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Survey on low back pain adherence and importance of physical therapy

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Abstract

One of the most common type of musculoskeletal problem in people is low back pain. Physical activity and exercise therapy are also among approved clinical recovery, and self-management is prescribed for chronic low back pain. The objective was to estimate the compliance and efficacy of physiotherapy management for low back pain. The study was conducted on the questionnaire based telephone survey. It comprises total of 13 questionnaire containing both compliance and efficacy. The data is collected from the individuals who are suffering from low back pain and undergoing rehabilitation in physiotherapy department. In a compliance and efficacy questionnaire for a total sample size of 80, the results showed that 40(50%) people were adherent to prescribed home exercise, 76(95%) felt that the treatment prescribed was helpful and 59(73.75%) said that it relieved pain. The present study found that there were significant improvements in pain after home based exercises which were prescribed.

Keywords: Back pain, compliance, therapeutic exercise

1. Introduction

One of the most common diseases taking a patient to a pain specialist is low back pain (Patel VB *et al.*, 2015) [5]. Low back pain will first discuss patient presentations and patient features for individuals with low back pain or traumatic back / spine injury compliant triage compliance. Three forms of low back pain are clinically defined: low back pain without potential involvement of the nerve root, with potential involvement of the nerve root, and attributed to trauma or other secondary factors [1].

Low back pain all over the world is a big concern. Low back pain prevalence is correlated with height, distribution of fat, reproductive history, and socioeconomic effects. A representative sample of 28.4% of males and 52.9% of females had low back pain among the 401 males and 403 females surveyed. The prevalence of low back pain in the age group (41-50 years) was higher (50 percent) relative to other age groups. The prevalence was found to be (30.80 percent) in younger age groups (20-30 years) [2].

Lower back pain may occur from several structures, including discs (secondary to herniation, disruption of the inner disc, infection), vertebral bodies (secondary to vertebral fracture, infection, metastatic lesion), lumbar nerve roots (compression from a herniated disc or inflammation due to mechanical causes, spinal stenosis and tethering due to post-surgical scarring), lumbar facet joints, the iliac crest, ligaments and the sacroiliac joint [3].

A theory-based strategy to promote adherence should seek to resolve factors influencing the recovery behaviour of chronic low back pain patients. Research shows that these variables could be involved. The interaction between the physiotherapist and the patients and the provision of therapy, self-efficacy and recovery encouragement.

The theory of self-determination (SDT) may provide a valuable context for resolving these variables, thereby increasing adherence to care and enhancing patient outcomes. According to the theory of self-determination, humans have fundamental psychological needs for autonomy (feeling totally free to participate in a behaviour), perceived competence (feeling successful in one's action), and connectedness (feeling secure and cared for in one's interpersonal relationships). Patient engagement in care can be more independent and less regulated when these needs are supported. In physical activity, the self-determination theory-based model of improvement in health behaviour, the correlation between the support of the autonomy of the

healthcare provider and the incentive and perceived competence was endorsed. This form of intervention may increase the independent motivation and competence of low back pain patients, leading to enhanced adherence to the prescribed home-based treatment and improved low back outcomes.

Therapeutic exercise is considered to be one of the most commonly prescribed treatments for low back pain, and the effectiveness of therapeutic exercise can only be established if patients comply with the studied exercise regimen. Physical activity and exercise therapy are among the accepted guidelines for clinical rehabilitation (i.e. specific repetitive movements intended to reduce low back pain). Numerous sufferers with low back pain do not adhere to their physiotherapists recommendations regarding physical activity and exercises. Poor patient adherence may decrease the effectiveness of physical activity advice and home-based rehabilitation exercises^[4].

The World Health Organization (WHO) describes adherence as "the degree to which the conduct of an individual coincides with a health care provider's agreed recommendation." Patients appeared to demonstrate low exercise adherence at a rate of about 50%, according to Holden *et al.* Patients who did not adhere to exercises had less therapeutic benefits than patients who adhered to those exercises^[5-7].

2. Methods

A Questionnaire based telephone survey was conducted from September 2018 to February 2019 at Mangalore, India. Patients are recruited who have undergone physiotherapy for low back pain at the physiotherapy department. The total sample size for the study was 80, from which eligible participants consisted of young adult (age>18), middle age, as well as elder population (age<63) who were in active practice and who had prescribed home exercises for a period of 30 days. A component of study consists of the time factor, intensity, the repetition, the medication and the support of family members with regards to the inclusion criterion of prescribed exercise at least once in a day for 30 days.

