A Study to Assess the Effectiveness of Mindfulness Training Program on Stress Reduction and Level of Adjustment among Students of Selected Nursing Colleges of Amritsar, Punjab

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ABSTRACT: Stress is a key risk factor for declining physical and mental health. Although it can affect anyone of any age, circumstance, and socioeconomic class, college students may be at more risk for it and consequentially, at risk for reduced mental and physical health. The difficulty in adaption is a major issue in the modern society. Mindfulness in research, training and education is evolving; the most popular definition is ''paying attention in a particular way; on purpose, in the present moment, and non-judgmentally. Mindfulness training involves cultivating the ability to be aware of our current thoughts, feelings, bodily sensations with kindness and understanding. It creates a psychological 'space' between one's perception (e.g. stressful stimulus) and response (thoughts, speech and actions. Therefore mindfulness training is potentially useful in promoting well-being and stress management in the nursing profession. A quasi-experimental single group pre- post-test design was used to evaluate the effectiveness of mindfulness training program me. The study was conducted among B.Sc. Nursing 1st yr. students in selected nursing colleges in Amritsar district. Data was collected before and after implementation of stress reduction program by purposive sampling. The tools used in the present study were socio demographic data sheet, Perceived Stress Scale and Academic Adjustment scale. Data was analyzed using descriptive and inferential statistics. The study results showcased a significant increase in the mean stress level and adjustment level score, from a pre-test stress level of 28.2 ± 6.20 to post-test stress level score of 9.4 ± 3.40 and a pre-test adjustment level of 19.4 ± 6.0 to post-level score of 36.7 ± 5.1. Thereby indicating the effectiveness of the intervention (p=0.001).

Keywords: Stress, adjustment, adaptation, attention, mindfulness, mental health.

INTRODUCTION

Modern society is plagued by the problem of stress, which has spread to be a major public health issue. Continuous that could result in energy-draining, fruitless ruminating that amplifies the stress reaction (Sharma, 2022). Exaggerated stress can also make resilience-related qualities like hope and the ability to forgive difficult. Despite the fact that some tension may lead to better functioning. There is proof that high levels of stress can harm one's physical and mental health. The effects of pressure on people's quality of life include autoimmune illness, migraines, obesity, muscle tension and backaches, high cholesterol, coronary heart disease, hypertension, stroke, and other conditions (Ong *et al.,* 2006). There are numerous difficult new experiences that come with attending college. Students deal with both academic and personal issues at the same time. Many struggle to manage their time effectively, balance irregular or excessive workloads, and may worry about losing their financial scholarship support (Dopp & Parrish 2007; Tansy &

Roe 2009). Nursing students experience tension and anxiety due to a variety of circumstances. Nursing students frequently have other conflicting priorities, which can increase stress levels. Several students struggle to pay for classes due to reduced financial aid; as a result, many must work while enrolled in nursing school to make ends meet (Turner & Carthy 2017).

The leading cause of disease and impairment in the world today is mental illness. One in four (25%) people in the globe will be impacted by mental or neurological disease at some stages in their lives. Being under stress, a universal phenomenon that manifests itself in every phase of life has been found to be a substantial contributor to attrition across all demographic groups (Sheu *et al.,* 2002). In addition to being the most frequently stated obstacle to academic success, pressure has also been linked to depression, eating disorders, and obesity among student populations, according to the American College Health Association (American College Health Association. 2009).

In difficult times like the transition from high school to university, when they have to adjust to new learning techniques or forge a positive identity as a university student, university students typically report high levels of perceived stress (Denovan & Macaskill 2017). Health professionals' stress levels are a topic of contemporary attention and cause for concern. This isn't just because there are so many intrinsic elements, as suggested by healthcare professionals, but also because it's important to take chronic stress into account (Onieva-Zafra *et al.,* 2020).

Adjustment indicates that when the individual face a new environment or a scenario, and individual needs to adjust him or herself in order to handle, learn and adapt to the multitude circumstance or environment. The prevalence of this issue has led to an increase in the publication of books, magazines, scientific journals, and other publications that address adjustment issues. The computer technology of the twenty-first century will inevitably cause pupils to act like machines, requiring extreme focus and quick thinking. The student's ego and assertiveness would be more seriously threatened by Kalaivani (2018).

