ORIGINAL RESEARCH PAPER

Physiotherapy

KEY WORDS: Jacobsons progressive muscle relaxation (JPMR), Depression, anxiety and stress among students, (DASS) scale.

EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUES ON DEPRESSION, ANXIETY AND STRESS AMONG UNDERGRADUATE PHYSIOTHERAPY STUDENTS-A QUASI EXPERIMENTAL STUDY

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ABSTRACT

Background: Physiotherapy college students repeatedly experience different stresses which render them more vulnerable to psychological problems that may affect their emotional, psychosocial and physical health. The aim of this study was to find out the prevalence of depression, anxiety and stress among physiotherapy students and to determine the effect of progressive muscle relaxation technique (PMR)on reducing depression, anxiety and stress among students. **Methodology:** A quasi experimental study design with purposive sampling technique. Study setting- KMCH college of physiotherapy, Coimbatore. A sample of 20 subjects between the age of 19 to 22 years, randomly categorised into two groups- experimental group and control group respectively. **Intervention:** Group A trained with progressive muscle relaxation. Group B allowed to do their routine activities. Outcome measures were depression, anxiety and stress scale (DASS 42). RESULTS: There is a significant statistical difference between pre test and post test values of DASS. **Conclusion:** This study concludes JPMR technique is very effective in reducing depression, anxiety and stress among physiotherapy students.

INTRODUCTION:

PROGRESSIVE MUSCLE RELAXATION

As early as 1930, Edmund Jacobson had developed the progressive muscle relaxation (PMR) technique. He discovered that a muscle could be relaxed by first tensing it for a few seconds and then releasing it. Progressive muscle relaxation helps people identify which muscles or muscle group are chronically tense by distinguish between sensations of tension purposeful muscle tensing and relaxation a conscious relaxing of the muscles.[1]

DEPRESSION:

Depression is classified as a mood disorder. It may be described as feelings of sadness, loss, or anger that interfere with a person's everyday activities. People experience depression in different ways, it may interfere with your daily work, resulting in lost time and lower productivity. It can also influence relationships and some chronic health conditions.[7]

ANXIETY:

Anxiety is an emotion characterized by an unpleasant state of inner turmoil, often accompanied by nervous behaviour such as pacing back and forth, somatic complaints and rumination.[8]

STRESS:

Stress is a feeling of emotional strain and pressure.[12] Stress is a type of psychological pain. Small amounts of pain may be desired, beneficial, and even healthy.[7]

Stress can be external and related to the environment, but may also be caused by internal perception that cause an individual to experience anxiety or other negative emotions surrounding a situation, such as pressure, discomfort, etc., which they then deem stressful.[7]

DEPRESSION ANXIETY STRESS SCALE:

The Depression Anxiety Stress Scale (DASS-42) is a 42 item self-report scale designed to measure the negative emotional states of depression, anxiety and stress developed by Lovibond and Lovibond. It is long version of the DASS-21. It is a useful tool for routine outcome monitoring and can be used to assess the level of treatment response.

AIM:

To find the prevalence of DAS and determine the effectiveness of progressive muscle relaxation technique on reducing depression, anxiety and stress among physiotherapy students.

OBJECTIVES:

To find out the efficacy of progressive muscle relaxation training on depression, anxiety and stress in undergraduate physiotherapy students.

MATERIALS AND METHODOLOGY

This is a quasi experimental study done among undergradraduate physiotherapy students to find effectiveness of JPMR techniques on depression,anxiety and stress. A total of 20 samples were purposively taken based on selection criteria and they were divided into 2 groups,each group containing 10 members.

Inclusion Criteria:

Undergraduate physiotherapy students
Gender: male and female
Age: 19 to 22 years
DASS - 42 range from
Depression-14-20
Anxiety-10-14
Stress-19-25

EXCLUSION CRITERIA:

Students of age group > 22 years
Experienced psychosis
Seizure disorder
Past history of head injury
Endocrine disorder
Cardiovascular disease
Respiratory disease
Neurological deficit
Non cooperative patients

A total of 20 participants were taken based on inclusion and exclusion criteria.The selected subjects were randomly divided into 2 groups A and B.