Questionnaire Development: The questionnaire developed including all pertaining to low back pain and this questionnaire discussed with some orthopaedic and college staff. A qualitative pre-test was performed on the final questionnaire draft; questionnaire was prepared and distributed to various staff involving content-validity. The questions consist of following items.

- Do you feel our treatment is helpful for you?
- Do you find any difficulty in doing exercise as therapist has taught you?
- Do you have enough time for exercise?
- Do your family members support you for exercise?
- Do you take rest in between the exercise?
- Is your environment is safe to perform the given exercise?
- Has your pain relived following exercise?
- Are you satisfied with the therapy?
- Are you regularly doing exercise?
- Do you wish to continue with the therapy?
- Do you perform prescribed dosage for each exercise (number of set, number of repetition per each set)?
- Do you drink water during the exercise?
- Do you take any pain relief tablets while following physical therapy exercise?

The respondent has to option

- Yes
- No

3. Result

The survey consists total sample size of 80 patients in which 49 are male 31 are female. Based on the questionnaire answered by the patient the following results are drawn. There are total of 13 questions based on effective treatment, difficulty in exercising, time consumption, family support, rest taken between the exercise, safe environment, pain relived, satisfaction, regularity in exercise, continuation of the therapy, prescribed dosage for each exercise, water consumption, pain relief tablet consumed during the exercise. These are further sub divided into male and female of their respective opinion.

Table 1: Treatment helpful

Treatment Helpful		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	1	2.0	2.0	2.0
	Yes	48	98.0	98.0	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	3	9.7	9.7	9.7
	Yes	28	90.3	90.3	100.0
	Total	31	100.0	100.0	

From the table 1 is shows total sample of 80; (49) were male and (31) were female patients, 48(98%) M and 28(90.3%) F found significant benefits from the treatment and the remaining was of 1(2%) M and 3(9.7%) F patients had nil effects.

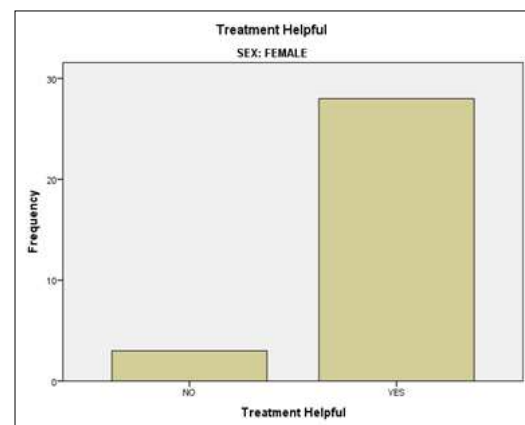


Fig 1.0: Treatment helpful (M)

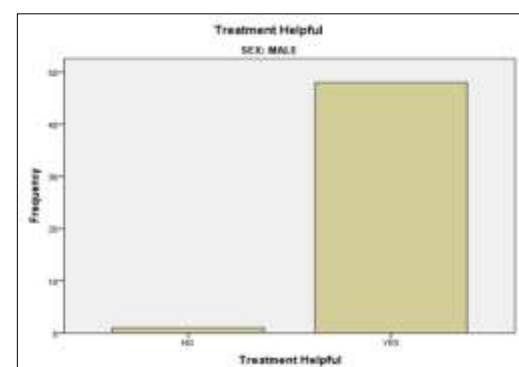


Fig 1.1: Treatment helpful (F)

From fig. 1 and 1.1 total sample size = 80 of which (49) male and (31) female. From that 42(85.7%) M and 28(90.3%) F were found to be having no difficulty in performing exercise which the therapist had instructed. Remaining percentage of people who faced difficulty the during the exercise was 7(14.3%) M and 3(9.7%) F.

