between Experimental and Control groups it was found that there is significant difference in usage of coping strategies during post-test like positive interpretation ($p=0.01$), mental disengagement ($p=0.03$), denial ($p=0.007$), religious coping ($p=0.001$) and behaviour disengagement ($p=0.002$). There is no significant difference in coping strategies like focus on end ($p=0.10$), use of instrumental social support ($p=0.18$), active coping ($p=0.02$), humour ($p=0.33$), restraint ($p=0.29$), use of emotional social support ($p=0.09$), substance use ($p=0.13$), acceptance ($p=0.30$), suppression of competing activities ($p=0.15$) and planning (0.46). As many coping strategies were adapted by nursing students after training on stress management techniques, this stress management techniques training program was effective.

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INTRODUCTION

Stress urges all the living organisms to use coping abilities either adaptive or maladaptive to get rid of stress. If the coping ability is adaptive, it helps the individual to adjust and have good mental health on other hand if it is maladaptive, individual may end up with poor mental health. Nursing is a profession, where students experience stress from personal, financial, family, legal, professional both academic and clinical stressors. Nursing students need to develop adequate coping abilities to deal day to day challenges. There are many stress management techniques that are effective in management of stress. But nursing students are not using these stress management techniques that are helpful due to many reasons like inadequate knowledge regarding these techniques, lack of time, lack of guidance, fear, anxiety, shyness, inadequate support from the nursing teachers. Chunping (2012) in their cross-sectional study among female Chinese nursing students (n= 686) found that nursing students more often used positive

rather than negative coping styles. Charnjeev singh *et al.* (2011) reported that the students use coping strategies like avoidance, transference, problem solving and optimism. It was recommended that nurse educators should find out most powerful areas and give a serious thought to encourage the use of healthy coping strategies to improve the productivity of students in nursing. (Charnjeev Singh *et al.*, 2011)

Objectives of the study

- To assess coping strategies among B.Sc (Nursing) nursing students
- To compare pre-test and post-test coping strategies among B.Sc(Nursing) nursing students.
- To find out the effectiveness of stress management techniques on coping strategies among B.Sc (Nursing) nursing students.

Hypothesis

H₀: There is no association between pre-test and post-test coping strategies among nursing students

H₁: There is significant increase in post-test coping strategies usage compared to pre-test

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MATERIALS AND METHODS

An experimental study, with random sampling technique was conducted among 114 nursing students, with 56 nursing students in experimental and 58 nursing students in control group. The experimental group received Stress management techniques training program for six weeks, daily. The Pre and post-test questionnaire is used to collect data from the students. Stress management program included seminar on stress and its management, deep breathing exercises, progressive muscle relaxation, massage therapy, visualization, stress diary, role play, stress journal and peer group sharing.

Description of the tool:

Demographic data: This consists data like age, belonging to which state, year of study, marital status, type of family and monthly income of the family.

COPE Scale: Carver cope scale describes a behavior for coping with problems which students usually perform when faced with certain problems. This section consists of 60 items, for which it is in Likert scale. The responses and its scoring interpretation are as follows

Scoring Interpretation:

Scores Interpretation

1. 1 = I usually don't do this at all
2. 2 = I usually do this a little bit.
3. 3 = I usually do this a medium amount.
4. 4 = I usually do this a lot

Sub-Scales (For each sub-scale, total the items listed from questionnaire, with no reversals of coding)

1. Positive reinterpretation and growth: 1, 29, 38, 59
2. Mental disengagement: 2, 16, 31, 43
3. Focus on and venting of emotions: 3, 17, 28, 46
4. Use of instrumental social support: 4, 14, 30, 45
5. Active coping: 5, 25, 47, 58 Denial: 6, 27, 40, 57
6. Religious coping: 7, 18, 48, 60
7. Humor: 8, 20, 36, 50
8. Behavioral disengagement: 9, 24, 37, 51
9. Restraint: 10, 22, 41, 49
10. Use of emotional social support: 11, 23, 34, 52
11. Substance use: 12, 26, 35, 53
12. Acceptance: 13, 21, 44, 54
13. Suppression of competing activities: 15, 33, 42, 55
14. Planning: 19, 32, 39, 56

Data Analysis

Mean and standard deviations are calculated for continuous data. Wilcoxon signed rank test is used to compare pre and post-test of experimental and control groups. T-test for two independent means is used to compare post-test coping strategies between experimental and control groups.

