To Assess the Effectiveness of Yoga Therapy in Relieving Lower Back Pain

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ABSTRACT
Chronic low back pain (CLBP) affects millions of people worldwide, and appears to be increasing in prevalence.Not only discomfort but also increased impairment, depressive effects and decreased quality of life were correlated with it. This paper is intended to assess the effectiveness of yoga therapy in lower back pain relief. This was an experimental study.The data were obtained from the research participants by means of the standardized questionnaire utilizing the Likert scale. The study was performed on 60 adults selected as per the inclusion criteria. The results have signified that majority of the respondents (i.e., 50%) belongs to the age group 36-40 years. The study respondents were similar with respect to socio-demographic and medical characteristics. The findings revealed that yoga therapy significantly relieves lower back pain in adults (p-value <0.005). The research has concluded that yoga therapy has a significant influence in relieving lower back pain.

Keywords: Low back pain, Yoga therapy, Adults

I INTRODUCTION

Currently, a large sum of capital is being spent in the implementation of chronic health treatments. These disorders include back problems, obesity, heart failure, etc (Nambi et al., 2014). This lifestyle issues are normally induced by harmful everyday behaviours, which trigger illness and impair people's mobility. Those habits, among many others, include a high-fat diet, bad occupational ergonomics and an insufficiency of physical fitness.

One of the most widely recorded musculoskeletal disorders is non-specific persistent spinal pain that has an adverse economic influence on public health services and a detrimental impact on the quality of life of the sufferer (Holtzman et al., 2013; Sherman et al., 2013). However the medical practitioners find it difficult to establish effective preventive procedures which prevent it from progressing to a chronic type in spite of the seriousness of low back pain issues.

Previous research find that yoga is an efficient procedure to relieve lower back pain; for example,that of (Cramer et al., 2013). Yoga is a nonsurgical, non-invasive and non-rugged alternative that may contribute to beneficial behavioural improvements in relation to health (Wellington et al., 2014). Yoga poses can help to relieve pain and increase agility when done correctly.

(a) Low Back Pain

CLBP impacts and seems to have expanded incidence among millions of people worldwide. Not only discomfort but also increased impairment, depressive effects and decreased quality of life were correlated with it.

Low back pain can vary from persistent, debilitating ache to an immediate, sharp feel. The discomfort is suddenly triggered by an injury or by raised heavy objects, or by age-related spinal improvements it may grow with time. Low back pain extends more than 3 months for certain patients (chronic pain). Chronically poor back pain continues for about one year for around 20 percent.

Latest findings have found that a properly adapted community of yoga poses can help to alleviate discomfort and enhance the capacity to balance and exercise as in ancient Indian religion, western Yoga. As practised now, physical postures, calming exercises and reflection or relaxing are usually mixed.

Numerous studies indicate that the yoga of low back pain is successful. Low back pain affects socially vulnerable individuals disproportionately. It was therefore necessary to assess whether yoga therapy would be well accepted and productive by the community.

II LITERATURE REVIEW

In Yogic terms this vital life force or energy is called 'prana'. And many other terms are used like the Chinese name it as 'chi' or the Japanese term it as 'ki'.

Yoga Therapy is important traditional forms of preventive health care. They effectively release tension and eliminate toxins, both of which balance the mechanisms of the body. In traditional Oriental health care, it is said that disease is initially caused by tension and stress, or, in other words, by dis-ease. Before the symptoms of any particular ailment manifest, there will be tension and toxicity in some areas of the body. It is to our advantage to work on our physical imbalances when they are at the least developed stage, there is, before the tension and toxins have caused damage to the internal organs.
This mechanism calms muscle stress and align the body's essential strengths. Yoga manages the respiration when maintaining the corpse in those places. The critical energy sources are moving routes.

Yoga postures, however, naturally push and stretch certain nerves, muscles and pathways so that the energy may flow easily and relieve the stress in the points. This mechanism balances the whole body and helps it to repair itself.

The great sages of the east were masters of preventive health care. They were able to determine imbalances through traditional diagnostic methods, and thus avoid sickness. They knew Postures, certain breathing exercises, and natural diets to balance out specific conditions.

There is a great deal more to yoga than relaxing and versatility — while these two are the key explanations that an individual should just imagine pursuing yoga. Any other advantages are here which may not be so common:

(a) Greater coordination and power
(b) Facilitates menopause complications
(c) Energy boost
(d) Improves weight reduction and improves metabolism
(e) Physical health strengthened

There are many researches available showing effects of yoga on low back pain.There are no significant work done to know the effect of ashtanga yoga. In the background of the above this research was designed to know the effects of ashtanga Yoga.

