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EFFECTIVENESS OF HOME MANAGEMENT VERSUS OPD MANAGEMENT IN LOW BACK PAIN PATIENTS

ABSTRACT

OBJECTIVE

To Study the effectiveness of Home management versus OPD management in Low back pain patients.

STUDY DESIGN

The study was a quasi experimental study design.

STUDY SETTINGS & PARTICIPANTS

Participants aged between 30 to 70 years suffering from low back pain for more than 3 months were inducted in the study. They were divided into two groups, one which was provided intervention at home and the other which was given physiotherapy in OPD setting.

INTERVENTIONS

A pre and post assessment was done at 6 months based on Oswestry low back pain disability questionnaire. Analysis was done by application of Independent sample t test. P value less than 0.05 was taken as significant.

RESULTS

A total of 100 participants were equally divided for OPD and home management. Oswestry low back pain disability questionnaire was administered pre and post intervention and Independent T test was applied to find the difference between the mean pretest and posttest scores for OPD and home managed patients which were taken 6 months apart. A significant difference was observed as p value was < 0.00

CONCLUSION

The results of the study concluded that OPD management for chronic low back pain not only reduces pain but also reduces chance of disability. But patient satisfaction was higher in home management group in comparison to OPD in personal care.

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[Sarfraz M, Naz E, Habib Ahmad F. Effectiveness of Home Management in Low

INTRODUCTION

The spine consists of 33 vertebrae and five regions that is cervical (7 vertebrae), thoracic (12 vertebrae), lumbar (5 vertebrae), sacral (5 vertebrae), and coccyx (4 vertebrae). Each protecting the spinal cord and provide stability to torso^{1,2}. The spine has got two types of curves, primary and secondary^{3,5}. Primary curves are thoracic and sacral where secondary curves are cervical and lumbar curves^{6,7}. Cervical and lumbar curves being most mobile and are more prone to develop different problems which can be due to posture, muscle spasm or may be due to the problem in disc, present in between the vertebrae^{8,11}.

The largest cause of work-related absence and one of the most common medical problems¹² affecting 8 out of 10 people at some point during their lives is low back pain. Low back pain means a pain, or ache, anywhere on the backside of body, in between the bottom of the ribs and the top of the legs¹³. The pain can come on suddenly, slowly or be the direct result of a fall or injury¹⁴. In most cases, the pain lasts from a few days to a few weeks and usually clears up after about six weeks¹⁵. Area of Lumbar spine encompass the distance from the 1st lumbar vertebra to the 1st sacral vertebra. The most frequent site of low back pain is in the 4th and 5th lumbar segment.¹² It is predicted that it will affect up to 90% of the world's population at some point in their lives, mostly affecting the age group between 35 and 55 years¹⁴. Risk factors for LBP include heavy physical work, frequent bending, twisting and lifting; and prolonged static postures. Psychosocial risk factors include anxiety, depression and mental stress at work.

LBP can be arbitrarily divided into acute, sub-acute or chronic, depending on the duration of the complaints. Acute LBP persists for less than six weeks, sub-acute is between six weeks and three months and chronic LBP lasts longer than three months¹⁵. It is believed that 80-90% of LBP episodes are acute and resolve within six weeks irrespective of the administration or type of treatment. However, 5-10% of LBP patients will develop chronic problems¹⁶.

T. M. Damush et al 2003 found that self-management program can improve and maintain functional status, mental functioning, and self-efficacy to manage future symptoms for 1 year among primary care patients with ALBP.¹⁷ K. Cooper et al 2008 determined the patient-centeredness from the patient's perspective in the context of physiotherapy for chronic low back pain. There were 25 patients who received physiotherapy for low back pain within 6 months. There was evidence of betterment in chronic low back pain¹⁸.

Physiotherapy is one of the effective plans for LBP and can be provided at home as well as in OPD. Exercises and some physiotherapy modalities like hot or cold therapy¹⁹ can be given in some cases, pain modulating agents like TENS²⁰ can be used for temporary pain relief. Postural control is taught to the patient to overcome any muscle imbalance.

