

*Full Length Research Paper*

## **Sciatica: Medical treatment or Physiotherapy?**

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**Low back pain is usually self-limiting. It has a sizeable impact on patients, and is associated with high healthcare and societal costs as much as \$16 billion each year. Patients are commonly treated in primary care but a small proportion is referred to secondary care and may eventually have surgery. There are numerous treatment approaches for sciatica. Many people receive only medical treatment and are unaware of the availability and efficacy of the physiotherapy treatment. Objective of this study is to find out best treatment by comparison between medical interventions versus physiotherapy treatment for Sciatica. This study is a quasi-experimental study which includes patients presenting with sciatica divided into two groups. One group received medical treatment from a general physician and other group received physical therapy treatment from physiotherapist along with medical treatment from general physician. The study was conducted at Fatima Memorial Hospital, Services Hospital, Mayo Hospital and Hamid Latif Hospital, Lahore. The study was completed within the time duration from February 2017 to July 2017. Non-probability purposive sampling technique was used to collect data. Pre-treatment evaluation was done with Visual Analogue Scale, Oswestry Disability Index and Straight Leg Raising Test. The physical inspection involved the straight leg raising test and active knee extension tests. The data was managed and analyzed using SPSS version 21. Physiotherapy along with medical treatment is observed to give better interventional outcomes.**

**Key words:** Sciatica, medical intervention, physiotherapy, oswestry disability index, straight leg raising test

### **INTRODUCTION**

Sciatica, known by a range of synonyms such as lumbosacral radicular syndrome, nerve root compromise, nerve root pain, and nerve root entrapment or is identified by radiating leg pain below the knee in one or more than

one lumbar or sacral dermatomes, it can also occur as an event of compression of nerve root or neurological insufficiencies (Smeele et al., 1996; Pinto et al., 2012). Disc prolapse is a typical cause of sciatica. Spinal

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or stenosis of lateral recess, cancers, radiculitis and also piriformis syndrome are also amongst the causes of this symptom (Luijsterburg et al., 2008; Stam, 1996). Individuals with overweight and obesity are likely to have lumbar radicular pain and sciatica (Shiri et al., 2014).

Sciatica is chiefly identified by taking previous history and physical examination. Regarding its management, during the first 6 to 8 weeks, there is congruity that management of sciatica ought to be conventional. Direction to be active as much as possible, physical therapy maneuvers or exercises, analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), epidural corticosteroid inoculations and transforaminal periradicular injections of corticosteroid are advised (Vloka et al., 2001). Modifiable risk elements could be cigarette smoking, obesity, occupational elements and health conditioned. Non-alterable elements include age, gender and social status. A significant number of well-known risk elements that are identified in first time sciatica are alterable, providing the potential benefits of key avoidance. Moreover, those risk factors likewise contribute to unhealthy way of life (Cook et al., 2014). There is a unity about the management of sciatica, that it should be conservative in the first 6 to 8 of treatment. However, required content of the conservative treatment is not understood till now (Vroomen et al., 2000). Bed rest is no longer believed to be a management possibility for sciatica (Mens et al., 2009). For the conservative management of sciatica, the essential choice to lessen the pain is by painkillers or else by decreasing compression on the nerve root. It is believed that conservative managements do not evidently recover the usual pattern of sciatica in maximum patients or decrease symptoms (Koes et al., 2007). Giving the patients the awareness of the causes and anticipated outcome might be an essential part of the treatment protocol.

Pain killers or non-steroidal anti-inflammatory drugs, acupuncture, epidural steroid injections, spinal manipulation, traction therapy, physical therapy, behavioral treatment, multidisciplinary treatment have mysterious effectiveness (Koc et al., 2009). Surgical treatment for sciatica stresses on elimination of the herniated slice of the disc and ultimately the part of the disc or on foraminal stenosis, with the motive of eradicating the ambiguous source of the sciatica (Peul et al., 2009). Agreement is that a cauda equina disorder is a clear notion for immediate surgery. Elective surgery is the choice for one sided sciatica (Gardner et al., 2011). The surgical intervention of patients with lumbar disc prolapse is preferred over conservative treatment. However, it has been additionally determined that the long-lasting positive outcomes of surgical intervention are suspicious and the assurance about the ideal timing of surgery is also undetermined (Devillé et al., 2000). It has been observed that patients with sciatica reported a quick decrease in pain and disability in the first 3 months, but still had mild