GROUP A - (EXPERIMENTAL GROUP)

GROUP B - (CONTROL GROUP)

PROCEDURE:

After obtaining permission from the authorities of KMCH college of physiotherapy, then I met Physiotherapy students

availability on each day After explained the study, obtained their written consent

GROUP A :- given JPMR technique
GROUP B :- allowed to do their routine activities

INTERVENTION:

JPMR can be practiced in a comfortable position sitting or lying down in a place that you will be undisturbed for 15-20 minutes. Tense for 5 seconds and relax each muscle group as follows:

- Forehead - Wrinkle forehead and Relax.
- Eyes and nose - Close eyes and Relax.
- Lips, cheeks and jaw -Tense and Relax.
- Hands - Clench your fists and relax.
- Forearms - push forward with hands and Relax.
- Upper arms - Bend your elbows and elax.
- Shoulders - Shrug shoulders and Relax.
- Back - Arch your back and relax
- Stomach - Tighten and Relax.
- Hips and buttocks – tighten and Relax.
- Thighs – Tighten and Relax.
- Feet - Bend toward body and Relax.
- Toes – Curl and Relax.

Focus on any muscles which may still be tense. If any muscle remains tense, tighten and relax those specific muscle three or four times.

DATA PRESENTATION
PAIRED 't' TEST:
GROUP-A: PRE AND POST TEST VALUE OF GROUP A

OUTCOME MEASURES	Mean value		Calculated 't' Value	Table 't' Value	P value and level of significance
	Pre test	Post test			
Depression, anxiety and stress	48.7	31.4	3.078	2.262	P<0.05 significance

Group-B: Pre And Post Test Value Of Group B

OUTCOME MEASURES	Mean value		Calculated 't' Value	Table 't' Value	P value and level of significance
	Pre test	Post test			
Depression, anxiety and stress	51.6	51	2.513	2.262	P<0.05 significance

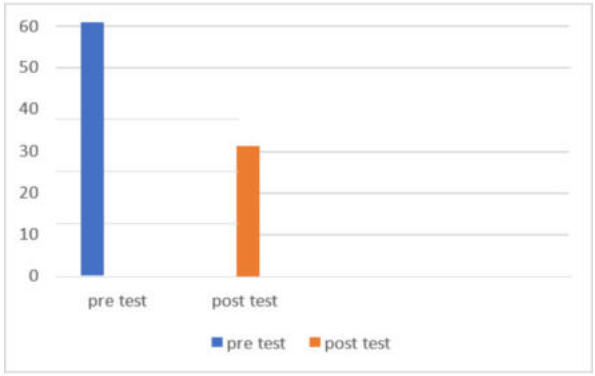
INDEPENDENT 't' TEST
PRE TEST VALUE OF GROUP A AND B

OUTCOME MEASURES	Mean value		Calculated 't' Value	Table 't' Value	P value and level of significance
	Group A	Group B			
DASS-42	48.7	51.6	1.25	2.086	P>0.05 not significant

Post Test Value Of Group A And B

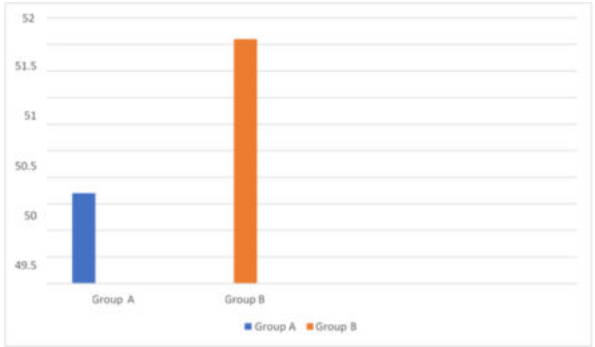
OUTCOME MEASURES	Mean value		Calculated 't' Value	Table 't' Value	P value and level of significance
	Group A	Group B			
DASS-42	37.4	51	10.453	2.086	P<0.05 significant