Advantage at home is the level of comfort for patient and especially for those patients who are not able to come in OPD. Advantage at OPD is presence of special modalities. Research is scarce where both the methods were compared both internationally and at the local level. Therefore we want to compare the effectiveness of

participate in the study.

DATA ANALYSIS PROCEDURE

Data was entered and analyzed on SPSS version 20. Descriptive variables were both numerical and categorical in nature. Mean and standard deviation was taken out for the numerical variables whereas frequencies and percentages were taken out for categorical variables. Pooled and Paired t test was applied for finding the difference in the mean scores of pre and post test of home versus OPD management groups. P value less than 0.05 was taken as significant.

RESULTS

A total of 100 participants were recruited in the study with a male to female ratio of 1:2 (33% males - 67% females). The participants were selected on the basis of chronic low back pain greater than 3 months. They were equally divided into OPD management and home management. At the time of recruitment they were given a pretest based on the Oswestry Low back pain questionnaire which was repeated after an intervention period of 6 months. The questionnaire was based on routine daily activities and was divided into 10 areas which assessed the effect of pain on their day to day activities.

Independent T test was applied to find the difference between the mean pretest and posttest scores for OPD and home managed patients which were taken 6 months apart. A significant difference was observed as p value was 0.000. When paired t test was applied to find the difference in the pre and post home scores of home managed group mean score for pretest was 36.42±6.9 and for the posttest was 16.38±6.3 with a highly significant p value of 0.000. When paired t test was applied to find the difference in the pre and post home scores of OPD managed group mean score for pretest was 19.42±9.8 and for the posttest was 10±8.9 with a highly significant p value of 0.000.

When intensity of pain was compared between the pretest and posttest and type of pain management there was a reduction of severity of pain from 40% (n=20) to 8% (n=4) in OPD treated patients as compared to home treated patients where reduction was seen from 96% (n=48) to 14% (n=7). Significant reduction in the number of people suffering from pain was observed. Initially in the pretest, n=34 (68%) of the people in the OPD management group had moderate to severe pain, number decreased to n=15 (30%) after 6 months. As compared to home management group where initially all the participants had moderate to severe pain after 6 months their number decreased to n=23 (46%) Table 1 and Table 2.

Regarding personal care, number of participants who were able to take care of themselves independently in the OPD managed group improved significantly from n=21 (42%) to n=38 (72%) after six months of intervention. Significant difference was also observed in the home managed group as the numbers increased from n=2 (4%) to n=28 (56%) Table 1 and Table 2

Regarding the impact of chronic pain on social life in the OPD managed group n=33 (66%) people had a normal social life and remaining had restricted. Their number improved to n=48 (96%) after 6 months of intervention. Whereas in the home managed group initially there were

When asked about the effect of chronic pain on employment or home making it was observed that there were n=24 (48%) in OPD managed group able to perform near normal duties. A number augmented to n=35 (70%). In group only n=5 (10%) were able to perform compared to n=27 (54%) after 6 months.

The effect of chronic pain on travelling revealed that n=26 (52%) were able to travel pain but after 6 months of intervention escalated to n=39 (78%) in OPD managed group where 50% of participants showed a difference was observed in the group where 50% of participants showed after 6 months.

Regarding the other variables that were daily activities lifting of weights shown n=20 (40%) were able to lift heavy weights intervention their number ascended to n=39 (78%) in OPD managed group. As compared OPD managed group improvement was seen in group where 50% of participants showed after 6 months.

Initially n=11 (22%) participants were able to less of miles travelled and with or without OPD managed group. Their number n=19 (38%) after 6 months of intervention managed group there were 13 (26%) bed ridden. After the intervention period to walk a few miles without pain hindered. After the intervention period the number whom chronic pain restricted them negligible in both groups.

Initially n=24 (48%) participants were able to pain for longer duration of time in OPD. After 6 months intervention another 9 patients improvement. Marked improvement home management group. Initially the this group who could sit without pain but n=26 (52%) people were able to sit without duration.