III OBJECTIVE AND METHODOLOGY

Objective

(a) Assessment of yoga therapy successful in the alleviation of low back pain.
(b) Materials And Methods
  (i) Research Design- This was a quasy laboratory design to test the efficacy of yoga therapy in adult low back pain relief.
  (ii) Setting-The research was conducted at the Aastha chikitsasansthan.
  (iii) Research Subjects-Adults aged 18-40 years with back pain issues became the target demographic. 60 adults, chosen using random surveys, were surveys for this study. Adult patients with lower reverse functions, aged 18 to 40, should interact well, collaboratively and readily; the criterion of exclusion included: adults not able to engage in the research The key criteria for inclusion included.
  (iv) Intervention- Yoga was given twice a week for three weeks for the research subjects. 60 minutes of yoga is performed in each morning session in the "SBPASS Complete Holistic Therapy Center". Yoga consisted of warmup, meditation, and central gestures as a sequence of yoga aasana motions. Yoga consisted of warmup. Yoga has been performed by a yoga specialist.
  (v) Instrument-The VisualAnalog Scale (VAS) was used to assess back pain. During the pre-test and the post-test, back pain and functionality were assessed with a pre-structured questionnaire to collect data needed to explore yoga impacts on back pain in adults.
  (vi) Ethical Consideration-The Ethical Committee has received ethical consideration for this study. Per respondent was signed with written informed consent in Priors data collection.
  (vii) Data Analysis-For statistical analysis of data, various methods such as percentage (%) analysis, Mean (M), Standard Deviation (SD) was used. ANOVA and t-test were used in computing significance of difference in mean values. (.05) level is used as cut-off for the testing of significance of difference used.All the statistical work has been done on computer using SPSS software underexpert guidance and supervision.

IV FINDINGS AND ANALYSIS

This investigation aimed to examine the effectiveness of yoga therapy in low-duration pain relief. 60 adults were chosen according to inclusion requirements. The testing was undertaken. In terms of sociodemographic and medical features, the respondents were identical.

Table 1
Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-23	3	5.0	5.0	5.0
	24-29	16	26.7	26.7	31.7
	30-35	11	18.3	18.3	50.0
	36-40	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

From the above table it was found that out of the 60 study subjects, 5% respondents belong to the 18-23 age group, 26.7% respondents belong to the 24-29 years age group, 18.3% respondents belong to the 30-35 years age group, 50% respondents belong to the 36-40 years age group,

Table 2
Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	35	58.3	58.3	58.3
	Male	25	41.7	41.7	100.0
	Total	60	100.0	100.0	

From the above table it was found that out of the 60 study subjects, majority of the respondents were female i.e., 58.3% while there were only 41.7% males included in the study.

Table 3
Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$10/12^{th}$	5	8.3	8.3	8.3
	Graduation	42	70.0	70.0	78.3
	Nil	1	1.7	1.7	80.0
	PG or above	12	20.0	20.0	100.0
	Total	60	100.0	100.0	

From the above table it was found that out of the 60 study subjects, 8.3% were $10/12^{th}$ passed, 70% were graduated, 1.7% had nil education and 20% were post graduate.

Table 4
Low Back pain ? History

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No pain	41	68.3	68.3	68.3
	Often	4	6.7	6.7	75.0
	Rarely	15	25.0	25.0	100.0
	Total	60	100.0	100.0	

From the above table, it was found that out of the 60 study subjects, 68.3% were reported that they had no pain history, 6.7% said that they had often low back pain, 25% said that they had rarely experienced low back pain.

Table 5
Daily Routine yoga practice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	59	98.3	98.3	98.3
	Yes	1	1.7	1.7	100.0
	Total	60	100.0	100.0	

From the above table, it was found that out of the 60 study subjects, 98.3% respondents said that they weren't practiced yoga in past while only 1.7% respondents said that they practice yoga.

Descriptive information for the subjects participating in the study is presented in the table below (Table 6).