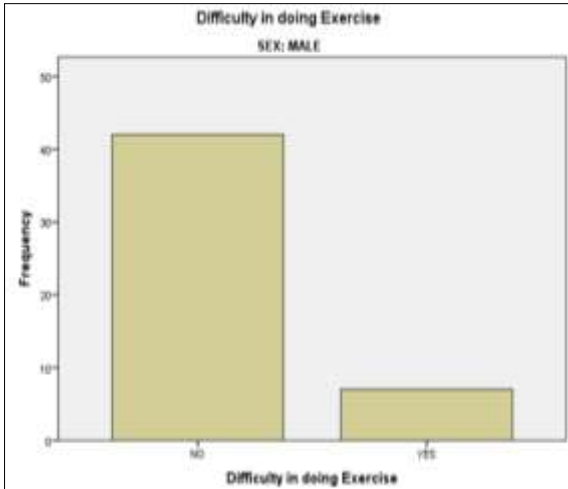


Fig 2.0: Difficulty in doing exercise (M)

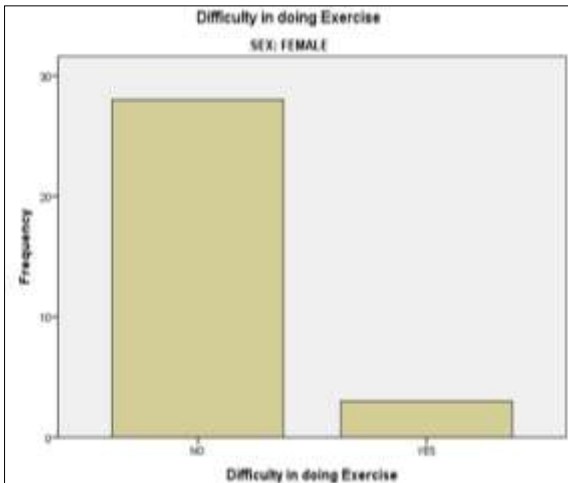


Fig 2.1: Difficulty in doing exercise (F)

From fig 2.0 and 2.1 it is based on the sample size male (49) and female (31).Where 32(65.3%) M and 23 (74.2%) F had enough time in performing given exercise.17 (34.7%) M and 8 (25.8%) F showed to be having lack of time.

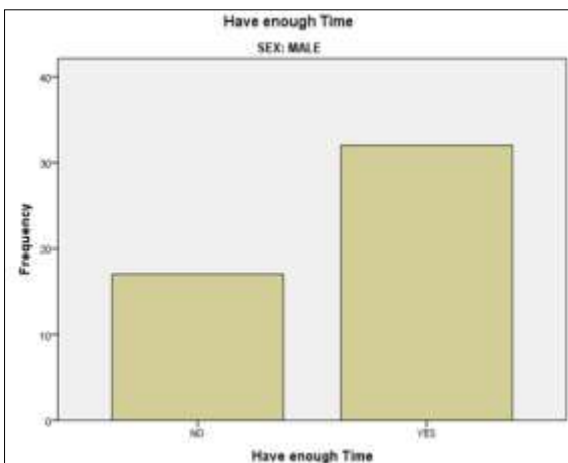


Fig 3.0: Have enough time for exercise (M)

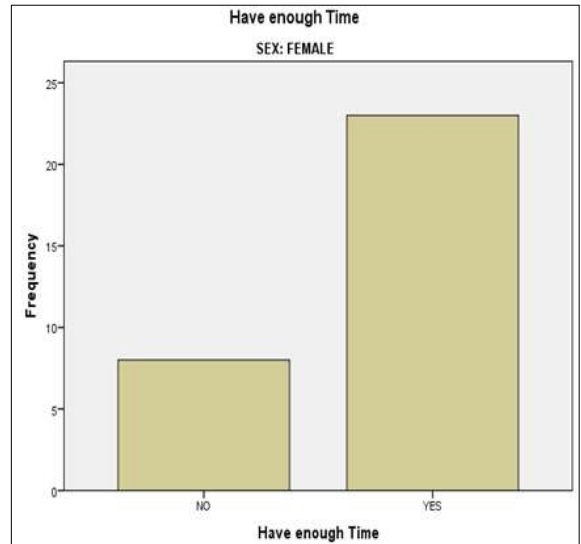


Fig 3.1: Have enough time for exercise (F)

From fig 3.0 and 3.1 it shows the selected sample of male (49) and female (31).In which 17(34.7%) M and 14(45.2%) F were found to have family support, 32(65.3%) M and 17(54.8%) F patients lacked support respectively.

