Journal of Rare Cardiovascular Diseases
ISSN: 2299-3711 (Print) | e-ISSN: 2300-5505 (Online)
www.jrcd.eu
RESEARCH ARTICLE

Effectiveness of Non-Specific Mechanical Low Back Pain Program Improving Quality of Life in Working Women

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Article History
Received: 04.01.2025
Revised: 16.02.2025
Accepted: 17.03.2025
Published: 20.03.2025

Abstract: The topic of this study is effectiveness of low back pain program in reducing low back pain and improving quality of life for the people with non-specific mechanical low back pain. This study enrolled fifteen patients with low back pain. After twenty forty sessions (4days a week) of low back pain program, the low back pain and quality of life were investigated with Modified Oswestry Low Back Pain Disability Questionnaire and Development of the World Health Organization WHOQOL-BREF quality of life assessment. The result and discussion were made with the help of pre-test $p>0.05$, post-test 1, post-test 2 $p<0.05$. It was concluded that the low back pain protocol has its effect in reducing low back pain and improving quality of life.

Keywords: Low back pain, working women, quality of life.

INTRODUCTION

Low back pain (LBP) is a very common health problem and affects all ranges of the population, however, its burden is often considered trivial. Low back pain occurs in similar proportions in all cultures, interferes with quality of life and work performance, and is the most common reason for medical consultations. Few cases of back pain are due to specific causes; most cases are non-specific .[13]

Most common cause of low back pain degenerative disorders, lumbar spinal stenosis, lumbar disc herniation, disco genic back pain. Risk factors of the low back pain are infection, tumour, trauma, obesity, smoking, lifting, vibration, prolonged sitting, job dissatisfaction.[39]

There are many causes of pain in the back. Symptoms in the low back can be a result of problems in the bony lumbar spine, discs between the vertebrae, ligaments around the spine and discs, spinal cord and nerves, muscles of the low back, internal organs of the pelvis and abdomen, and the skin covering the lumbar area.[40] Pains in the upper back can also be a result of disorders of the aorta, chest tumours, and inflammation of spine. Symptoms that can be associated with low back pain include

- Dull ache,
- Numbness,
- Tingling,
- Sharp pain,
- Pulsating pain,
- Pain with movement of the spine,
- Pins and needles sensation,
- Muscle spasm,
- Tenderness,
- Sciatica with shooting pain down one or both lower extremities.[41]

It can range in intensity from a dull, constant ache to a sudden, sharp or shooting pain. It can begin suddenly as a result of an accident or by lifting something heavy, or it can develop over time as we age. Getting too little exercise followed by a strenuous workout also can cause back pain.

There are two types of low back pain:

- *Acute*, or short-term back pain lasts a few days to a few weeks. Most low back pain is acute. It tends to resolve on its own within a few days with self-care and there is no residual loss of function. In some cases, a few months are required for the symptoms to disappear.

- *Chronic back pain* is defined as pain that continues for 12 weeks or longer, even after an initial injury or underlying cause of acute low back pain has been treated. About 20 percent of people affected by acute low back pain develop chronic low back pain with persistent symptoms at one year. Even if pain persists, it does not always mean there is a medically serious underlying cause or one that can be easily identified and treated. In some cases, treatment successfully relieves chronic low back pain, but in other cases pain continues despite medical and surgical treatment.[42]

SCHEDULE OF LOW BACK PAIN INTERVENTION

The aim of the study is to improve quality of life in people with low back pain through low back pain protocol. study has been explained to them, participation and consent forms were collected from duration of the study is 6weeks 24 sessions Pre-test was taken by using Modified Oswestry Low Back Pain Disability Questionnaires, world health organization quality of life

questionaire (whoqol-bref) This study was done both maher –faculty of occupational therapy opd and in the home of subjects. All the fifteen subject's were educate about each session and the exercise were taught before starting each sessions. . And after the intervention period the post test was taken by using Low Back Pain Disability Questionnaires, world health organization quality of life questionaire (whoqol-bref)

WEEK 1
SESSION- 1
- Myofacial release

SESSION-2
- Myofacial release

SESSION-3
- Myofacial release

SESSION-4
- Myofacial release

WEEK 2
SESSION-1
- Active stretch
- Straight leg raises up to 45 degrees
- Abdominal curl ups
- Bridging with comfortable
- Back extension with forearm bearing weight
- Cat and camal exercise