An individual must modify themselves when faced with a new environment or circumstance in order to handle, learn, and adapt to a range of situations or surroundings. These changes occur gradually, and convertibility and coping were usually used in conjunction. How a person adjusts depends on their social and cultural context (Martin *et al.,* 2016). Work adjustment, as described by Huang *et al.* (2011), is the process through which an individual may adapt to their working environment. When people are in a bad mood due to a changing environment or condition, the affective transmission process known as emotional adjustment takes place.

The nursing profession is a disciplined field that deals with providing healthcare to society. It is also a helping career that is service-oriented to uphold people's health and well-being. However due to its fast-paced and emotional nature, the nursing profession is stressful both mentally and physically. It is now widely acknowledged that stressful environments have a good impact on students' academic performance and psychological health (P.K. 2020).

Training can improve mindfulness abilities, and a variety of Mindfulness-Based Interventions (MBIs) have been created to improve these qualities. It is believed that improving proximal abilities learned by MBIs, such non-judgmental attention regulation, may have a cascading effect on more distant objectives, like improved behavior or diminished psychopathology symptoms (Dunning *et al.,* 2018).

In the literature, mindfulness practices have been recommended as useful aids for lowering stress and anxiety among undergraduate nursing students. Awareness in the present moment is mindfulness (Moscaritolo, 2009). Being present is being mindful. Every activity can be done while being conscious at any time. For instance, pausing to take a deep breath or sensing the beat of music are examples of being attentive. There are several occasions throughout life when we act automatically. Most of the time, we are only partially conscious and not present. Being only partially conscious puts one at risk of missing out on some of life's most priceless moments as well as the value of making eye contact, touching, and being in one's own body. Nursing professionals need to be totally alert and in the moment (Kabat-Zinn, 1991).

For nursing students to successfully manage numerous stresses during their educational experiences while maximizing learning, it may be beneficial to strengthen their positive coping abilities. To stop stress from happening again and to decrease its effects, it may be helpful to put scientifically validated strategies into practice. Examples include stress management counseling, counseling programmes, creating peer and family support networks, and creating hospital policies that assist nursing students (Labrague *et al.,* 2017).

It has been said that mindfulness is the capacity to be aware of the present moment in a critical and nonjudgmental way. Purposefully concentrating entirely on the present moment can lead to mindfulness, which creates a straightforward framework for individuals to improve their personal well-being. But structured mindfulness exercises (such body scans and breath awareness) might improve one's ability for present-moment awareness and acceptance/non-judgment (Veigh *et al.,* 2021).

The pattern of adjustment of nursing students must be studied in order to make the necessary interventions. Because we currently need students who will, as nurses, someone lead the profession are to successfully adjust to nursing and be valuable and effective contributors to the health care delivery system, the investigator is interested in learning how to reduce stress and adjustment pattern and coping mechanisms among Nursing Students.

MATERIAL AND METHODS

This study employed a pre-post-test quasi-experimental design. Prior to and during the intervention, data were gathered from the participants. The sample size for the current study was 90 first-year B.Sc. nursing students, three elements made up the tool used in the current investigation. Part A contained socio-demographic information on the participants, including their age, gender, place of residence, type of family, parents' educational background, line of work, and monthly income. Experts in the fields of psychiatry, psychology, and nursing determined the tool's content validity and modified it as necessary. Via the test-retest procedure, the reliability was determined (r=0.85).

Part B. The Perceived Stress Scale (PSS) made up it. It is a well-known stress evaluation tool. Academic Adjustment scale in Section C. The Academic Adjustment Scale (AAS) was created with a focus on student who temporarily relocates to a new culture for the purpose of tertiary education. The study was carried out after obtaining formal administrative permission from the respective nursing college's.

A written consent was obtained from all subjects participating in the study after explanation of the aim of the study. Pre-test data was collected then the mindfulness training programme was implemented on the group. The study tools were reapplied on the study group students immediately after the program and then again one month of completion of the training program.

RESULT AND DISCUSSION

Table 1: Frequency and percentage distribution of demographic variables of nursing students.