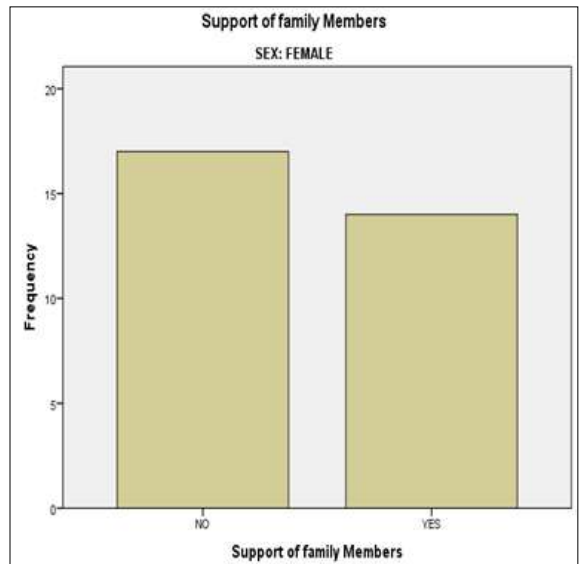


Fig 4.0: Support of family members (female)

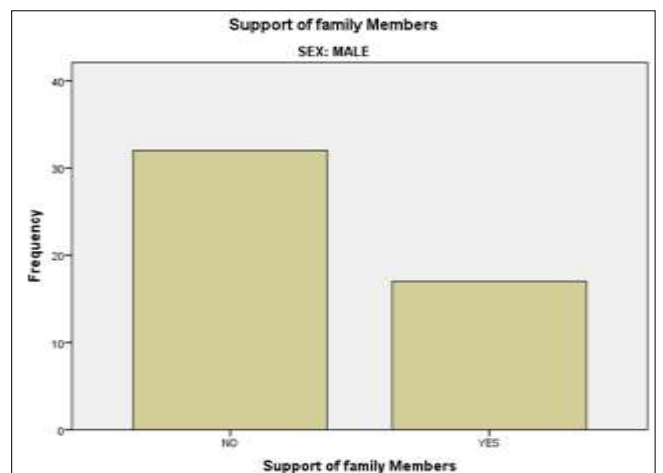


Fig 4.1: Support of family members (male)

From fig. 4.0 and 4.1 is shows that in a sample population of male (49) and female (31).Where 31(63.3%) M and

20(64.5%) F had taken rest in between the exercise. Remaining 18(36.7%) M and 11(35.5%) F did not take rest during the exercise.

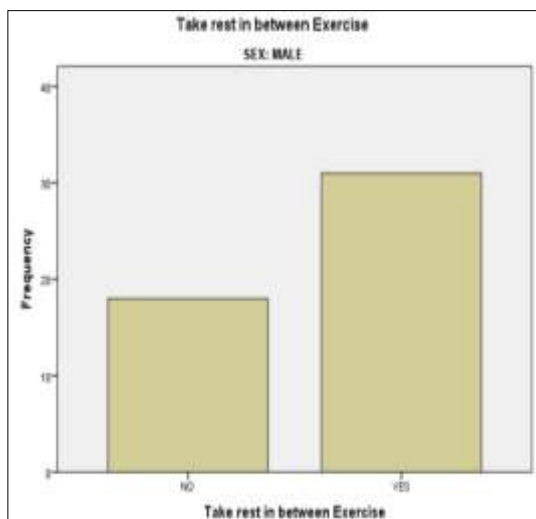


Fig 5.0: Rest taken in between (M)

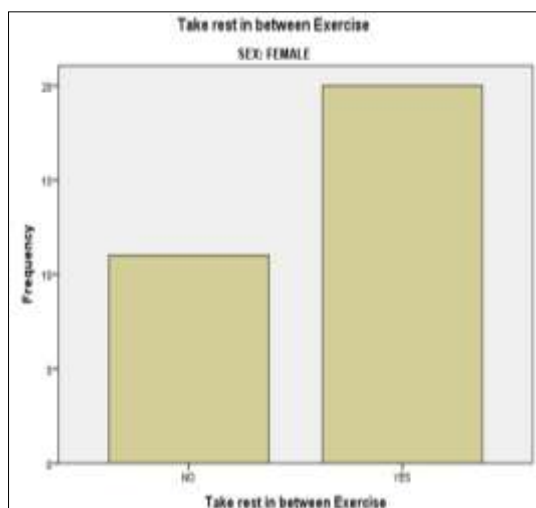


Fig 5.1: Rest taken in between (F)

From fig 5.0 and 5.1 it shows the population of male (49) and female (31), the percentage of people who felt their environment was safe were 49(100%) M and 30(96.8%) F and Remaining 1 (3.2%) F felt discomfort in their surroundings.