SESSION-2
- Active stretch
- Straight leg raises up to 45 degrees
- Abdominal curl ups
- Bridging with comfortable
- Back extension with forearm bearing weight
- Cat and camal exercise

SESSION-3
- Active stretch
- Straight leg raise up to 45 degree
- Abdominal curl ups
- Bridging with comfortable
- Back extension with forearm bearing weight
- Cat and camal exercise

SESSION-4
- Active stretch
- Straight leg raise up to 45 degree
- Abdominal curl ups
- Bridging with comfortable
- Back extension with forearm bearing weight
- Cat and camal exercise
- Client education

WEEK 3
SESSION-1
- Active stretch
- Straight leg raise up to 30 degree
- Abdominal curls up with arm across the chest
- Lying flexion
- Contralatral arm and leg raise
- Sitting flexion

SESSION-2
- Active stretch
- Straight leg raise up to 30 degree
- Abdominal curls up with arm across the chest
- Lying flexion
- Contralatral arm and leg raise

SESSION-3
- Active stretch
- Straight leg raise up to 30 degree
- Abdominal curls up with arm across the chest
- Lying flexion
- Contralatral arm and leg raise
- Sitting flexion

SESSION-4
- Active stretch
- Straight leg raise up to 30 degree
- Abdominal curls up with arm across the chest
- Lying flexion
- Contralatral arm and leg raise
- Sitting flexion

WEEK4
SESSION-1
- Straight leg raise up to 15 degree & maintain
- Lower back rotation stretch
- Bridge with alternate knee extension
- Superman's pose
- Back extention in forearm weigth bearing

SESSION-2
- Straight leg raise up to 15 degree & maintain
- Lower back rotation stretch
- Bridge with alternate knee extension
- Superman's pose
- Back extention in forearm weigth bearing

SESSION-3
- Straight leg raise up to 15 degree & maintain
- Lower back rotation stretch
- Bridge with alternate knee extension
- Superman's pose
- Back extention in forearm weigth bearing

SESSION-4
- active stretch
- Straight leg raise up to 15 degree & maintain
- Lower back rotation stretch
- Bridge with alternate knee extension
- Superman's pose

- Back extention in forearm weigth bearing

WEEK5

SESSION-1

- active stretch
- Straight leg raise up to 30 degree
- Diagonal abdominal curl up
- Child's pose
- Back extension in forearm in weight bearing
- Lower back rotational stretches

SESSION-2

- active stretch
- Straight leg raise up to 30 degree
- Diagonal abdominal curl up
- Child's pose
- Back extension in forearm in weight bearing
- Lower back rotational stretches

SESSION-3

- active stretch
- Straight leg raise up to 30 degree
- Diagonal abdominal curl up
- Child's pose
- Back extension in forearm in weight bearing
- Lower back rotational stretches

SESSION-4

- active stretch
- Straight leg raise up to 30 degree
- diagonal abdominal curl up
- Child's pose
- Back extension in forearm in weight bearing
- Lower back rotational stretches
- Client education

WEEK 6

SESSION-1

- active stretch
- Bridging with comfortable distance in knees
- Contralatral arm and leg raise
- Bridge with alternate knee extension

SESSION-2

- active stretch
- Bridging with comfortable distance in knees
- Contralatral arm and leg raise
- Bridge with alternate knee extension

SESSION-3

- active stretch
- Bridging with comfortable distance in knees
- Contralatral arm and leg raise
- Bridge with alternate knee extension

SESSION-4

- active stretch
- Bridging with comfortable distance in knees
- Contralatral arm and leg raise
- Bridge with alternate knee extension
- Client education

Table 1: Comparison of the Pre test and Post test of MOLBPDQ

Parameters	N	Mean value	Standard Deviation
Pre test	15	22.2000	5.64674
Post test	15	9.7333	4.78788

