ORIGINAL RESEARCH

A study to assess the level of stress and coping behaviours and to evaluate the effectiveness of selected coping strategies among Student Nurses in selected institutions of Punjab

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Abstract
Statement of the Problem
Methods
The study used a quasi- experimental study of before and after control group design. A total of 245 I year B.Sc. nursing degree students from six nursing institutions were included as interventional group (n=126) and control group (n=119) through purposive sampling technique. The teaching on coping strategies was given for 1 week and review for another 3 weeks. On the first week of data collection, following the pre- assessment, a detailed lecture was given on stress and coping strategies for seven consecutive days to the interventional group. Followed by this, first post test assessment was done on the seventh day to both the groups and reviewed for another 3 consecutive weeks and second posttest assessment was also done followingly to both the groups. Data collection tools included a (1) demographic variables,(2) 5- Point Likert scale on stress (3) 5- Point Likert scale on coping behaviours of student nurses. (4) Teaching module on "stress and coping strategies".

Results
The scores of stress and coping behaviours were compared between the two groups by unpaired 't' test. The findings revealed a significant difference between control 2nd - post and interventional 1st, 2nd post-test stress scores with the obtained overall 't' value 13.66 was greater than statistical table value and 'p' value was 0.000 at $P < 0.001$ level and a significant difference between control 2nd - post and interventional 1st, 2nd post-test coping behaviours with the obtained overall 't' value 7.99 which was greater than statistical table value and 'P' value was 0.000 at $P < 0.001$ level Thus, it infers that the interventional group had higher score as compared to the control group. These findings proved that there is a significant decrease in the level of stress and increase in the level of coping behaviours among students in the interventional group than the control group. With regard to post-test correlationscore, a negative correlation was present between the two variables. The result shows that the obtained coefficient correlation value in the control (r = -0.374) and the interventional(r = 0.372) group indicate that there was a negative correlation between stress and coping, since the value was statistically significant at $P < 0.001$ level.
This study concluded that coping strategies might be an effective intervention in reducing stress and improving coping behaviours among student nurses in daytoday activities

Stress, first coined in the 1930's, has in more recent decades become a commonplace of popular parlance. Stress could be defined simply as the rate of wear and tear on the body systems caused by life **(Stranks JW).** It occurs when a person has difficulty in dealing with life situations, problems and goals. Stress has physical, emotional, and cognitive effects. Although everybody has the capacity to adapt himself to stress, not everyone responds to similar stressors exactly the same.

"**Newman** defined Stress, as the relationship between the person and the environment that is appraised by the person as taxing or exceeding the person's resources. Stressors are disruptive forces operating exposed to, through a stimulus or stressor. Stress is also the appraisal or perception of a stressor.

Stress is a part of everyone's life. Stress for short periods may not affect you but stress over time may cause or make some illness worse, such as heart diseases, stroke, high blood pressures, diabetes, irritable bowel syndrome, asthma, arthritis. Other common disorders linked to psychological state are eating disorders, tension headaches, migraines, muscle spasms, chest pains, excessive menstrual cramps, acne, rapid or irregular heart rate, intestinal ulcers, frequent urination and rheumatoid arthritis flare ups. Mental health problems – depression and anxiety may be the result of chronic stress **(Schiff W, Alters S).**

According to Lazarus and Folkman[5], a stressor is perceived as stressful when the situation is appraised by the person as exceeding his or her resources and endangering his or her well being. Doing something and refraining from doing something about the stressful situations are ways of coping. Coping is the constantly changing cognitive and behavioural efforts for managing specific external or internal demands that are appraised as exceeding the resources of the person. It is the process by which a person manages the appraisal. The function of coping includes managing or alleviating the problem causing the distress and regulation the emotional response to the problem. Once the person has successfully coped with a situation, reappraisal occurs. When stress occurs, a person uses physiological psychological energy to respond and adapt to a particular situation. This type of coping strategy usually depends on the intensity, duration and number of stressors. Active coping strategies which are viewed as positive coping, generally includesstrategies such as problem solving, seeking emotional support from others and engagement in leisure pursuits. However the avoidance and maladaptive coping primarily refers to strategies when individuals try to avoid dealing with problems by cognitively and physically distancing themselves from the situation **(Blake RL, Vandiver TA).**