RESULTS

The findings of demographic data, percentage distribution of usage of coping strategies and comparison of means of coping strategies of experimental and control groups are presented in the subsequent tables.

Table 1. Items in Cope Scale

Coping strategies	Items
Positive interpretation	<ul style="list-style-type: none"> • Grow as a person as a result of experience • Seeing in a different light to make it more positive
Mental disengagement	<ul style="list-style-type: none"> • Turning to work or other substitute activities to take mind off things • Day dreaming
Focus on end	<ul style="list-style-type: none"> • Get upset and let emotions out • Upset and really aware of it
Use of instrumental social support	<ul style="list-style-type: none"> • Getting advice from someone • Talking to someone to find more about the situation
Active coping	<ul style="list-style-type: none"> • Concentrating efforts on doing something about it • Taking additional action to try to get rid of the problem
Denial	<ul style="list-style-type: none"> • Saying to oneself that "it isn't real" • Refusing to believe that it has happened
Religious coping	<ul style="list-style-type: none"> • Putting trust in God • Seeking God's help
Humor	<ul style="list-style-type: none"> • Laugh about the situation • Make jokes about it.
Behavioral disengagement	<ul style="list-style-type: none"> • Admitting self that it can't be dealt and quit trying • Giving up trying to reach the goal.
Restraint	<ul style="list-style-type: none"> • Restraining from doing anything too quickly • Holding off things until the situation permits
Use of emotional social support	<ul style="list-style-type: none"> • Discuss feelings with some one. • Getting emotional support from friends or relatives
Substances abuse	<ul style="list-style-type: none"> • Using alcohol or drugs to make self feel better • Try to lose oneself for a while by drinking alcohol or taking drugs
Acceptance	<ul style="list-style-type: none"> • Getting used to idea that it had happen. • Accepting that it has happened and can't be changed
Suppression of competing activities	<ul style="list-style-type: none"> • Keeping self from getting distracted by other thoughts or activities. • Focus on dealing with this problem and if necessary let other things slide a little.
Planning	<ul style="list-style-type: none"> • Making a plan of action. • Trying to come up with a strategy about what to do
	<ul style="list-style-type: none"> • Looking for something good that is happening • Making fun of the situation • Sleeping more than usual • Go to movies or watch TV to think about it less • Letting feelings out • Lot of emotional distress • Talk to someone who could do something concrete about the problem • Asking people with similar experiences what they did • Taking direct action to get around the problem • Doing what has to be done, one step at a time • Pretending that it has not happened. • Acting as though it hasn't even happened. • Finding comfort in one's religion. • Praying more than usual • Kidding around about the problem • Making fun of the situation • Giving up the attempt to get what is wanted. • Reducing the effort for solving the problem. • Making sure not to make matters worse by acting too soon • Forcing oneself to wait for the right time to do something • Getting sympathy and understanding from someone. • Talking to someone about what has been felt. • Drink alcohol or take drugs in order to think about it less. • Using alcohol or drugs to get through it. • Accept the reality that it has happened • Learn to live with it. • Trying hard to prevent other things from interfering with efforts at dealing with this. • Putting other activities aside in order to concentrate on this • Thinking about how best the problem can be handled. • Thinking hard about what steps to be taken

Table 2. Frequency and percentage distribution of demographic variables

S.NO	Demographic variables	Experimental group (N=56)		Control group(N=58)	
		n	%	n	%
1	Age				
	18-20	37	66.1	35	60.3
	21-23	18	32.1	23	39.6
	>23	1	1.8	0	0
2	State:				
	AP	43	76.79	27	46.55
	Telangana	0	0	0	0
	Tamil nadu	0	0	0	0
	Kerala	10	17.86	36	62.07
	Others	3	5.36	4	6.90
3	Present year of study				
	I year	15	26.78	15	25.86
	II year	15	26.78	13	22.41
	III year	12	21.42	15	25.86
	IV year	14	25	15	25.86
4	Marital Status				
	Un married	54	96.43	56	96.55
	Married	2	3.57	2	3.45
	Widow	0	0	0	0
5	Type of family				
	Joint family	19	33.93	11	18.97
	Nuclear family	37	66.07	47	81.03
6	Monthly income of family in Rupees/ month				
	a. Below Rs. 10,000	17	30.36	28	48.27
	b. Rs.10,000 – 20,000	23	41.07	21	36.20
	c. Rs.Above 20,000	16	28.57	9	15.52