Graph 1: : Comparison of the Pre test and Post test MOLBPDQ

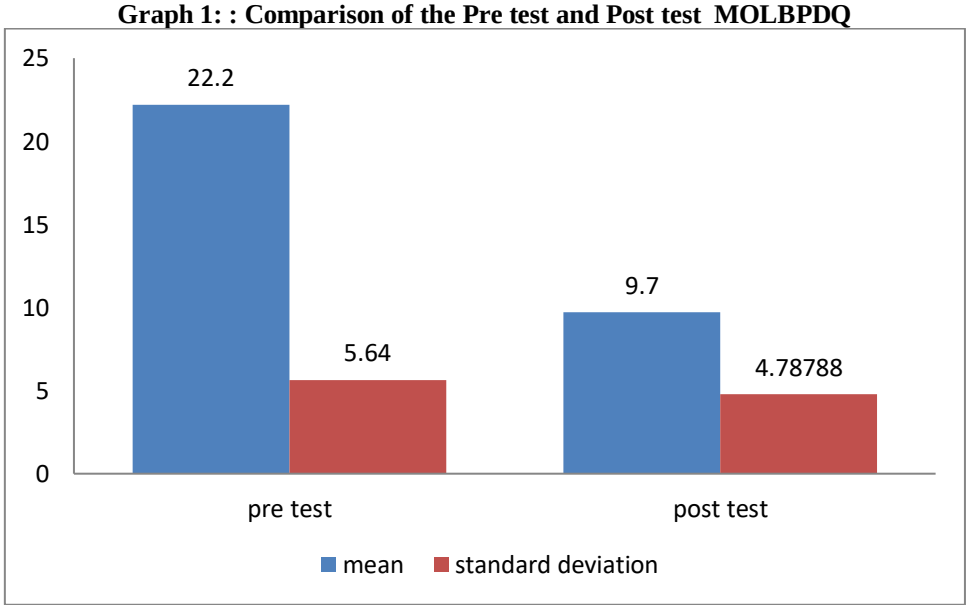

Table 1 and Graph 1 describes the comparison between the Pre test and Post test of Pain Intensity (MOLBPDQ) , the mean value of Pre test is 22.2 and Post Test is 9.73, Standard deviation of Pre test is 5.64 and the Post test is 4.78.

Table 2 comparison of Physical Health in Pre test and Post test using WHOQOL/BREF

Domain 1.1	N	Mean	Standard deviation	P Value
Pre test	15	48.5333	13.42102	0.001***
Post test	15	68.4000	11.67292	

Graph 2 comparison of Physical Health in Pre test and Post test using WHOQOL/BREF

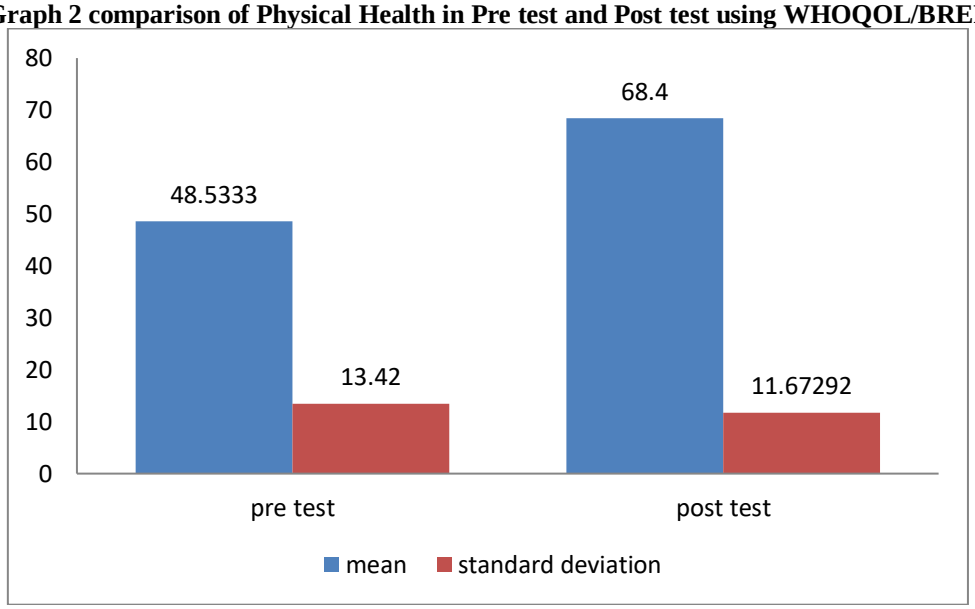

Table 2 and Graph 2 shows the comparison between the pre-test and post test of physical health using WHOQOL/BREF,the mean value of pretest 48.5 and post test 68.4 ,standard deviation of Pre test 13.42 and the Post test is 11.67.p value 0.001which shows that is highly significant.