Coping responses can be described as positive or negative and as reactive (i.e. reacting to an individual's own thoughts and feelings) or active (dealing with actual stressful situations or events). Active or reactive coping responses can be positive or negative, depending on the situation and the content of the response . The coping process is an important aspect of the person-environment interface. The kinds of coping strategies used in a given situation are a function of individual differences in personality or experience as well as characteristics of the situation. Problem-focused coping strategies are designed to help people live longer, feel better and avoid having self-defeating thoughts. They assist people to understand themselves. This type of interventions target the individual thoughts as a cognitive process. It is based on the theory that changes in our emotions and behaviours are determined by our thoughts about events that occur. People are often disturbed by their view on perception of events rather than the events themselves. By being able to change the way that one think about things, then one can be able to change the way that they also feel about them. Cognitive-behavioral coping strategies are the most effective methods to reduce the stress.

Bittman BB, Synder C, Bruhn KT., Liebfried F,Stevens SK, Westengard J (2019) conducted a prospective cross over study, to examine the impact of a 6-session Recreational Music-making (RMM) protocol on burnout and mood dimensions as well as Total Mood

Disturbance (TMD) in 75 first year associate degree student nurses from Allegany college of Maryland. Burnout and mood dimensions were assessed with the Maslac Burnout Inventory and the profile of Mood States respectively. This study shows that a statistically significant reduction of multiple burnout and mood dimensions as well as total mood disturbance scores in first year associate degree student nurses. All this study finding shows importance and effectiveness of stress management program on student nurses.

Ram Kumar Guptha (2019) conducted a quasi-experimental study to determine the effectiveness of yoga nidhra on stress level among student nurses (30 in study group and 30 in control group) in selected nursing institutes of Pune, India. Findings related to effectiveness of yoga Nidra show that the mean post –test stress level of the experimental group was lower than the mean pre-test stress level. Keeping   in view of the study, the following recommendations are made: A study can be done using other alternative methods or techniques. It is also recommended to develop and implement policies to promote mental well-being of students. This will not only assist in the prevention of mental health problems but also contribute to a healthy working environment and reduced levels of stress.

In this present study, **t**he following instruments were developed by the researcher with the help of an extensive review of literature from various resources and based on the objectives of this study. The developed tools comprised four parts as follows:

The content validity of the instrument was evaluated by a panel of fifteen experts and it was determined as follows:

The prepared tool (Part I, Part II and Part III) along with objectives, hypotheses, operational definitions, blueprint and criteria checklist were given to experts and requested to give their valuable suggestions regarding accuracy, relevance and appropriateness of the content. There were two response columns against each item in the questionnaires-namely, 'agree' and 'disagree' along with a column for remarks and suggestions of the evaluator. The evaluator was asked to put '□ ' against above mentioned columns. The validated tool was received from the 13 judges in the field of Nursing, Medicine, clinical psychology, Education and Bio-Statistics with their valuable opinion.

The reliability of the instrument was established by administering the instrument to 78 I year B.Sc. degree student nurses from both the control and interventional groups during the pilot study. The reliability of these instruments were tested and presented as follows:

Reliability of the 5 point likert scale on stress (Part II) was this tool reliability was tested by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was $\alpha = > 0.75$.. It shows statistically significant and thus reliable

Reliability of the 5- Point Likert scale on coping behaviours (Part III) was too tested by internal consistency**.** The internal consistency test was tested by Cronbach-Alpa. The reliability was. $\alpha = > 0.78$ It shows statistically significant and thus reliable.

It was observed in the control pre-test, out of 126 students, none of them had very severe stress but majority 99(79%) had severe stress and 27(21%) had moderate stress. Likewise in interventional group, out of 119 students 2(2%) had very severe stress, 111(93%) had severe stress and 6(5%) had moderate stress 99(79%) had moderate stress and no one experienced mild stress. This may be due to the lack of awareness about the coping strategies to overcome stress by the student nurses.

However in interventional group, after the training all the subjects, 119(100%) experienced moderate stress and none of them had severe and very severe stress. These findings proved that there is a significant decrease in the level of stress among the students who had training on coping strategies.   Therefore this result clearly proved the effectiveness of coping strategies in reducing the intensity of stress. In other words, students who received training on coping strategies exhibited lesser level of stress than students in the control group.