Table 3. Percentage distribution of usage of Coping strategies in Experimental Group (N=56)

Coping strategies		Don't		Little		Medium		Lot	
		n	%	n	%	n	%	n	%
Positive interpretation	Pre-Test	0	0	6	10.7	26	46.4	24	42.9
	Post-Test	0	0	17	30.4	16	28.6	23	41.1
Mental disengagement	Pre-Test	0	0	24	42.9	26	46.4	6	10.7
	Post-Test	3	5.4	32	57.1	20	35.7	1	1.8
Focus on end	Pre-Test	2	3.4	12	21.4	35	62.5	7	12.5
	Post-Test	1	1.8	14	25	38	67.9	3	5.4
Use of instrument	Pre-Test	0	0	14	25	30	53.6	12	21.4
	Post-Test	0	0	7	12.5	42	75	9	16.1
Active coping	Pre-Test	0	0	13	23.2	32	57.1	11	19.6
	Post-Test	0	0	10	17.9	29	51.8	17	30.4
Denial	Pre-Test	1	1.8	21	37.5	30	53.6	4	7.1
	Post-Test	0	0	38	67.9	15	26.8	3	5.4
Religious coping	Pre-Test	0	0	6	10.7	19	33.9	31	55.4
	Post-Test	0	0	9	16.1	18	32.1	29	51.8
Humor	Pre-Test	4	7.1	22	39.3	28	50	2	3.6
	Post-Test	4	7.1	16	28.6	34	60.7	2	3.6
Behavioral disengagement	Pre-Test	0	0	11	19.6	35	62.5	10	17.9
	Post-Test	2	3.6	6	10.7	47	83.9	1	1.8
Restraint	Pre-Test	0	0	12	21.4	36	64.2	8	14.3
	Post-Test	0	0	20	35.7	32	57.1	4	7.1
Use of emotional social support	Pre-Test	0	0	8	14.3	33	58.9	15	26.8
	Post-Test	0	0	11	19.6	33	58.9	12	21.4
Substances use	Pre-Test	34	60.7	34	60.7	3	5.4	1	1.8
	Post-Test	29	51.8	29	51.8	9	16.1	0	0
Acceptance	Pre-Test	1	1.8	1	1.8	33	58.9	7	12.5
	Post-Test	0	0	0	0	28	50	14	25
Suppression of competing activities	Pre-Test	0	0	0	0	41	73.2	4	7.1
	Post-Test	0	0	0	0	35	62.5	5	8.9
Planning	Pre-Test	0	0	0	0	33	58.9	11	19.6
	Post-Test	0	0	0	0	31	55.4	13	23.2

Table 4. Percentage distribution of usage of Coping strategies in Control group (N=58)

Coping strategies		Don't		Little		Medium		Lot	
		n	%	n	%	n	%	n	%
Positive interpretation	Pre-Test	0	0	6	10.3	29	50	23	39.7
	Post-Test	1	1.7	11	19.0	31	53.4	16	27.6
Mental disengagement	Pre-Test	1	1.7	18	31.0	37	63.8	2	3.4
	Post-Test	1	1.7	17	29.3	35	60.3	4	6.9
Focus on end	Pre-Test	0	0	12	20.7	37	63.8	9	15.5
	Post-Test	0	0	20	34.5	34	58.6	4	6.9