Table 3 comparison of psychological Pre test and Post test using WHOQOL/BREF

Domain 2	N	Mean	Standard deviation	P Value
Pre test	15	51.4667	16.48751	0.001***
Post test	15	67.3333	13.1131	

Graph 3 comparison of psychological Pre test and Post test using WHOQOL/BREF

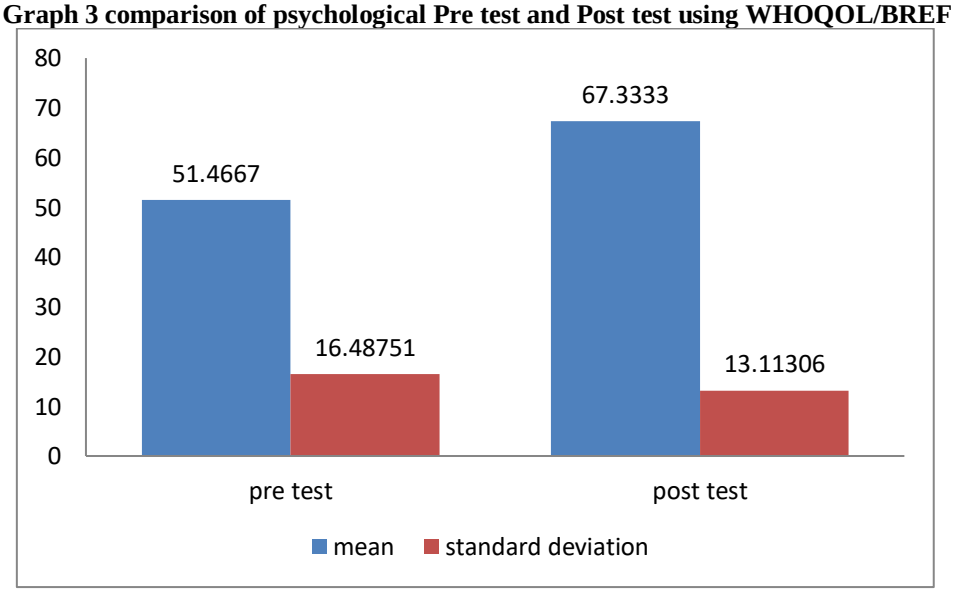

Table 3 and Graph 3 shows the comparison between the pre-test and post test of PSYCHOLOGICAL domain of WHOQOL/BREF Scale. The mean value of pretest 51.46 and post test 67.33 ,standard deviation of Pre test 16.48 and the Post test is 13.11.P value 0.001, which shows that it is highly significant.

Table 4 comparison of social relationships Pre test and Post test using WHOQOL/BREF

Domain 3	N	Mean	Standard deviation	P Value
Pre test	15	48.33	18.7	0.001***
Post test	15	62.8	17.2	

Graph 4 comparison of social relationships Pre test and Post test using WHOQOL/BREF

