

Effectiveness of Jacobson Progressive Muscle Relaxation Technique on Low Back Pain among Sanitary workers working in selected hospitals at Kanyakumari dist.

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ABSTRACT

Background: Low back pain is one of the common musculoskeletal health problems that occur most commonly among all Health workers. Different researches showed that health care team members are suffering from low back pain due to many factors. This research was conducted to find the prevalence and contributing factors of low back pain among sanitary workers and provide Jacobson Progressive Muscle Relaxation.

Method: The Pre experimental study was done among 30 sanitary workers by using purposive sampling method. Semi structured self-administered questionnaire with single and multiple responses was administered among sanitary workers after taking informed consent. And using Oswestry low back disability questionnaire (OLBDQ) their back pain was assessed in pre test after that Jacobson Progressive Muscle Relaxation Technique was taught to the sanitary workers for four weeks then post test was conducted with the same scale.

Results: After four weeks of performing Jacobson Progressive Muscle Relaxation Technique on the lower Back, and according to the results of the pre-test and posttest a significant Decrease in back pain level was observed ($P < 0.05$) and reduction in pain level

Conclusion: Jacobson Progressive Muscle Relaxation Technique on the lower Back showed a significant effect on the increased balance and pain Reduction. Thus the Recommended exercises can be suggested according to the type of exercises as a factor for increasing static and dynamic balance.

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INTRODUCTION

Exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons, including increasing growth and development, preventing ageing, strengthening muscles and the cardio vascular system, honing athletic skills and also for enjoyment. Many individuals choose to exercise publicly outdoors where they can congregate in groups, socialize and enhance well being. Physical exercise is important for maintaining physical fitness and can contribute to healthy weight, regulating digestive health, building and maintaining

healthy bone density, muscle strength and joint mobility, promoting physiological well being, reducing surgical risks and strengthening the immune system. The health benefit of regular exercise is hard to ignore. Anyone can be benefits from exercise, regardless of age, sex or physical ability.

Low back pain is an important clinical, social, economic and public health problem affecting the population indiscriminately. In accordance with the report of World Health Organization in 2002, low back pain constituted 37% of all occupational risk factors which occupies first rank among the disease complications caused by work. In Western countries like USA,

back pain is considered to be a leading cause of disability. The one year prevalence of chronic low back pain is 15%. Study reports from Tibet, Turkey, Gilgil, China and Africa suggest that, the prevalence rates are not dissimilar from Western countries with one year prevalence in adults between 36% and 64%.

Rajan (2020) done This survey based descriptive research work has been undertaken in Tirunelveli city, Tamilnadu to understand and differentiate perception of sanitary workers working in both private multi-speciality and single speciality hospitals towards various health related issues arising as a result of work and work place. In order to know the health related problems, the present study has examined twenty variables related to both physical and mental health. The study has sampled 120 sanitary workers (60 from multi-speciality hospitals and 60 from single speciality hospitals) using judgement sampling technique. The results of the study has proved that the health related issues such as pain in back, neck, waist and shoulder, low energy, difficulty in sleeping and getting up from the bed, weight loss, loss of appetite and irregular sleep, hypertension hair fall and digestive disorder have been the health related issues commonly perceived by sanitary workers working in both kinds of hospitals. Skin problems, respiratory problems, minor work related injuries have been highly perceived by sanitary workers working in multi-speciality hospitals than single speciality hospitals.

Statement of the Problem

Effectiveness of Jacobson Progressive Muscle Relaxation Technique on Low Back Pain among Sanitary workers working in selected hospitals at Kanyakumari dist.

Objectives of the Study

1. To assess the level of chronic low back pain among sanitary workers in pretest.
2. To assess the level of chronic low back pain among sanitary workers in posttest.
3. To find out the effectiveness of Jacobson Progressive Muscle Relaxation Technique on Low Back Pain among Sanitary workers
4. To associate the pre-test score of chronic low back pain among sanitary workers with selected demographic variables.