to moderate symptoms 5 years after surgery. While no remarkable differentiation was found, micro discectomy revealed great improvements in comparison to other surgical interventions (Machado et al., 2016). Acupuncture, that has an extended past history in primitive China as a conservative method of management in Chinese medicine, has been broadly used in various pain relief application in the western world since the 1970s. About managing sciatica patients by means of acupuncture, studies have unveiled the benefits (Liu and Chen, 2017). A comparison was made between disc surgery and conservative treatment. In one experiment micro discectomy was compared with conservative management in patients of sciatica since 6 to 12 weeks. No remarkable contrasts were found for associated leg pain, backache and individual disability after follow-up of two years. Leg pain, nevertheless, appeared to be upgraded initially more rapidly in patients in the discectomy category (Weinstein et al., 2006). Sciatica can be debilitating, and verification regarding medical managements is restricted. Pregabalin is efficacious in the management of few types of neuropathic pain. It has been observed that treatment with pregabalin did not remarkably decrease the intensity of leg pain linked with sciatica and did not remarkably improve other outcomes, as compared with placebo, after the time period of 8 weeks. The occurrence of bad events was significantly greater in the pregabalin group than in the placebo group (Mathieson et al., 2017). However, physical therapy was considered to be of great value with patients participating in exercises to reduce pain and restlessness, improve gait and posture (Newsome et al., 2014). Jeong and Associates stated after their experiment that mobilization approaches for the sciatic nerves may improve nervous system compliance and lessen the sensitivity, that would help to relieve the symptoms (Jeong et al., 2016). The use of stimulated form of vitamin B12 Methycobalamine has shown promising effect in patients with low back pain, especially in diabetic patients (Beliveau, 1971; Zhang et al., 2013). Where pharmacological management is frequently suggested, sometimes contrary effects takes place. Acupuncture is a remarkable alternate when medical intervention is barred. This therapy evades side effects of medications, however it should be taken under consideration as an additional therapy (Miladi et al., 2014). This study was conducted to validate the view that Physiotherapy along with medications is a better option to treat sciatica than physiotherapy or pharmacotherapy alone.

## MATERIALS AND METHODS

### Study design

Quasi experimental study.

**Table 1.** Descriptive statistics for the age, height, weight and BMI of the patients.

Study group		N	Minimum	Maximum	Mean	Std. deviation
Medical intervention	Age of the patient	25	22.00	64.00	49.0000	10.35213
	Height of the patient	25	140.00	185.00	164.5200	11.61579
	Weight of the patient	25	20.00	105.00	72.3600	18.29135
	BMI of the patient	25	21.00	31.00	26.5600	3.41663
	Valid N (list wise)	25	-	-	-	-
Physiotherapy along with medical intervention	Age of the patient	25	21.00	62.00	43.6800	11.94334
	Height of the patient	25	118.00	182.00	156.6000	13.54314
	Weight of the patient	25	48.00	90.00	68.2800	12.77211
	BMI of the patient	25	18.00	45.00	27.3080	6.89377
	Valid N (list wise)	25	-	-	-	-

### Study setting

The study was carried out at Fatima Memorial Hospital, Hamid Latif Hospital, Mayo Hospital and Services Hospital Lahore, Pakistan. The study was completed within the time duration from January 2017 to June 2017 at Fatima Memorial Hospital Lahore, Pakistan. 50 patients were taken, 25 in each group. Non-probability purposive sampling technique was used to collect the data.

### Data collection procedure

A total of 50 questionnaires were distributed and all of them were responded. All ethical issues were considered in this study, an informed consent was taken from the head of department for their approval to conduct the study and the patients.

### Treatment

All the subjects were allocated into 2 groups, of which one group got only medical treatment and other group was given physiotherapy treatment along with medicines. Treatment plan given to group 1 included; tablet Orphenadrine (35) + Paracetamol (450 mg) three times a day, tablet Tizanidine (2 mg) two times a day, tab Calcium + vitamin D once a day, tab Methycobalamine 500 mcg three times a day.