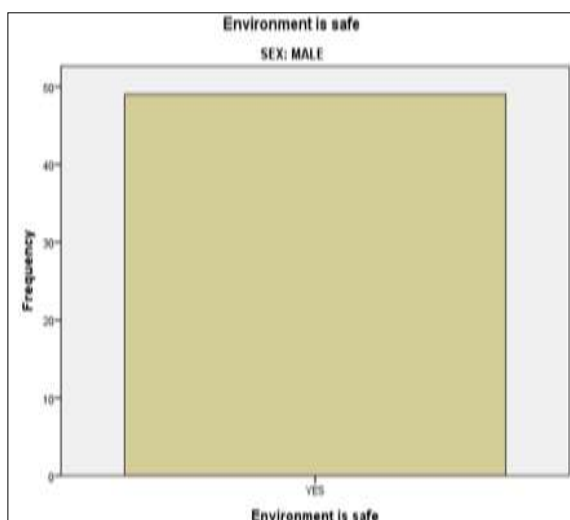


Fig 6.0: Environment safe (male)

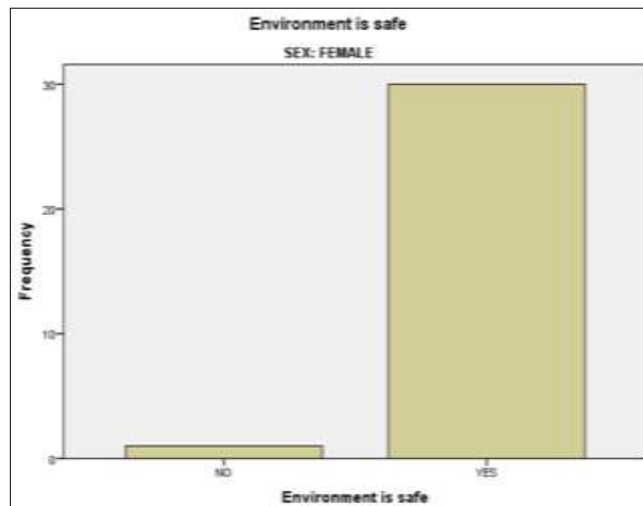


Fig 6.1: Environment safe (female)

Table 2: Pain relived

Pain Relived		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	8	16.3	16.3	16.3
	Yes	41	83.7	83.7	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	13	41.9	41.9	41.9
	Yes	18	58.1	58.1	100.0
	Total	31	100.0	100.0	

From table 2 it shows the selected sample of male (49) and female (31). Pain relived in M 41(83.7%) and F 18(58.1%).Remaining M 8 (16.3%) and F 13 (41.9%) had no reduction in pain.

Table 3: Satisfaction

Satisfaction		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	2	4.1	4.1	4.1
	Yes	47	95.9	95.9	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	3	9.7	9.7	9.7
	Yes	28	90.3	90.3	100.0
	Total	31	100.0	100.0	

From table 3 is shows a sample size of male (49) and female (31).Where 47(95.9%) M and 28(90.3%) F said to have complete satisfaction and the remaining of 2(4.1%) M and 3(9.7%) F were not satisfied

Table 4: Regularity in exercise

Regularity in Exercise		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	16	51.6	51.6	51.6
	Yes	15	48.4	48.4	100.0
Valid	Total	31	100.0	100.0	
	Female				
	No	25	51.0	51.0	51.0
	Yes	24	49.0	49.0	100.0
	Total	49	100.0	100.0	

From table 4 it shows that 49 (M) and 31(F) of total sample, 24(49.0%) M and 15(48.4%) F were regular in their exercise and the remaining 25(51.0%) M and 16(51.6%) F were not regular in their exercise

Table 5: Wish to continue the therapy

Wish to Continue the therapy		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	1	2.0	2.0	2.0
	Yes	48	98.0	98.0	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	3	9.7	9.7	9.7
	Yes	28	90.3	90.3	100.0
	Total	31	100.0	100.0	