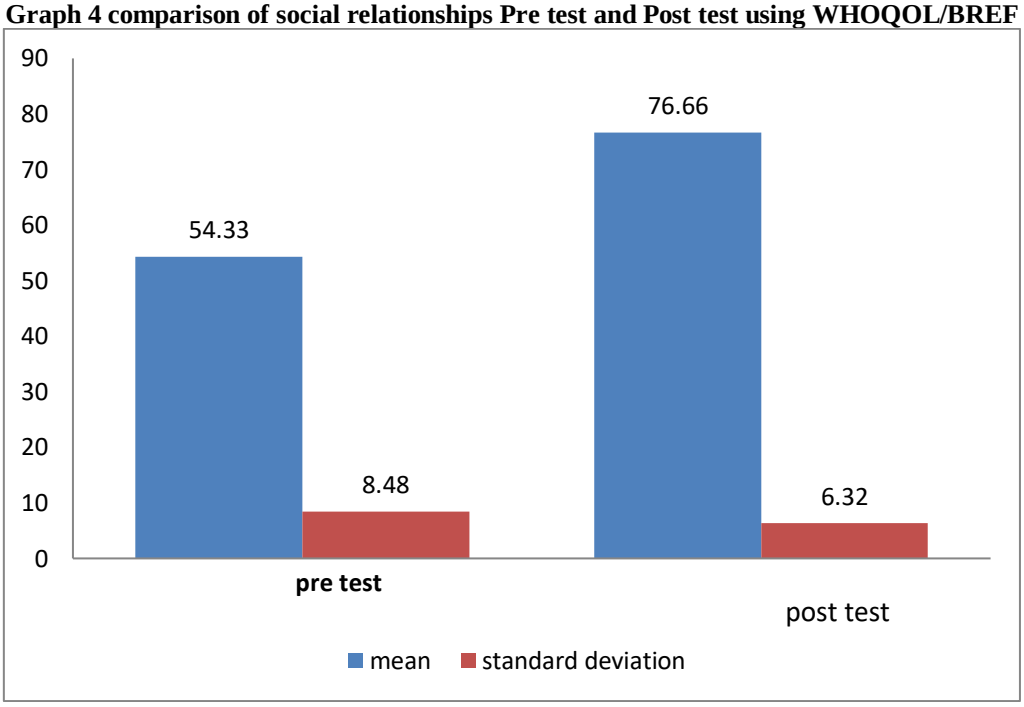

Table 5 comparison of environment Pre test and Post test using WHOQOL/BREF

Domain 4	N	Mean	Standard deviation	P Value
Pre test	15	54.33	8.48	0.001***
Post test	15	76.66	6.32	

Graph 5comparison of environment Pre test and Post test using WHOQOL/BREF

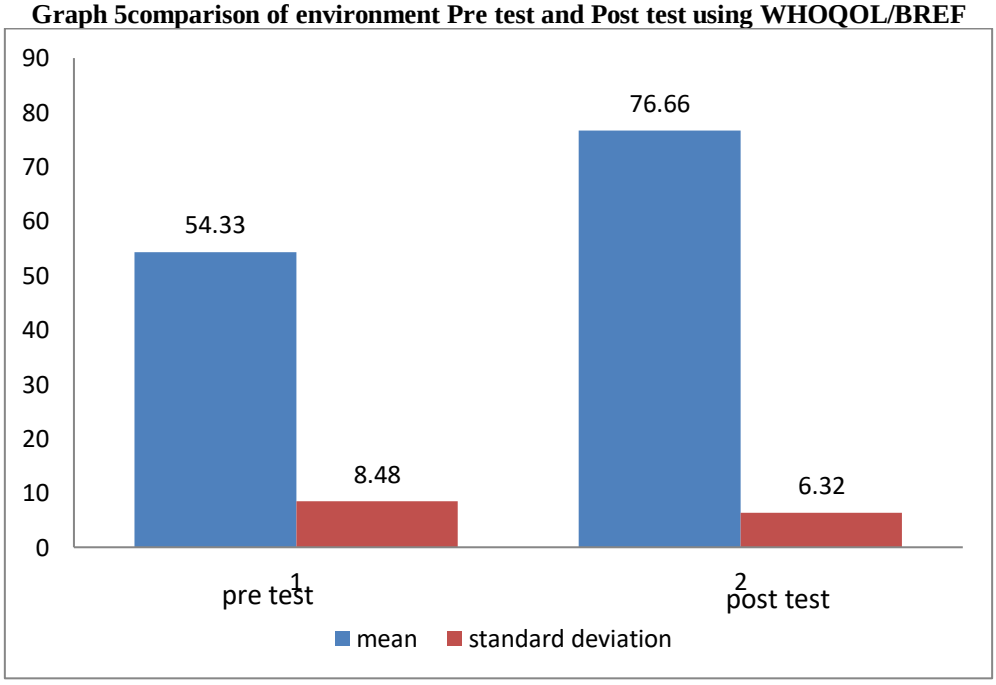

Table 5 and Graph 5shows the comparison between the pre-test and post test of environment using WHOQOL/BREF,the mean value of pretest 54.33 and post test 76.66 ,standard deviation of Pre test 8.48 and the Post test is 6.32.p value 0.001 shows that it is highly significant.

CONCLUSION

From the above results, it can be concluded that low back pain protocol is more effective in alleviating primary symptoms of pain and movement restriction thus enhancing the quality of life of the working women . Thus myofascial release can be used as an effective adjunct to conventional occupational therapy in cases of non specific mechanical low back pain.

LIMITATIONS

The present study was done with a Small sample size.

- Time consumption and personal attention required for myofascial release therapy

RECOMMENDATIONS

- Study can be done on larger sample size
- Study can be done for longer duration
- Study can be done for both the gender
- Study can be done on different age group.

DECLARATION: The authors have no conflict of interest

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