

Effectiveness of Dynamic Stretching Exercises Program on Back Pain among BSc (N) Internship students in Kanyakumari district.

1. Felecia Jane Diserali. S.PhD scholar, Rani Meyyammai College of Nursing, Chitambaram, Annamalai University, Tamilnadu.

Email _ feleciajane34@gmail.com

Mob.9443475004

2.Dr.B.Sara, PhD (N),Reader,HOD In MSN, Government college of Nursing,Cuddalore,Chidambaram,email _ sarasrinisha@gmail.com

Mob_ 9994744050

3.Dr. Artza Sophiya, Associate professor, Christian College of Nursing, Neyyoor The Tamilnadu Dr MGR Medical University, Chennai.

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ABSTRACT

The purpose of this study was to examine the effectiveness of a dynamic stretching exercise program (DSEP) on back pain (BP) and exercise among BSc (N) Internship students in Kanyakumari district. A total of 127 students, who had been experiencing BP for longer than 6 months and had BP with pain scores greater than 4 on the Visual Analogue Scale for Pain (VASP), were randomly assigned to an experimental group and a control group. The experimental group (n = 64) followed an SEP, whereas the control group (n = 63) was directed to perform usual activities for 50 minutes per time, three times a week. Data were collected at four time points: at baseline, and 2, 4, and 6 months after the intervention. During the 6-month follow-up, the experimental group had significantly lower VASP scores than did the control group at the second, fourth, and sixth months. In addition, the experimental group showed significantly higher exercise self-efficacy than did the control group at the fourth and sixth months. A total of 81% of the participants in the experimental group reported a moderate to high level of BP relief. The findings can be used to enhance the students to reduce the back pain while doing the work.DSE is an effective and safe nonpharmacological intervention for the management of BP.

INTRODUCTION

Pain is an unpleasant emotional state and serves as a defense mechanism to protect injured parts of the body from further harm. Low back pain, more accurately termed as lumbosacral pain, occurs below the 12th rib and above the buttocks. Work-related issues in the lower back are highly prevalent among professional nurses, who are considered one of the professional groups in the healthcare service system. A review of 132 research papers on musculoskeletal diseases related to nursing work indicated that the annual average prevalence of low back pain among nursing students is 55%. Low back pain often leads to restricted work and life activities or disability, posing a threat to the productivity and stability of the workforce. This issue is associated with the physical activities and ergonomics risk factors in the workplace for student nurses. On one hand, student internship frequently engage in high-

intensity physical activities, such as manual lifting or patient handling which often lead to injuries in the lower back muscles, ligaments, and other soft tissues. On the other hand, student nurses lack awareness of low back pain prevention and related training, making them susceptible to low back pain, thereby increasing absenteeism and early retirement due to poor health conditions among them. Moreover, the probability of low back pain increases with extended working hours and reduced rest time, accumulating over time .Nursing students need to complete relevant skill training during clinical rotations, thus facing similar occupational exposures. Due to their lack of nursing-related work experience and awareness of low back care, nursing students are more prone to developing low back pain. Furthermore, most nursing schools currently lack relevant strategies for preventing

and training nursing students in low back pain protection. Once nursing students experience low back pain, it not only affects their physical well-being in daily life and work but also leads to psychological issues such as aversion to the nursing profession and disinterest in learning. Dynamic stretches are movements that people perform at a slower pace than most workouts. Individuals tend to do dynamic stretches to warm up their muscles and prepare for exercise. Dynamic stretching involves making active movements that stretch the muscles to their full range of motion. These exercises often simulate functional movements and help prime the body for more intense training. To prepare for a run, for example, a person may perform a knee exercise that is a gentle simulation of running, such as the “high knees” exercise that we describe below.

PURPOSE OF THE STUDY

The study aims to show Effectiveness of Dynamic Stretching Exercises Program on Back Pain among BSc (N) Internship students in Kanyakumari district.