Socio Demographic Data		
Age in year		
a. 16-18	34	37
b. 19-21	56	63
c. 22-24	0	0
d. 25-27	0	0
Sex		
a. Female	82	91
b. Male	08	9
Hostel staying		
a. Yes	54	60
b. No	36	40
Religion		
a. Hindu	27	30
b. Muslim	04	5
c. Sikh	57	63
d. Christian	02	2
e. Others	0	0
Residing area		
a. Urban	50	55
b. Rural	40	45
Type of family		
a. Nuclear family	54	60
b. Joint family	33	36
c. Extended family	3	4
d. Single family	0	0
Educational status of father		
a. No formal education	09	10
b. Middle	09	10
c. Matric	24	27
d. Senior secondary	31	34
e. Graduate	09	10
f. Post graduate	08	9
Educational status of mother		
a. No formal education	05	6
b. Middle	10	11
c. Matric	27	30
d. Senior secondary	28	31
e. Graduate	13	14
f. Post graduate	07	8
Occupational status of father		
a. Farming	15	17
b. Self -employee	20	22
c. Daily wages	13	14
d. Private job	22	25
e. Government job	20	22
Occupational status of mother		
a. Home maker	60	66
b. Self -employee	05	6
c. Daily wages	08	9
d. Private job	08	9
e. Government job	09	10
Family income		
a. Up to 5000	08	9
b. 5001-10000	18	20
c. 10001-20000	28	31
d. Above 20000	36	40

Table 1 present the frequency and percentage distribution of the demographic characteristics of nursing students are shown in Table 1. A majority of 56 (63%) of them were between the ages of 19 and 21, while 34 (37%) were between the ages of 16 and 18.

The bulk of participants, or 82 (91%), were female nursing students. Regarding the number of nursing students who stayed in home, 54 (60%) did so. Most nursing students by religion were Sikh 57 (63%), followed by Hindu 27 (30%), Muslim 04 (5%), and Christian 2 (2%).

According to their place of residence, the majority of respondents (55%) are from urban area 40, followed by (45%) by rural region. The majority of nursing students, 54 (60%), were living in nuclear families, while 33 (36%) were in joint families, followed by 03(4%) belongs to single family.

Regarding the education of their dads, nursing students were more likely to have 31 (34%) senior secondary education, 24 (27%) matriculation, 9 (10%).

Graduate education, middle education, and had no formal education followed by 8 (9%) postgraduate education.

According to mothers education of nursing students, majority 28 (31 %) had completed senior secondary, 27 (30%) matric, 13 (14%) graduate, 10(11%) middle, 07 (8 %) post graduate and 05 (6 %) were having no formal education. As per occupation of fathers maximum 22 (24%) were in private job, 20 (22%) were in government job and self -employee, 15 (17%) were in farming and 13(14 %) were in daily wages. According to mothers occupation maximum 60 (66%) were home make 9 (10 %) in government job, 8(9%) were private job and daily wages 5 (6 %) were in self-employee. Regarding monthly income of nursing students, maximum 36(40%) had income of above 20000 per month, 28(31%) had income of 10001-20000, 18 (20%) had income of 5000-10001 and 8 (9%) had income of below 5000 per month.

Table 2: Frequency and percentage distribution of level of stress among nursing students N=90.

Perceived stress Score		Pretest		Post test	
Level of stress	Score	(n)	%	(n)	(%)
High stress score	27-40	58	64%	0	0%
Moderate stress score	14-26	27	30%	56	62%
Mild stress	0-13	05	6%	34	38%

Table 3: Frequency and percentage distribution of level of adjustment among nursing student N=90.