Group 2 treatment included stretches of hamstrings and piriformis muscle, hot pack and TENS (Transcutaneous Electrical Nerve Stimulation), sciatic nerve mobilization along with the same pharmacotherapy as Group 1.

### DATA ANALYSIS

The data was managed and analyzed using SPSS version 21.

### RESULTS

The distribution of age in medical intervention group (group 1) was  $49.0 \pm 10.3$ , while distribution of age in physiotherapy along with medical intervention (group 2)

was  $43 \pm 11.9$ . The distribution of weight (kg) in group 1 was  $72.3 \pm 18.2$  and in group 2 it was  $68 \pm 12.7$ . The distribution of height (cm) in group 1 was  $164.5 \pm 12$  and in group 2 it was  $156.6 \pm 14$ . The distribution of BMI in group 1 out was  $26.5 \pm 3.41$  and the distribution of BMI in group 2 was  $27 \pm 6.89$  (Table 1).

In group 1 male were 15 (60%) and female were 10 (40%) while in group 2 male were 3 (12%) and female were 22 (88%) (Table 2). In group 1 the office employees were 10 (40%), laborers were 6 (24%) and House wives were 9 (36%). In group 2 office employees were 8 (32%), house wives were 16 (64%) and Students were 1 (4%) (Table 3). In group 1, 5 (20%) presented with acute pain 20 (80%) with chronic pain and in group 2, 7 (28%) presented with acute pain and 18 (72%) with chronic pain (Table 4). In group 1, 5 (20%) patients had active life style and 20 (80%) had a sedentary life style. In group 2, 11 (44%) had an active life style while 14 (56%) had a sedentary life style (Table 5). In group 1, 3 (12%) had positive active knee extension test and 22 (88%) had negative knee extension test. In group 2, 13 (52%) had positive knee extension test and 12 (48%) had negative knee extension test (Table 6).

Independent sample t-test for visual analogue scale pre-treatment reading showed the non-significant p value 0.529 with Mean Difference (-1.72000) and DF (48). Week 1 reading showed the non-significant p value 0.161 with Mean Difference (4.76000) and DF (48). Week 2 reading showed the non-significant p value 0.002 with Mean Difference (10.24000) and DF (48). Week 3 reading showed the non-significant p value 0.00 with Mean Difference (16.00000) and DF (48) (Table 7).

Independent Sample t-test for Oswestry Disability Index Pre-treatment reading showed the non-significant p value 0.268 with Mean Difference (-2.68000) and DF (48). Week 1 reading showed the non-significant p value 0.480 with Mean Difference (1.48000) and DF (48). Week 2 reading showed the non-significant p value 0.00 with Mean Difference (6.56000) and DF (48). Week 3 reading

**Table 2.** Gender of the patient.

Study Group			Frequency	Percent	Valid percent	Cumulative percent
Medical intervention	Valid	Male	15	60.0	60.0	60.0
		Female	10	40.0	40.0	100.0
		Total	25	100.0	100.0	-
Physiotherapy along with medical intervention	Valid	Male	3	12.0	12.0	12.0
		Female	22	88.0	88.0	100.0
		Total	25	100.0	100.0	-

**Table 3.** Occupation of the patient.

Study group			Frequency	Percent	Valid percent	Cumulative percent
Medical intervention	Valid	Employee	10	40.0	40.0	40.0
		Laborers	6	24.0	24.0	64.0
		House Wife	9	36.0	36.0	100.0
		Total	25	100.0	100.0	-
Physiotherapy along with medical intervention	Valid	Employee	8	32.0	32.0	32.0
		House Wife	16	64.0	64.0	96.0
		Student	1	4.0	4.0	-
		Total	25	100	100	100.0

**Table 4.** Type of pain.

Study group			Frequency	Percent	Valid percent	Cumulative percent
Medical intervention	Valid	Acute	5	20.0	20.0	20.0
		Chronic	20	80.0	80.0	100.0
		Total	25	100.0	100.0	-
Physiotherapy along with medical intervention	Valid	Acute	7	28.0	28.0	28.0
		Chronic	18	72.0	72.0	100.0
		Total	25	100.0	100.0	-

showed the non-significant p value 0.00 with Mean Difference (11.56000) and DF (48) (Table 8).