MATERIALS AND METHODS

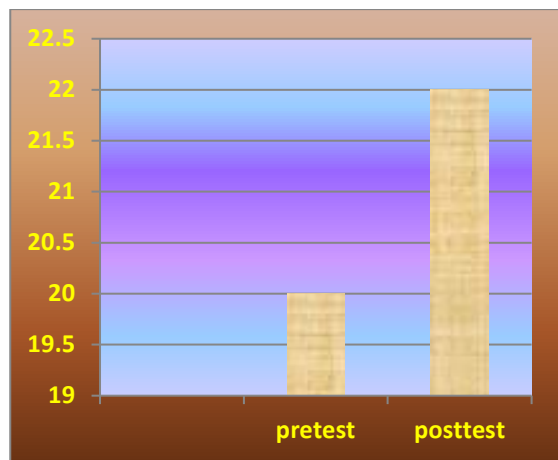
The study was conducted on nursing students who entered hospital for internship from July 2021 to March 2022. Inclusion criteria: completion of university courses with passing grades, good physical health, emotional self-control, and voluntary participation. Exclusion criteria: absence from training for more than 1 week due to leave, travel, or other reasons, inability to complete training and withdrawal midway, presence of e used to do association.

RESULTS

Assess the effectiveness of Dynamic Stretching Exercises Program on Back Pain among BSc (N) Internship students in experimental group

Criteria	Mean Difference	T Value	P value
Pretest	15.8	2.7	0.13
Posttest	17.9	7.3	0.05**

P=>0.05



CONCLUSION

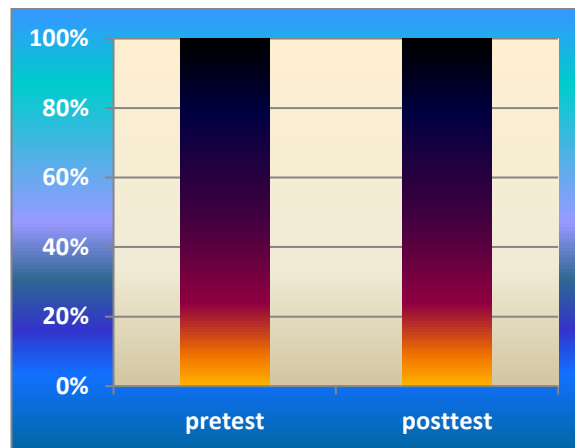
It can be concluded that stretching exercises have a better effect with high muscle strength abilities were better than low muscle strength athletes with respect to flexibility. stretching is suitable for students with high muscle strength. We found that DS caused a sustained reduction in passive stiffness of the hamstrings and

musculoskeletal diseases, and underlying medical conditions. A total of 78 nursing students were included in the study. Data on age, gender, height, weight, exercise habits (defined as having ≥ 2 sessions of ≥ 30 minutes of exercise per week, otherwise considered as no exercise habit), staying-up-late habits (defined as staying up past 1am for ≥ 4 nights per week, otherwise considered as no staying-up-late habit), smoking history, education level ,mental status (whether anxiety-prone in daily life),correctness of working posture, and menstrual pain in females were collected. The number of interns experiencing low back pain in the past 1 month and 3months was recorded. The diagnostic criteria for low back pain in this study were as follows: feeling of soreness, swelling, pain, or discomfort in the lower back, relief after rest and aggravation after fatigue or activity; relief of symptoms with a supporting pad under the lower back when lying down, inability to bend or worsening of pain symptoms; no abnormality in the shape of the lower back, localized tenderness, and negative findings on imaging studies. The visual analogue scale (VAS) was used to score low back pain, with a score > 3 indicating moderate or severe pain lasting at least one day. Data from nursing students who had and had not experienced low back pain were compared to analyze the factors contributing to low back pain. Statistical Analysis All data were analyzed using SPSS 26.0 (SPSS, Chicago, Illinois, USA). T-tests were used to compare continuous variables, and the Pearson’s chi-squared test and the continuity-corrected chi-squared test were used to do association.

Assess the effectiveness of Dynamic Stretching Exercises Program on Back Pain among BSc (N) Internship students in control group

Criteria	Mean Difference	T Value	P value
Pretest	14.7	2.4	0.14
Posttest	14.9	2.5	0.16

P=>0.05



increase in knee ROM, as well as a less lasting increase in PT at the onset of pain.

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