For how long participants who were able to managed group can stand without being pain initially it was n=19 (38%) but after the number levitated to n=34 (68%) managed group there was only 1 category but after 6 months n=28 showed improvement and they were pain.

When inquired about sleeping n=30 (60%) patients in OPD managed group could sleep disturbed by pain and their number increased to n=42 (84%) after 6 months. ment was observed in the home management initially there was only one participant get a proper night sleep but later on increased to n=31 (62%) after intervention

DISCUSSION

The effectiveness of home management in low back pain patients using a self administered questionnaire were followed over a period of six months. post test were carried out on all the 100

The pain intensity was shown to improve from 40% to 8% in OPD managed group in our research where a similar research conducted by K. Cooper stated betterment in chronic low back pain¹⁸. He induced 25 patients receiving physiotherapy for low back pain for 6 months. French S. Cameron stated that heat therapy cold compression therapy can reduce symptoms of acute and sub acute low back pain¹⁹ similarly our study revealed that use of the same modalities with manual therapy improved pain by 38%. Parallel study conducted by Hollinghurst S. sharp D. Ballard K. et al stated that Massage (manual) therapy can provide relief in pain²². Regarding home management, T.M. Damush et al¹⁷ affirmed that self-management program can improve LBP. He conducted a research on Long-term Effects of a Self-management Program for Patients with Acute Low Back Pain. Similarly we noticed that the group following home programme in our study revealed 82% betterment in Pain.

Sarno. John revealed Education and attitude, cognitive therapy and progressive relaxation therapy can reduce chronic pain²³ and our study confirmed the same results when respondents took sessions in OPD and showed improvement up to 33% in social life.

When comes to personal care Damush TM¹⁷ stated marked improvement in functional status, mental functioning, and self-efficacy when managed at home, the same results were reflected by our study which revealed 52% improvement in personal care.

Ebadil S et al conducted a research and concluded that the therapeutic ultrasound and exercise treatment for chronic non specific low back pain is beneficial and found Bohn function (17%) and pain (24%) improved post treatment¹⁴. Similarly our research showed 48% to 70% improvement in OPD managed group and 10% to 54% improvement in home managed group.

DA. Hurley conducted a research to see sleep disturbance in chronic low back pain. He took three intervention groups, one supervised exercise group, second walking programme group and third usual physiotherapy group and concluded the major improvement was seen in walking and supervised exercise group²⁵ like our study revealed improvement in sleep pattern after having supervised OPD sessions.

The major limitation was that confounders like taking pain killers were not taken into account leading to information bias. Occupational history was not asked which could have led to selection bias. Compliance of home managed group for treatment could not be assessed that.

CONCLUSION

The results of the study concluded that OPD management for chronic low back pain not only reduces pain but also reduces chance of disability. But patient satisfaction was higher in home manage group in comparison to OPD in personal care.

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Table 1: Association between type of Management and Oswestry Low Back Pain Disability Questionnaire (Pretest)

Intensity of Pain	Management (n=50)		Home Management (n=50)		P Value
	n	%	n	%	
Personal Care	Mild	35	70	27	54
	Moderate	11	22	16	32
	Severe	4	8	7	14
Lifting	Can Look After Independently	36	72	28	56
	Partially Dependent	12	24	20	40
	Totally Dependent	2	4	2	4
Walking	Can Lift Heavy Weights	34	68	26	52
	Can Lift Medium Weights	14	28	17	34
	Can Lift only Light Weights	2	4	7	14
Sitting	Can Walk with/out Support	19	38	10	20
	Can Walk Max. 1 mile to 100 yards	31	62	40	80
	In bed most of the time	0	0	0	0
Standing	Can Sit without Pain	33	66	26	52
	Can Only Sit Max. 1 hour	16	32	23	46
	Cannot Sit at all	1	2	1	2
Sleeping	can Stand as long as I want	34	68	28	56
	Can Stand Max. 1 hour	16	32	21	46
	Pain Prevents from Standing	0	2	1	2
Social Life	Can Sleep without being disturbed by Pain	42	84	31	62
	Can Sleep only for 2-6 hours	8	16	19	38
	Pain Prevents from Sleeping	0	0	0	0
Travelling	Normal Social Life	48	96	41	82
	Restricted Social Life	2	4	7	14
	No Social Life	0	0	2	4
Employment /Home Making	Can Travel without Pain	39	78	27	54
	Can Travel between 30 mins-2 hours	11	22	23	26
	Pain Prevents from Travelling	0	0	0	0
	Near Normal Office/Home activities	35	70	27	54
	Moderate to Light Work	15	30	18	36
	No Work	0	0	5	10