Independent Sample t-test for Straight Leg Raising Test Pre-treatment reading showed the non-significant p value 0.489 with Mean Difference (2.00000) and DF (48). Week 1 reading showed the non-significant p value 0.78 with Mean Difference (-5.12000) and DF (48). Week 2 reading showed the non-significant p value 0.03 with Mean Difference (-8.00000) and DF (48). Week 3 reading showed the non-significant p value 0.00 with Mean Difference (-13.28000) and DF (48) (Table 9).

Pairwise Comparison of Visual Analogue Scale Pre-treatment and Post-Treatment for Medical intervention

Group Mean Difference Week 3 was (34.200) with significance (0.00) (Table 10).

Pairwise comparison of Visual Analogue Scale Pre-treatment and Post-Treatment for Physiotherapy along with Medical intervention Group Mean Difference Week 3 was (51.920) with significance (0.00) (Table 11).

Pairwise Comparison of Oswestery Disability Index Pre-treatment and Post-Treatment for Medical intervention Group Mean Difference Week 3 was (19.800) with significance (0.00) (Table 12).

Pairwise Comparison of Oswestery Disability Index Pre-treatment and Post-Treatment for Physiotherapy along with Medical intervention Group Mean Difference

**Table 5.** Life Style of the patient.

Study group			Frequency	Percent	Valid percent	Cumulative percent
Medical intervention	Valid	Active	5	20.0	20.0	20.0
		Sedentary	20	80.0	80.0	100.0
		Total	25	100.0	100.0	-
Physiotherapy along with medical intervention	Valid	Active	11	44.0	44.0	44.0
		Sedentary	14	56.0	56.0	100.0
		Total	25	100.0	100.0	-

**Table 6.** Active knee extension test.

Study group			Frequency	Percent	Valid percent	Cumulative percent
Medical intervention	Valid	Positive	3	12.0	12.0	12.0
		Negative	22	88.0	88.0	100.0
		Total	25	100.0	100.0	-
Physiotherapy along with medical intervention	Valid	Positive	13	52.0	52.0	52.0
		Negative	12	48.0	48.0	100.0
		Total	25	100.0	100.0	-

Week 3 was (34.040) with significance (0.00) (Table 13).

Pairwise Comparison of Straight Leg Raising Test Pre-treatment and Post-Treatment for Medical intervention Group Mean Difference Week 3 was (-26.080) with significance (0.00) (Table 14).

Pairwise Comparison of Straight Leg Raising Test Pre-treatment and Post-Treatment for Physiotherapy along with Medical intervention Group Mean Difference Week 3 was (-41.360) with significance (0.00) (Table 15).

## DISCUSSION

This study found that sciatica prevails more among those who have deskbound and sedentary life style, this is in keeping with Peter György Horváth and associate who stated that the body built and the posture in which a person sits has a substantial influence on the pressure distribution and peak pressures in the selected zones. Alongside a comfortable seat special attention should be paid also to a correct posture, because many of health complains can be linked to the latter (Horváth et al., 2017). Our study showed remarkable effects of muscle relaxants along with vitamin B12 in-keeping with most international procedures where pharmacological treatment has been recommended to decrease the pain in patients of sciatica, involving paracetamol, non-steroidal anti-inflammatory medication, opioid pain killers, anti-convulsants, and corticosteroids. But, generally there is

very restricted acknowledgement on the effectiveness, safety, and durability of these drugs alone in old age patients who have sciatica (Ferreira and McLachlan, 2016).

We observed that there is prevalence of sciatica more among females which agrees with Karjalainen and co-workers who reported that female gender complained about sciatic pain more than male gender (Karjalainen et al., 2013). There is small evidence that outcomes of exercise produces greater effects on leg pain as compared to the advice to stay active and energetic for the short period of time in patients experiencing sciatica (Fernandez et al., 2015).

In people with acute sciatica, muscle relaxants show clinically remarkable short-period pain relief (Abdel Shaheed et al., 2017). Pharmacotherapy with physiotherapy showed significant pain relief in our study. However, it was noticed in the whole process of the study that medical intervention relieved the symptoms of sciatica for short period of time while, physiotherapy along with medical intervention has remarkable effects in reducing the pain, gaining range and also improved the quality of everyday life in the long run. The age of the patients included in our study ranged from 18 to 65 years.