Graphical Presentation

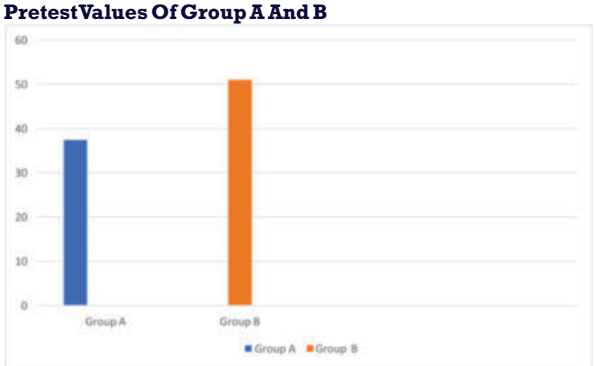


Pre And Post Test Values Of Group A

Pre And Post Test Values Of Group B



Pretest Values Of Group A And B



Post Test Values Of Group A And B

DATA ANALYSIS AND INTERPRETATION
PAIRED 't' TEST
GROUP-A (JPMR EXERCISE)

For 14 degree of freedom at 5% level of significance the calculated 't' value is greater than table 't' value, the null hypothesis is rejected. So, there is significant difference between pre test and post test values of group A .

GROUP -B (ALLOWED TO DO THEIR ROUTINE ACTIVITIES)

For 14 degree of freedom at 5% level of significance the

calculated 't' value is greater than table 't' value, the null hypothesis is rejected. So, there is significant difference between pre test and post test values of group B .

INDEPENDENT 't' TEST

PRETESTVALUES OF GROUP A & B

For 28 degree of freedom at 5% level of significance the calculated 't' value is lesser than table 't' value, the null hypothesis is accepted. So, there is no significant difference between group A & group B and so the both groups are homogenous.

POST TESTVALUES OF GROUP A & B

For 28 degree of freedom at 5% level of significance the calculated 't' value is greater than table 't' value, the null hypothesis is rejected. So, there is significant difference between group A & group B .

RESULTS

The aim of this study is to decrease the depression anxiety and stress among UG physiotherapy students.

In this study JPMR technique was given to the persons who had depression anxiety and stress.

JPMR technique shows significant difference between group A and B Experimental group shows more improvement than the control group.

DISCUSSION

Globally, studies conducted on different samples of undergraduate students have identified a moderate to high prevalence of depression, anxiety and stress in this population. Early diagnosis and management of psychological distress lead to better management and patient outcomes. Thus, it is necessary to identify those students who are at a higher risk of developing mental health problems during college life.

The present study revealed that, negative emotional states of depression, anxiety and stress were highly prevalence among physiotherapy students and importance of relaxation training to reduce such emotional hassles from students daily life. When progressive muscle relaxation is practiced and incorporated into their daily routine, it helps to alleviate negative emotional states and better cope up with the daily hassles of academic life.

The results obtained from our study showed that, among 48 physiotherapy students surveyed, the prevalence of Depression, Anxiety and stress found to be more than 20 respectively, between the age group of 19-22 years.

Thus, the overall findings show that, there is an effective in JPMR techniques on depression, anxiety and stress among undergraduate physiotherapy students.

This study concluded that there is significant differences in both the groups, but experimental group showed more reduction in the Depression, Anxiety and Stress than control group.

SUMMARY AND CONCLUSION

This study was done to find out the effect of Progressive muscle relaxation techniques on Depression, Anxiety and Stress among undergraduate physiotherapy students.20 students were selected with purposive sampling method and randomly divided into two groups.

Experimental group having 10 subjects. They received techniques.

Control group having 10 subjects. They were allowed to do their daily routine.

For depression, anxiety and stress, (DASS) were used before the intervention and after the intervention for a period of 5 weeks.

Pre- test and post -test values of the study were collected and assessed by using independent 't' tests and paired 't' tests.
The study revealed that there is significant differences in both the experimental and control groups, but experimental group showed more reduction in the Depression, Anxiety and Stress than control group.

Thus, the study is proving that JPMR helps to reduce Depression, Anxiety and Stress.

LIMITATIONS AND SUGGESTIONS

LIMITATIONS:

- Sample size is small.
- Only age group of 19 to 22 were taken.
- Study duration was too short.

SUGGESTIONS:

- Large sample size can be included.
- Age group of adult population can be selected.
- Study duration can be prolonged.

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