These findings were consistent with the findings by a study done by **Richman CL,**

Brodish J, Haas F and Billings C to examine the effect of designated interventions in nursing practice problems on levels of burnout in nurses. A battery of tests measuring burnout, self-esteem, depression, personal accomplishment, depersonalization, and emotional exhaustion were given to nurses in interventional and control groups. Pre- and post-test data were gathered for both groups. The treatment included a 2-day conference which was designed as a respite experience to address problems specific to the nursing profession. Results indicate significantly less burnout, less frequency of depersonalization, and significantly greater frequency of personal accomplishment in the scores of the interventional group relative to the control group. This study shows that specific interventions can be used to benefit the emotional well-being of nurses by providing them with a respite opportunity and the skills to manage key stressors in their professional environment.

- **Distribution of the subjects based on their pre-test and post-test level of coping behaviours on coping strategies in the control and interventional groups**

Depiction of pre and post-test levels of coping behaviours in control and Interventional group among student nurses result reveals that in control group, in pre- test that 9(7%) had moderate and 117(93%) had good coping and 4(3%) coped excellently and in the post-test 14(11%) coped moderately, 108, (86%) had good coping and 4(3%)coped excellently since majority of the samples mingles witheveryone and might share their feelings which is an effective coping technique.

However, in interventional group in pre-test that 5(4%) had moderate coping, 114(96%) had a good coping and 2(2%)coped excellently and in the post-test 117(98%) had a good coping and 4(3%)coped excellently which shows an improvement in the post test Thus higher the level of coping proves the effectiveness of teaching on coping strategies among student nurses.

- **Area wise distribution of mean, SD and mean percentage of pre and post- test mean scores in control and interventional group regarding effectiveness of coping strategies on the level of stress of student nurses.**

Mean scores in control group reveal the overall difference in mean percentage of 2nd post - test and pre - test was 54% and 53% respectively, indicates only 1% of differences with the mean score (133.9±24.4and 131.6±28.3) in all the subscales of stress level. Thus, it is inferred that there was a small change in stress level of student nurses in the control group, since there was small difference between control pre and post-test mean scores.

In interventional group, the overall 2nd post -test mean percentage scores 37% was decreased from pre -test mean percentage scores, revealing a difference of 26% and with mean scores (158.9±18.6and 91.25±15.85) respectively. Highest difference 34% was found in the subscale of "time balance stressors with post -test mean score (21.49±3.1 and 11.31.±2.71) of the control and interventional group respectively. It is statistically proved that the comparison of mean post-test stress scores was lower than mean pre-test stress scores in all the subscales f stress. Therefore, the interventional post-test mean scores clearly showed that there was a significant reduction 0f 26% in stress level of student nurses in the interventional group during post-test. Hence, it is clearly showed that the teaching on coping strategies is effective in reducing the level of stress among student nurses.

Conclusion

It is clear from the results of this study that these student nurses are exposedto a variety of stressors from academic and clinical perspectives. Effectively managing stress is a priority for first-year student nurses. Overall time management for the students will determine their ability to successfully negotiate their way through the remaining years of their program. Including holistic care studies for student nurses have shown to result in the ability to study

better, better sleeping habits and general health improvement. Requiring stress management within the nursing curriculum assists nurses with teaching coping techniques to clients and hospital visitors. An effective nursing program provides ongoing stress management workshops during the academic year. There are unique interpersonal and environmental stressors for student nurses. Stressors specific to nursing college students can be addressed by educational administrators. Administrators can address these with an assigned counselling faculty that supports at-risk students. They are essential for managing the workload of nurses but can also directly contribute to the care of their clients. Insufficient knowledge about stress coping techniques is the primary barrier to its implementation. Implementation of these coping techniques within an academic program better prepares nurses for a professional career.

For student nurses away from home, creating a support system may fall last in their list of priorities. Providing support within the academic system may involve group and individual counselling as well as direct access to resources. Creating a support system with family and friends is a primary stress reduction technique because having the ability to enjoy time away from nursing and studies supports self- care. Nurses must prioritize their own care amid the other care they are required to provide. A positive outcome of these study findings indicate that the coping strategies appeared to be more effective in reducing the level of stress for student nurses. The researcher concludes that the nursing curriculum should implement teaching strategies whereby student nurses can be empowered to promote positive intrapersonal and interpersonal skills and able to lead a productive life. Providing students with a first year course that addresses some of the issues pertaining to the experience of first year student will assist students to manage their stress.

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