The results showed that 40 to 45 years range was more affected, that could be due to lumbar degeneration and inactivity, this agrees with professor Koes and co-workers who suggested that the peak age for onset of lumber pain is about the same reported in our study

**Table 7.** Independent samples test for visual analogue scale.

Variable		Levene's test for equality of variances		T-test for equality of means				
		F	Sig.	t	Df	Sig. (2-tailed)	Mean difference	Std. error difference
Visual analogue scale pre-treatment	Equal variances assumed	1.168	0.285	-0.635	48	0.529	-1.72000	2.70932
	Equal variances not assumed	-	-	-0.635	45.005	0.529	-1.72000	2.70932
Visual analogue scale post treatment week1	Equal variances assumed	3.913	0.054	1.423	48	0.161	4.76000	3.34568
	Equal variances not assumed	-	-	1.423	34.931	0.164	4.76000	3.34568
Visual analogue scale post treatment week 2	Equal variances assumed	0.199	0.657	3.316	48	0.002	10.24000	3.08796
	Equal variances not assumed	-	-	3.316	45.812	0.002	10.24000	3.08796
Visual analogue scale post treatment week3	Equal variances assumed	2.903	0.095	7.404	48	0.000	16.00000	2.16102
	Equal variances not assumed	-	-	7.404	42.863	0.000	16.00000	2.16102

**Table 4.** Independent samples test for Oswestry disability index.

Variable		Levene's test for equality of variances		t-test for equality of means				
		F	Sig	T	Df	Sig. (2-tailed)	Mean difference	Std. error difference
Oswestry disability index pre-treatment	Equal variances assumed	4.642	0.036	-1.120	48	0.268	-2.68000	2.39313
	Equal variances not assumed			-1.120	39.481	0.270	-2.68000	2.39313
Oswestry disability index post treatment week1	Equal variances assumed	3.547	0.066	.712	48	0.480	1.48000	2.07878
	Equal variances not assumed			.712	43.061	0.480	1.48000	2.07878
Oswestry disability index post treatment week2	Equal variances assumed	0.113	0.739	4.963	48	0.000	6.56000	1.32167
	Equal variances not assumed			4.963	47.999	0.000	6.56000	1.32167
Oswestry disability index post treatment week3	Equal variances assumed	1.648	0.205	12.275	48	0.000	11.56000	0.94177
	Equal variances not assumed			12.275	46.727	0.000	11.56000	0.94177

(Koes et al., 2007).

Females were found to be more prone to develop sciatica. People who have active life style are less likely to get affected by sciatica. Two tests were performed to confirm the presence of sciatica, one was straight leg raising test which

showed 100% positive result and the other was active knee extension test which showed mixed, that is, negative and positive results. Medications usually prescribed in sciatica are analgesics, vitamin B12 and muscle relaxants. In our study one group was being treated with the same

medical intervention and compared to the other group that was treated by physiotherapy along with medical intervention, results showed more relief in pain, better quality of life of the patient and the SLR test came out to be negative after three weeks of treatment in the latter group.

**Table 5.** Independent samples test for straight leg raising.

Variable		Levene's test for equality of variances		T-test for equality of means				
		F	Sig.	t	Df	Sig. (2-tailed)	Mean difference	Std. error difference
Straight leg raising test pre-treatment	Equal variances assumed	0.503	0.482	.697	48	0.489	2.00000	2.87080
	Equal variances not assumed			.697	42.483	0.490	2.00000	2.87080
Straight leg raising test post treatment week1	Equal variances assumed	0.742	0.393	-1.801	48	0.078	-5.12000	2.84296
	Equal variances not assumed			-1.801	43.796	0.079	-5.12000	2.84296
Straight leg raising teat post treatment week2	Equal variances assumed	0.527	0.471	-3.102	48	0.003	-8.00000	2.57925
	Equal variances not assumed			-3.102	45.678	0.003	-8.00000	2.57925
Straight leg raising test post treatment week3	Equal variances assumed	1.630	0.208	-5.284	48	0.000	-13.28000	2.51314
	Equal variances not assumed			-5.284	43.115	0.000	-13.28000	2.51314