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Use of instrument	Pre-Test	1	1.7	10	17.2	29	50	18	31.0
	Post-Test	1	1.7	10	17.2	10	17.2	17	29.3
Active coping	Pre-Test	1	1.7	11	19.0	40	69.0	7	12.1
	Post-Test	0	0	14	24.1	38	65.5	6	10.3
Denial	Pre-Test	1	1.7	21	36.2	31	53.4	5	8.6
	Post-Test	0	0	27	46.6	27	46.6	4	6.9
Religious coping	Pre-Test	0	0	2	3.4	15	25.9	41	70.7
	Post-Test	0	0	4	6.9	11	19.0	43	74.1
Humor	Pre-Test	1	1.7	20	34.5	29	50	8	13.8
	Post-Test	1	1.7	22	38.0	28	48.3	7	12.1
Behavioral disengagement	Pre-Test	0	0	15	25.9	33	56.9	10	17.2
	Post-Test	0	0	9	15.5	36	62.1	13	22.4
Restraint	Pre-Test	0	0	20	34.5	31	53.4	7	12.1
	Post-Test	0	0	20	34.5	34	58.6	4	6.9
Use of emotional social support	Pre-Test	3	5.18	10	17.2	22	37.9	23	39.7
	Post-Test	1	1.7	11	19.0	28	48.3	18	31.0
Substances use	Pre-Test	41	70.7	16	27.6	1	1.7	0	0
	Post-Test	36	62.1	18	31.0	4	6.9	0	0
Acceptance	Pre-Test	0	0	14	24.1	37	63.8	7	12.1
	Post-Test	0	0	11	19.0	38	65.5	9	15.5
Suppression of competing activities	Pre-Test	0	0	18	31.0	30	51.7	10	17.2
	Post-Test	0	0	23	39.7	29	50	6	10.3
Planning	Pre-Test	1	1.8	6	10.3	35	60.3	16	27.6
	Post-Test	0	0	17	29.3	23	39.7	18	31.0

Table 5. Comparison of Means between pre-test and post-test Coping strategies of Experimental group (N=56) and Control group (N=58)

Coping strategies		Pre-test		Post-Test		P-value	Inference
		Mean	SD	Mean	SD		
Positive interpretation	Experimental Group	11.68	2.39	12.36	2.82	0.0255*	S
	Control Group	11.48	2.39	11.25	2.32	0.18	NS
Mental disengagement	Experimental Group	9.25	2.24	8.43	2.16	0.013*	HS
	Control Group	9.43	2.10	9.21	2.22	0.11	NS
Focus on end	Experimental Group	9.88	2.45	9.29	2.19	0.045*	S
	Control Group	10.17	2.06	9.79	2.04	0.14	NS
Use of instrument	Experimental Group	10.38	2.46	10.27	2.26	0.405	NS
	Control Group	11.10	2.64	10.71	2.81	0.05	NS
Active coping	Experimental Group	10.46	2.45	10.79	2.76	0.27	NS
	Control Group	10.12	2.36	9.88	2.27	0.14	NS
Denial	Experimental Group	9.12	2.34	8.05	2.35	0.006*	HS
	Control Group	9.34	2.25	9.07	1.98	0.20	NS
Religious coping	Experimental Group	12.54	2.95	11.98	2.93	0.127	NS
	Control Group	13.31	2.54	13.55	2.51	0.30	NS
Humor	Experimental Group	8.56	2.37	8.91	2.50	0.105	NS
	Control Group	9.48	2.44	9.12	2.71	0.11	NS
Behavioral disengagement	Experimental Group	10.38	2.46	9.32	2.00	0.005*	HS
	Control Group	10.34	2.32	10.45	2.25	0.33	NS
Restraint	Experimental Group	10.05	1.96	9.54	2.05	0.05	NS
	Control Group	9.64	2.32	9.31	2.24	0.14	NS
Use of emotional social support	Experimental Group	11.11	2.59	10.41	2.78	0.04*	S
	Control Group	11.09	3.34	11.09	2.73	0.39	NS
Substances use	Experimental Group	5.18	1.97	5.54	2.04	0.12	NS
	Control Group	4.52	1.11	5.12	1.86	0.01*	S
Acceptance	Experimental Group	9.75	2.51	10.38	2.60	0.04*	S
	Control Group	10.10	2.37	10.14	2.32	0.47	NS
Suppression of competing activities	Experimental Group	9.95	2.08	9.61	2.00	0.12	NS
	Control Group	9.81	2.19	9.21	2.25	0.05	NS
Planning	Experimental Group	10.57	2.22	10.5	2.93	0.41	NS
	Control Group	10.88	2.36	10.55	2.66	0.17	NS