Table 6
Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Height (M)	60	0.51	1.31	1.82	1.6160	0.00996	0.07718
weight (KG)	60	39.00	46.00	85.00	61.0000	1.10801	8.58260
BMI m2	60	15.70	17.60	33.30	23.4150	0.40879	3.16650
Pre: Back Pain intensity	60	8.00	2.00	10.00	5.9833	0.21719	1.68233
Pre: Roland Morris Disability (RMQ)	60	4.00	18.00	22.00	21.3833	0.15421	1.19450
Post: Back pain intensity	60	1.00	0.00	1.00	0.2000	0.05208	0.40338
Post: Roland Morris Disability (RMQ)	60	0.00	0.00	0.00	0.0000	0.00000	0.00000
Valid N (listwise)	60						

Table 7
Related Samples Wilcoxon Signed Rank test

Pre: Back Pain intensity			Post: Back pain intensity			p value
Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	
5.98	1.68	6.00	0.20	0.40	0.00	<0.005

The above table has signified that there was a significant difference in pre-session and post-session back pain intensity (p-value <0.005).

Table 8
Related Samples Wilcoxon Signed Rank test

Pre: Roland Morris Disability (RMQ)			Post: Roland Morris Disability (RMQ)			p value
Mean	Standard Deviation	Median	Mean	Standard Deviation	Median	
21.38	1.19	22.00	0.00	0.00	0.00	<0.005

The above table has signified that there was a significant difference in pre-session and post-session Roland Morris disability score (p-value <0.005).

V DISCUSSION

The purpose of this research was to examine the effects of back pain in yoga therapy.The study was performed on 60adults selected as per the inclusion criteria. The results have signified that majority of the respondents (i.e., 50%) belongs to the age group 36-40 years. In terms of socio-demographic and medical features, the research respondents were identical.

Previous back pain episodes, heavy physical pressures, poor satisfaction, age, back fatigue and smoking included low back pain risk factors (Latimer et al., 1999; Waddell, 2001). In our study it was found that majority of the respondents (85%) were non-smoker. Treatment and injury because of persistent low back pain may rely on psychosocial challenges than on the physical demands of particular clinical features or workplace (Waddell, 2001). Variable data for the efficacy of non-pharmacological and prescription is provided among the treatments for CLBP (Chou, 2007) management. Yoga would be more affordable, since it can be performed in a community setting and self-administered at home similar to spinal stimulation, physical rehabilitation, and acupuncture. Present cost analysis of yoga activities, however, is important.

The findings revealed that yoga therapy has a big influence on lower back discomfort (p-value <0.005). The literature review has found that yoga can alleviate and enhance both physical and mental function and pain and incapacity (Chang et al., 2016).

In our study it was found that majority of the respondents were female i.e., 58.3%. In a reference study the number of female respondents was found to be 71.7% (Bramberget al., 2017). The females are supposed to be busywith household works throughout the day hence, more prone to back pain problems this may be the reason of the majority of female respondents in study.

In our study it was found that the majority of the study subjects have a good education qualification while there was only one respondent who had nil education qualification.The results also signified that majority of the study subjects are employed (58.3%). The study was performed on adults, majority of the respondents belongs to age group

36-40 years. During this age peoples are supposed to be working and this may be a reason behind the observed results. However, there is not significant difference between employed and unemployed respondents.

In this study, the plurality of participants were identified in the 60 study subjects i.e., 68.3% were reported that they had no back-pain history. However, 1.7% respondents said that they practice yoga in the past. These findings suggest that the respondents were free from any past history of back pain& other comorbidity and also not practicing yoga; therefore, this does not impact a Yoga Therapy intervention trial to test the efficiency of back pain relief.

In our study, it was found that there was a significant difference in pre-session and post-session Roland Morris disability score (p-value <0.005). The results also signified that there was a significant difference in pre-session and post-session back pain intensity (p-value <0.005). The results indicate that the enhancement of lower back functionality is impaired greatly by Yoga therapy.

Yoga makes the body calm and calm, in addition to the pumping of oxygen, back pain, tail and swelling (Kozier 2008). Yoga should be practiced routinely to boost the standing, to walk longer, to move quicker and to do it without leaving any discomfort afterwards. The role and usefulness of yoga will resolve issues correlated with the body's anatomical functions (Brayshaw, 2007). This research also indicates that Yoga has a big impact on enhancing lower back mobility.

VI CONCLUSION

Yoga is as effective in minimising functional back pain as most non-pharmacologic therapies. Compared with normal treatment or no treatment, it seems to be more effective in minimising the intensity of pain or LBP "brothersomeness." The report concluded that yoga therapy has a big impact on lower back discomfort and enhancing lower back mobility. Adults should also advise that these interventions be included as an addition to the management of discomfort. Yoga may have a beneficial impact on stress and other co-morbidity. Yoga seems to be an efficient and healthy treatment for chronically low pain in the back. More study explores the associated impact of low back pain reduction yoga therapy.

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