Adjustment level		Pretest		Posttest	
Level of adjustment	Score	(n)	%	(n)	(%)
Low adjustment level	0-15	30	33%	0	0%
Moderate adjustment level	16-30	55	61%	41	46%
High adjustment level	31-45	5	06%	49	54%

This study aims to comprehend the stress and adjustment levels experienced by nursing students. According to the current study, Pre-test reveals that 58% of the nursing students reported highs levels stress, 27% reported moderate level stress and 5% reported low levels of stress. Post- test reveals that 0% students reported high level of stress and 56% students having moderate states level and 34% having mild stress. It is interpreted that mindfulness meditation reduces the level of stress in nursing student (van der Riet *et al.,* 2018) discovered that mindfulness meditation has a positive impact on nurses' and nursing students' stress. According to the current study, Pre-test reveals that the majority of nursing students (61%) had moderate adjustment levels, followed by 30% had low adjustment

levels, and only 5% who had high adjustment levels. Post-test reveals that the (49%) nursing students reported high adjustment level (41%) had moderate adjustment levels, and no one had low level of adjustment level. In a related study Anu Alexander *et al.* (2020) Pre-test least participant 1 (1.67%) having poor health adjustment and most of them have 49 (81.67%) adequate health adjustment and few participants 10 (16.67%) are having reasonably. Post-test very few samples 6 (10%) having adequate health adjustment and 54 (90%) participants are having reasonably adequate health adjustment. It shows there is an improvement in the Health aspect after the education on Mindful meditation.

Table 4: Comparison of pre, post, and after one month academic adjustment before and after mindfulness training program among nursing students (N=90).

Description	Academic adjustment score		
	Pretest	Post test	After one month
Range	9 -34	20 -45	30 -45
Mean	19.4	32.1	36.7
Std. Deviation	6.0	5.7	5.1
Mean % age	43.1	71.2	81.6
Max. Value	45	45	45

Table 4 show that the mean pre-test adjustment level score for the experimental group was (43.1), the mean post-test score was (71.2), and the mean adjustment level score after one month was (81.6). Regarding adjustment level, there was a difference in the mean pre-test and post-test scores, and in the second transition, there was a difference between the mean post-test and the test taken one month later.

Table 5: Comparison of pre, post, and after one month perceived stress and after mindfulness training program among nursing students (N=90).

Description	Perceived stress score		
	Pretest	Post test	After one month
Range	10 – 38	2 – 22	1 – 15
Mean	28.2	14.2	9.4
Std. Deviation	6.2	4.2	3.4
Mean % age	70.6	35.5	23.5
Max. Value	40	40	40

Table 5 show that that the mean pre-test perceived stress score was 70.6, its mean post-test score was 35.5, and its mean stress score one month later was 23.5. There was a change in the mean stress score between the pre- and post-tests, and in the second transition, there was a difference between the mean post-test and the test administered a month later.

Table 6: Repeated measure multivariate test between pre, post & after month test of perceived stress and academic adjustment among nursing students in experimental group (n=90).

Description	Repeated measure multivariate tests between					
	Pre, Post & after one month test		Pre & Post tests		Post & after one month tests	
	F	p-value	F	p-value	F	p-value
Perceived stress	706.68	0.000**	1169.34	0.000**	331.39	0.000**
Academic adjustment	595.17	0.000**	858.65	0.000**	174.33	0.000**
* Highly significant difference $p<0.01$						

Table 6 show that, the perceived stress score before, after, and one month after the test was (F) 706.68, which was highly significant at the $p<0.01$ level. The stress score both before and after the test was 1169.34, which was likewise significant at the p0.01 level. After another post-test and one month, the stress score had increased to 331.39, which was significant at the $p<0.01$ level. Test adjustment level score was (F) 595.17 in the experimental group pre-post and after one month, which was highly significant at $p<0.001$ level. Then, the combined pre- and post-test adjustment level score was 858.65, which was similarly statistically significant at the $p<0.001$ level. Then in the post-test once again and one month after the adjustment level score had 174.33, which was significant at $p<0.001$ level. Hence it was concluded that the mindfulness meditation was MBSR was effective in reducing stress among nursing students and improved their daily living as well as mental health.

CONCLUSIONS

In today's environment, stress has evolved into a permanent, ongoing state. Stress generation is identified as the current generation. In the current research study, an effort was made to gauge nursing students' levels of adjustment and stress. The fact that these students face a noticeably higher incidence of stress than the overall population is a reflection of the challenging subjects they are studying, hostel living, working shifts in hospitals, and academic strain. We propose that an orientation session at the beginning of the nursing school, along with positive mental health training, can significantly lessen nursing students' stress and improve both their professional and personal well-being.

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