Hypotheses

H1 - There is a significant difference between post test levels of back pain among the patients receiving Jacobson Progressive Muscle Relaxation Technique in sanitary workers working in selected Hospital at Kanyakumari District.

Research Approach

The researcher has chosen quantitative research approach to test the effectiveness of the intervention for this study.

Research Design

Research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. In this study, Preexperimental design was used to determine the effectiveness of Jacobson Progressive Muscle Relaxation among sanitary workers working in the Hospitals.

Variables

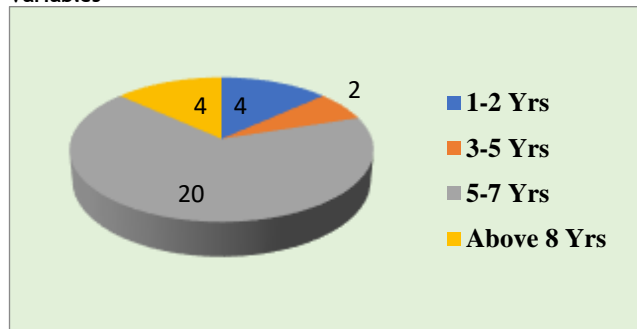


Figure: 1 Frequency Distribution of samples according to age

Variables are qualities, properties or characteristics of persons, things or situations that change or vary and are manipulated or measured in research.

Independent Variable

Jacobson Progressive Muscle Relaxation Technique

Dependent Variable

Chronic low back pain

SETTING OF THIS STUDY

The study will be conducted among sanitary workers working in white memorial Hospital at kanniyakumari district.

POPULATION

The target population selected for this study will be all sanitary workers working in selected hospital at Kanyakumari District.

SAMPLE

The sample selected for this study will be sanitary workers working in white memorial Hospital at Kanyakumari District.

SAMPLE SIZE

The sample size of this study will be 30 sanitary workers working in white memorial Hospital at Kanyakumari District.

SAMPLING TECHNIQUE

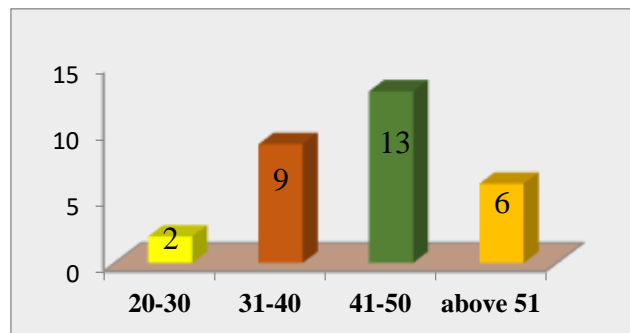
Purposive sampling technique will be used for this study.

Methods and Data collection

This study is a preexperimental research with pre-test and post-test. The study was conducted using the Purposive sampling method. The statistical population of the study consisted of 30 sanitary workers. Participants were selected based on the following inclusion criteria: minimum one year of sanitary work, Have history of low back pain Problems. The exclusion criteria were as follows: history of femur, leg and knee fracture, severe ligaments damages, osteoarthritis, previous knee surgery, patella tendon injuries, lumbar spine injuries. A week before the study, participants were briefed on the exercise protocol and completed the consent forms. Pre test was conducted using Oswestry low back disability questionnaire (OLBDQ). Their demographic characteristics were measured at the same time. Jacobson Progressive Muscle Relaxation Technique was administered for a period of 4 weeks, four sessions per week. Given that the highest effect on isometric and isotonic exercises is 2 to 4 sets, and 10 reps, the program was designed in two four-week phases with the gradual progression difference. After 4 weeks of Jacobson Progressive Muscle Relaxation Technique exercises post test was done with the same scale.