From table 5 it shows that total sample size was male (49) and female (31). In which 48(98.0%) M and 28(90.3%) F wished to continue the therapy and the remaining 1(2.0%) M and 3(9.7%) F were having no interest

Table 6: Follow the prescribed dosage

Follow the prescribed Dosage		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male				
	No	17	34.7	34.7	34.7
	Yes	32	65.3	65.3	100.0
	Total	49	100.0	100.0	
	Female				
	No	16	51.6	51.6	51.6
	Yes	15	48.4	48.4	100.0
	Total	31	100.0	100.0	

From table 6 sample size of 80. Where 49(M) and 31(F); in which 32(65.3%) M and 15(48.4%) F are said to perform the prescribed dosage. And remaining 17(34.7%) M and 16(51.6%) F did not follow the prescribed dosage

Table 7: Drinking water during exercise

Drinking Water during Exercise		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	43	87.8	87.8	87.8
	Yes	6	12.2	12.2	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	22	71.0	71.0	71.0
	Yes	9	29.0	29.0	100.0
	Total	31	100.0	100.0	

From table 7 it shows that a total sample of 49(M) and 31(F), in which 6(12.2%) M and 9(29%) F said that they consumed water during the exercise. And remaining of 43(87.8%) M, 22(71%) F did not consume water

Table 8: Take pain relief tablet

Take Pain relief Tablet		Frequency	Percent	Valid Percent	Cumulative Percent
	Male				
	No	44	89.8	89.8	89.8
	Yes	5	10.2	10.2	100.0
Valid	Total	49	100.0	100.0	
	Female				
	No	26	83.9	83.9	83.9
	Yes	5	16.1	16.1	100.0
	Total	31	100.0	100.0	

From table 8 it shows that in a sample size of 49(M) and 31(F), 5(10.2%) M and 5(16.1%) F took pain relief tablets. Rest 44(89.8%) M and 26(83.9%) F did not take any tablet during the course of exercise

4. Discussion

The goal was to estimate the compliance and efficacy of low back pain physiotherapy management. In patients with chronic low back pain, the study established that adherence to

home exercises was assessed as the frequency, duration and intensity of home exercises obtained using a telephone survey questionnaire. Home-based exercise programmes are a practical, cost-effective and long-term form of treatment for chronic low back pain and are as effective as conventional physiological treatment.

A reduction in kinesiophobia, the avoidance of recurrence, and a reduction in disability are the benefits of exercise. The long-term efficacy of the home-based exercise programme is explained by these results. Based on the study, for clinically based exercises, adherence is stated to be 40(50 percent). The efficacy of treatment is compromised by not adhering to the prescribed exercise. At about the same time, the WHO recommended that such adherence measures be used to prevent undermining the legitimacy of a re exercise. An internal health control locus appears to be correlated with autonomous motivation, and a higher health control locus is a strong adherence factor to home exercises. So, above the self-reported amount of workouts at home.

There are several variables that affected adherence in the present study we including difficulty performing the exercise, insufficient time, healthy setting, programme dose, and exercise prescription characteristics. It is clearly shown in this study that the incorporation of written and illustrated exercise instructions is effective as a learning tool to facilitate compliance with LBP exercise therapy. Low compliance rates that may not be effective in producing optimal results for active participation in only such outcome-specific exercise schemes have been promoted through verbal encouragement alone. In order to encourage the continued use of exercise in the management of acute LBP, the effectiveness of a specific adapted exercise is required and it is recommended that the exercise should be accompanied by written and demonstrated instructions to enhance compliance. The present study found that there were significant improvements in pain after home-based exercises which were prescribed.

5. Conclusion

This survey consists of 13 questionnaires containing both "compliance and efficacy". The result of the study suggests that there are factors affecting both compliance and efficacy some clients complain about the difficulty in performing the exercises, and some others complain about the lack of time and improper rest period in between the exercises, whereas few others also complain about fatigue because of improper rest period taken in between the exercise even after advising them. We found that 40(50%) people adherence to the prescribed home exercise, among them 76(95%) felt our treatment is helpful and 59(73.5%) pain relieved. So they are satisfied with therapy and they wish to continue the same.

6. Conflicts of Interest

None.

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