Table 2: Association between type of Management and Oswestry Low Back Pain Disability Questionnaire (posttest)						
		OPD Management (n=50)		Home Management (n=50)		P Value
		n	%	n	%	
Intensity of Pain	Mild	16	32	0	0	0.000
	Moderate	14	28	2	4	
	Severe	20	40	48	96	
Personal Care	Can Look After Independently	21	42	2	4	0.000
	Partially Dependent	23	46	13	26	
	Totally Dependent	6	12	35	70	
Lifting	Can Lift Heavy Weights	20	40	1	2	0.000
	Can Lift Medium Weights	16	32	18	36	
	Can Lift only Light Weights	14	28	31	62	
Walking	Can Walk with/out Support	11	22	15	30	0.000
	Can Walk Max. 1 mile to 100 yards	36	72	22	44	
	In bed most of the time	3	6	13	26	
Sitting	Can Sit without Pain	24	48	0	0	0.000
	Can Only Sit Max. 1 hour	25	50	37	74	
	Cannot Sit at all	1	2	13	26	
Standing	can Stand as long as I want	19	38	1	2	0.000
	Can Stand Max. 1 hour	31	62	40	80	
	Pain Prevents from Standing	0	0	9	18	
Sleeping	Can Sleep without being disturbed by Pain	30	60	1	2	0.000
	Can Sleep only for 2-6 hours	19	38	35	70	
	Pain Prevents from Sleeping	1	2	14	28	
Social Life	Normal Social Life	33	66	6	12	0.000
	Restricted Social Life	16	32	34	68	
	No Social Life	1	2	10	20	
Travelling	Can Travel without Pain	26	52	2	4	0.000
	Can Travel between 30 mins-2 hours	23	46	36	72	
	Pain Prevents from Travelling	1	2	12	24	
Employment/ Home Making	Near Normal Office/Home activities	24	48	5	10	0.000
	Moderate to Light Work	25	50	36	72	
	No Work	1	2	9	18	

Table 2: Association between type of Management and Oswestry Low Back Pain Disability Questionnaire (posttest)

PRACTICE OF ERGONOMICS AMONG BANKERS OF PRIVATE AND PUBLIC SECTOR BANKS

ABSTRACT

OBJECTIVE

To compare the knowledge and practice of ergonomics among bankers of private and public sector

METHOD

A cross-sectional study was conducted on bankers of Karachi over a period of 6 months. 200 participants were recruited from one of the reputed public sector bank of Karachi for the observational study. Another group of 200 members was taken from different private banks of Karachi. Convenience sampling technique was chosen for data collection by using self-administered Questionnaire. Data entry was done on SPSS Version 20. Mean is calculated by using One sample T-test and considered significant at p value <0.05. In addition, the frequencies and percentages were taken as descriptive statistics for categorical variables.

RESULTS

The workshop on ergonomics revealed statistically significant difference between the mean values 1.82, (p=0.00) and 1.95 (p=0.06) in the private and public sector bankers respectively. In addition, the means of back care were also calculated between the two sectors; showing higher mean values (1.83,) among the public sector bankers as compared to the private sector bankers (1.72, p=0.00).

CONCLUSION

Our result shows that private sector bankers are more vigilant about their health and posture as compared to the public sector. The above result appears to be useful indicators of determining the risk of musculoskeletal problems among bankers.

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