Statistical Analyses

Data pertaining to the demographic characteristics to their age, majority of them 13 (43%) belongs to the age group of 41 - 50 years regarding gender majority 20(66.67%) were female regarding educational status in experimental group majority of subjects 12(40%) have secondary education, According to habit in experimental group majority 12(40%) of them have habits of smoking, alcoholism, tobacco chewing. Regarding their dietary pattern majority of them 23(77%) were non vegetarians. Regarding their work Experience majority of them subjects 20 (66.67%) were 5-7 Years.



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Figure: 2 Frequency Distribution of samples according to working experience

Table: 1 Frequency Percentage distribution of Low back pain level in pre and posttest

n=30

Pain Level	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
No Disability	2	6.67	4	13.3
Mild Disability	4	13.3	22	73.33
Moderate Disability	6	20	2	6.67
Severe Disability	14	46.67	2	6.67
Completely Disability	4	13.3	0	0

Table presented the pre and post test level of low back pain among sanitary workers in pre test majority of them 14(46.67%) whereas in Posttest most of them 22(73.33%)had mild disability shows that intervention plays a vital role in reducing low back pain.

Comparison of post test level of low back pain among sanitary workers receiving Jacobson Progressive Muscle Relaxation Technique.

Table 2: comparison of mean, standard deviation and unpaired “t” test on post test level leg pain perception among patients receiving isometric and isotonic training in study group and control group.

n=30

Variables	Group	Mean	SD	‘t’value
Level of back pain	30	5.38	1.21	12.03*

Significant at $p \leq 0.05$

Table represents the comparison of the mean, standard deviation and Unpaired ‘t’ test value on post test level of back pain perception among patients receiving Jacobson Progressive Muscle Relaxation Technique. The mean score on level of low back pain perception among patients receiving Jacobson Progressive Muscle Relaxation Technique was 2.24 with the standard deviation 0.81. In control group, the post test mean score was 5.38 with the standard deviation 1.29. The estimated unpaired “t” test value was 12.13* which was significant at $p \leq 0.05$. It shows that Jacobson Progressive Muscle Relaxation Technique was effective and reduced the level of back pain. Hence the research hypothesis was accepted.

DISCUSSION

The major finding of the study was summarized as follows. Data pertaining to the demographic characteristics to their age, majority of them 13 (43%) belongs to the age group of 41 - 50 years regarding gender majority 20(66.67%) were female regarding educational status in experimental group majority of subjects 12(40%) have secondary education, According to habit in experimental group majority 12(40%) of them have habits of smoking, alcoholism, tobacco chewing. Regarding their dietary pattern majority of them 23(77%) were non vegetarians. Regarding their work Experience majority of them subjects 20 (66.67%) were 5-7 Years. Regarding low back pain level disability among sanitary workers in pre test majority of them 14(46.67%) whereas in Posttest most of them 22(73.33%)had mild disability

shows that intervention plays a vital role in reducing low back pain. The mean score on level of low back pain perception among patients receiving Jacobson Progressive Muscle Relaxation Technique was 2.24 with the standard deviation 0.81. In control group, the post test mean score was 5.38 with the standard deviation 1.29. The estimated unpaired “t” test value was 12.13* which was significant at $p \leq 0.05$. It shows that Jacobson Progressive Muscle Relaxation Technique was effective and reduced the level of back pain. Hence the research hypothesis was accepted.

CONCLUSION

The study was done to evaluate the effectiveness of Jacobson Progressive Muscle Relaxation Technique on Low back pain among Sanitary workers working in selected Hospital in kanyakumari District. It found that Jacobson Progressive Muscle Relaxation Technique significantly given impact in reducing the level of low back pain among sanitary workers.

RECOMMENDATIONS

- The following steps can be undertaken to strengthen the study.
- A study can be conducted among large sample.
- A study can be conducted to assess the effectiveness of Isometric and Isotonic Training on work related musculoskeletal disorders among rubber tappers.
- A study can be conducted for the other health related issues.

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