**Table 6.** Pairwise comparison of medical intervention group for visual analogue scale.

Pairwise Comparisons							
Study group	(I) VAS	(J) VAS	Mean difference (I-J)	Std. error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Medical intervention	1	2	13.600 <sup>*</sup>	1.370	0.000	9.661	17.539
		3	24.480 <sup>*</sup>	2.153	0.000	18.289	30.671
		4	34.200 <sup>*</sup>	2.249	0.000	27.735	40.665
	2	1	-13.600 <sup>*</sup>	1.370	0.000	-17.539	-9.661
		3	10.880 <sup>*</sup>	1.434	0.000	6.756	15.004
		4	20.600 <sup>*</sup>	2.068	0.000	14.654	26.546
	3	1	-24.480 <sup>*</sup>	2.153	0.000	-30.671	-18.289
		2	-10.880 <sup>*</sup>	1.434	0.000	-15.004	-6.756
		4	9.720 <sup>*</sup>	1.476	0.000	5.477	13.963
	4	1	-34.200 <sup>*</sup>	2.249	0.000	-40.665	-27.735
		2	-20.600 <sup>*</sup>	2.068	0.000	-26.546	-14.654
			3	-9.720 <sup>*</sup>	1.476	0.000	-13.963

Physiotherapy is emerging choice of treatment in recent times. Unlike international state of affairs people in Pakistan people are not so much aware

of the treatment choices they can have. In recent times people in Pakistan are becoming aware of effectiveness of physiotherapy treatment, at least

they are curious to know the outcomes of different treatments.

The Results of this study can broaden their

**Table 7.** Pairwise comparison of physiotherapy along with medical intervention group for visual analogue scale.

Study group	(I) VAS	(J) VAS	Mean difference (I-J)	Std. error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Physiotherapy along with medical intervention	1	2	20.080*	2.572	0.000	12.685	27.475
		3	36.440*	2.501	0.000	29.248	43.632
		4	51.920*	1.854	0.000	46.590	57.250
	2	1	-20.080*	2.572	0.000	-27.475	-12.685
		3	16.360*	1.733	0.000	11.378	21.342
		4	31.840*	2.618	0.000	24.314	39.366
	3	1	-36.440*	2.501	0.000	-43.632	-29.248
		2	-16.360*	1.733	0.000	-21.342	-11.378
		4	15.480*	1.791	0.000	10.331	20.629
	4	1	-51.920*	1.854	0.000	-57.250	-46.590
		2	-31.840*	2.618	0.000	-39.366	-24.314
		3	-15.480*	1.791	0.000	-20.629	-10.331

Based on estimated marginal means

\*. The mean difference is significant at the 0.05 level.

a. Adjustment for multiple comparisons: Bonferroni.

**Table 8.** Pairwise comparison of medical intervention group for oswestry disability index.

Pairwise comparisons							
Study group	(I) ODI	(J) ODI	Mean difference (I-J)	Std. error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Medical intervention	1	2	7.640*	0.700	0.000	5.628	9.652
		3	12.720*	0.863	0.000	10.238	15.202
		4	19.800*	1.106	0.000	16.620	22.980
	2	1	-7.640*	0.700	0.000	-9.652	-5.628
		3	5.080*	0.818	0.000	2.727	7.433
		4	12.160*	1.059	0.000	9.114	15.206
	3	1	-12.720*	0.863	0.000	-15.202	-10.238
		2	-5.080*	0.818	0.000	-7.433	-2.727
		4	7.080*	0.594	0.000	5.372	8.788
	4	1	-19.800*	1.106	0.000	-22.980	-16.620
		2	-12.160*	1.059	0.000	-15.206	-9.114
		3	-7.080*	0.594	0.000	-8.788	-5.372

**Table 9.** Pairwise comparison of physiotherapy along with medical intervention group for oswestry disability index.

Study group	(I) ODI	(J) ODI	Mean difference (I-J)	Std. error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Physiotherapy along with medical intervention	1	2	11.800*	0.926	0.000	9.139	14.461
		3	21.960*	1.387	0.000	17.971	25.949
		4	34.040*	1.844	0.000	28.737	39.343
	2	1	-11.800*	0.926	0.000	-14.461	-9.139
		3	10.160*	1.112	0.000	6.964	13.356
		4	22.240*	1.541	0.000	17.810	26.670