Table 6. Comparison of means between post-test coping strategies between Experimental and Control groups

Coping strategies	Mean		t-value	P-value	Inference
	Experimental Group (N=56)	Control Group (N=58)			
Positive interpretation	12.36	11.26	2.26	0.01*	HS
Mental disengagement	8.43	9.21	-1.89	0.03*	S
Focus on end	9.29	9.79	-1.28	0.10	NS
Use of instrumental support	10.27	10.71	-0.91	0.18	NS
Active coping	10.79	9.88	1.91	0.02	S
Denial	8.05	9.07	-2.49	0.007*	HS
Religious coping	11.98	13.55	-3.07	0.001*	HS
Humor	8.91	9.12	-0.42	0.33	NS
Behavioral disengagement	9.32	10.45	-2.82	0.002*	HS
Restraint	9.54	9.31	0.56	0.29	NS
Use of emotional social support	10.41	11.09	-1.30	0.09	NS
Substances use	5.54	5.12	1.13	0.13	NS
Acceptance	10.38	10.14	0.51	0.30	NS
Suppression of competing activities	9.61	9.21	1.00	0.15	NS
Planning	10.5	10.55	-0.09	0.46	NS

DISCUSSION

Comparison between pre-test and post-test Coping strategies

Experimental group: There is significant increase in usage of coping strategies of post-test like positive interpretation ($p=0.0255$), Mental disengagement ($p=0.013$), Focus on end ($p=0.045$), denial (0.006), Behavioural disengagement ($p=0.005$), use of emotional social support ($p=0.04$) and acceptance ($p=0.04$) at 0.05 significant level. There is no significant increase ($p>0.05$) in the usage of coping strategies like use of instrumental social support ($p=0.405$), active coping ($p=0.27$), religious coping ($p=0.127$), humor ($p=0.105$), restraint ($p=0.05$), substance use ($p=0.12$), suppression of competing activities ($p=0.12$) and planning ($p=0.41$).

Control Group: There is no significant increase in usage of all the coping strategies during post-test compared to pre-test.

Comparison between post-test coping strategies between Experimental and Control groups

There is significant difference in usage of coping strategies during post-test like positive interpretation ($p=0.01$), mental disengagement ($p=0.03$), denial ($p=0.007$), religious coping ($p=0.001$) and behaviour disengagement ($p=0.002$). There is no significant difference in coping strategies like focus on end ($p=0.10$), use of instrumental social support ($p=0.18$), active coping ($p=0.02$), humour ($p=0.33$), restraint ($p=0.29$), use of emotional social support ($p=0.09$), substance use ($p=0.13$), acceptance ($p=0.30$), suppression of competing activities ($p=0.15$) and planning (0.46). These coping strategies are adapted as per the situations. Participants did not use social and emotional support indicating requirement of personalised counselling services. Students did not show an increase in substance use which is a positive sign of good adapting method. Specialised sessions are also needed to encourage the planning, acceptance and humour strategies.

Conclusion

Ramkumar *et al.* (2011) conducted a study on medical and nursing students and reported that there is an unsatisfactory

overall coping ability to be prevalent among medical and nursing students. Ramkumar *et al.* (2011), Piko *et al.* (2012) reported that the ability to handle stress is largely determined by the coping mechanism used by the person. The trainee nurses may become vulnerable to stress because of the use of less effective coping strategies as avoidance when handling stress. Kim *et al.* (2015) reported that increased feelings of control and emotional competence assist nursing students to adopt active and effective coping strategies when dealing with stress. (Kim *et al.*, 2015) As the present study reported an increase of using healthy coping strategies, stress management techniques are encouraged in nursing institutions. As some coping strategies are not being practiced, specialised personalised services for planning, acceptance, humour, social and emotional support need to be provided.

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