**Table 10.** Contd.

	1	-21.960 <sup>*</sup>	1.387	0.000	-25.949	-17.971
3	2	-10.160 <sup>*</sup>	1.112	.000	-13.356	-6.964
	4	12.080 <sup>*</sup>	.844	.000	9.652	14.508
	1	-34.040 <sup>*</sup>	1.844	.000	-39.343	-28.737
4	2	-22.240 <sup>*</sup>	1.541	.000	-26.670	-17.810
	3	-12.080 <sup>*</sup>	.844	.000	-14.508	-9.652

Based on estimated marginal means

\*. The mean difference is significant at the 0.05 level.

a. Adjustment for multiple comparisons: Bonferroni.

**Table 11.** Pairwise comparison of medical intervention group for straight leg raising test.

Pairwise comparisons							
Study group	(I) SLR	(J) SLR	Mean difference (I-J)	Std. error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Medical intervention	1	2	-7.520 <sup>*</sup>	1.083	0.000	-10.635	-4.405
		3	-17.680 <sup>*</sup>	1.550	0.000	-22.136	-13.224
		4	-26.080 <sup>*</sup>	1.931	0.000	-31.633	-20.527
	2	1	7.520 <sup>*</sup>	1.083	0.000	4.405	10.635
		3	-10.160 <sup>*</sup>	.966	0.000	-12.936	-7.384
		4	-18.560 <sup>*</sup>	1.490	0.000	-22.844	-14.276
	3	1	17.680 <sup>*</sup>	1.550	0.000	13.224	22.136
		2	10.160 <sup>*</sup>	0.966	0.000	7.384	12.936
		4	-8.400 <sup>*</sup>	0.847	0.000	-10.834	-5.966
	4	1	26.080 <sup>*</sup>	1.931	0.000	20.527	31.633
		2	18.560 <sup>*</sup>	1.490	0.000	14.276	22.844
		3	8.400 <sup>*</sup>	0.847	0.000	5.966	10.834

**Table 12.** Pairwise comparison of physiotherapy along with medical intervention group for straight leg raising test.

Study group	SLR	(J) SLR	Mean difference (I-J)	Std. Error	Sig. <sup>a</sup>	95% Confidence interval for difference <sup>a</sup>	
						Lower bound	Upper bound
Physiotherapy along with medical intervention	1	2	-14.640 <sup>*</sup>	1.005	0.000	-17.529	-11.751
		3	-27.680 <sup>*</sup>	1.289	0.000	-31.387	-23.973
		4	-41.360 <sup>*</sup>	1.762	0.000	-46.425	-36.295
	2	1	14.640 <sup>*</sup>	1.005	0.000	11.751	17.529
		3	-13.040 <sup>*</sup>	1.012	0.000	-15.951	-10.129
		4	-26.720 <sup>*</sup>	1.496	0.000	-31.022	-22.418
	3	1	27.680 <sup>*</sup>	1.289	0.000	23.973	31.387
		2	13.040 <sup>*</sup>	1.012	0.000	10.129	15.951
		4	-13.680 <sup>*</sup>	1.084	0.000	-16.798	-10.562
	4	1	41.360 <sup>*</sup>	1.762	0.000	36.295	46.425
		2	26.720 <sup>*</sup>	1.496	0.000	22.418	31.022
		3	13.680 <sup>*</sup>	1.084	0.000	10.562	16.798

Based on estimated marginal means

\*. The mean difference is significant at the 0.05 level.

a. Adjustment for multiple comparisons: Bonferroni.

options in terms that either they are focusing on short term treatment or long-term management. It provides awareness about impact of physiotherapy in improvement of quality of life of the patients of sciatica.

Patients who were participating in different exercises to reduce pain and discomfort found physiotherapy of great value. International medical guidelines recommend pharmacological intervention for the management of pain but it doesn't produce long term effects in elderly patients. So rationally Physiotherapy along with medical intervention is more effective and decent choice in terms of improving pain and making the quality of life better in patients of sciatica.

## CONCLUSION

It was concluded that Physiotherapy along with medical intervention is more beneficial as compared to medical intervention alone in terms of improving the overall quality of life of the patient.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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