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Research Article

A QUASI-EXPERIMENTAL RESEARCH TO EVALUATE THE EFFECT OF YOGA THERAPY ON WOMEN EXPERIENCING LOWER BACK PAIN

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Abstract:

Objective: The objective of this research was to evaluate the levels of low back pain and disability along with the efficacy of yoga therapy on disability and low back pain before and after the implementation of Yoga therapy. We also aimed to find the correlation between low back pain level with various demographic variables after Yoga therapy.

Patients and Methods: We carried out this quasi-experimental research on pre and post-test excluding control group strategy at Jinnah Hospital, Lahore from August 2018 to February 2019. The research sample comprised of thirty women who complained about pain in the lower back area. These women were enrolled through purposive sampling in order to evaluate the efficacy of Yoga therapy for lower back pain complainants.

Results: The outcomes of this research reveal that most involved age groups (70%) were from 36 years to 40 years. Most of the females' height was in the range of (150 – 160) cm. Half of the females were in the weight category of more than sixty kilograms. Average BMI of 60% females was in the bracket of (19 – 25). About 60% of females were educated up to secondary education. Majority of females (74%) were housewives. Majority of them used to perform moderate level work, used to travel by bus and also used two-wheelers (motorbikes). Pretest mean pain score was more than posttest mean pain score (90% Versus 40%). The posttest mean pain score was (0.9 ± 0.84). Pretest disability mean score was also more than the posttest disability mean score (13.2% Versus 11.4%). Posttest mean disability score was (12.3 ± 2.17). Outcomes show that Yoga therapy reduces pain in a significant proportion (t- 3.98, P-Value < 0.001).

Conclusion: There was a significant correlation between marital status, pain, transportation facilities, medical measures and related illness. Weight has an association with disability along with transportation facilities and related medical measures.

Keywords: Yoga Therapy, Effectiveness, Women, Low Back and Pain.

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INTRODUCTION:

Back pain refers to a pain which is felt in the back originating from joint structure, bones, nerves and muscles. It is the most repeated pain disorder in the present day and its chronic condition is featured by persistent sharp pain or dull pain disorders of lower back [1]. According to Kimberly B, back pain affects 80% adults in the course of life which makes it a leading epidemic [2]. Other studies also measure the onset of back pain among different populations up to 60% [3]. The most affected age group for back pain occurrence is from 45 years to 65 years. Women dominate male in the occurrence rate of low back pain [4]. The complementary rehabilitation lies in Yoga for low back pain which is holistic in nature and carries recovery features to reduce low back pain among females [5]. Limited research work is available on the effectiveness of Yoga therapy. Therefore, the objective of our research was to evaluate the levels of low back pain and disability along with the efficacy of yoga therapy on disability and low back pain before and after the implementation of Yoga therapy. We also aimed to find the correlation between low back pain level with various demographic variables after Yoga therapy. Research is based on four hypotheses including the first hypothesis, “no significant variation exists between pre and post-test outcomes of low back pain”, second hypothesis, “no significant variation exists between pre and post-test outcomes of level of disability”, third hypothesis, “no significant variation exists between selected demographics and low back pain” and fourth hypothesis, “no significant variation exists between selected demographics and disability level”. The conceptual framework revolves around a model of Nola J Pender’s Health promotion model [6].

PATIENTS AND METHODS:

We carried out this quasi-experimental research on pre and post-test excluding control group strategy at Jinnah Hospital, Lahore from August 2018 to February 2019. The research sample comprised of thirty women who complained about pain in the lower back area. These women were enrolled through purposive sampling in order to evaluate the efficacy of

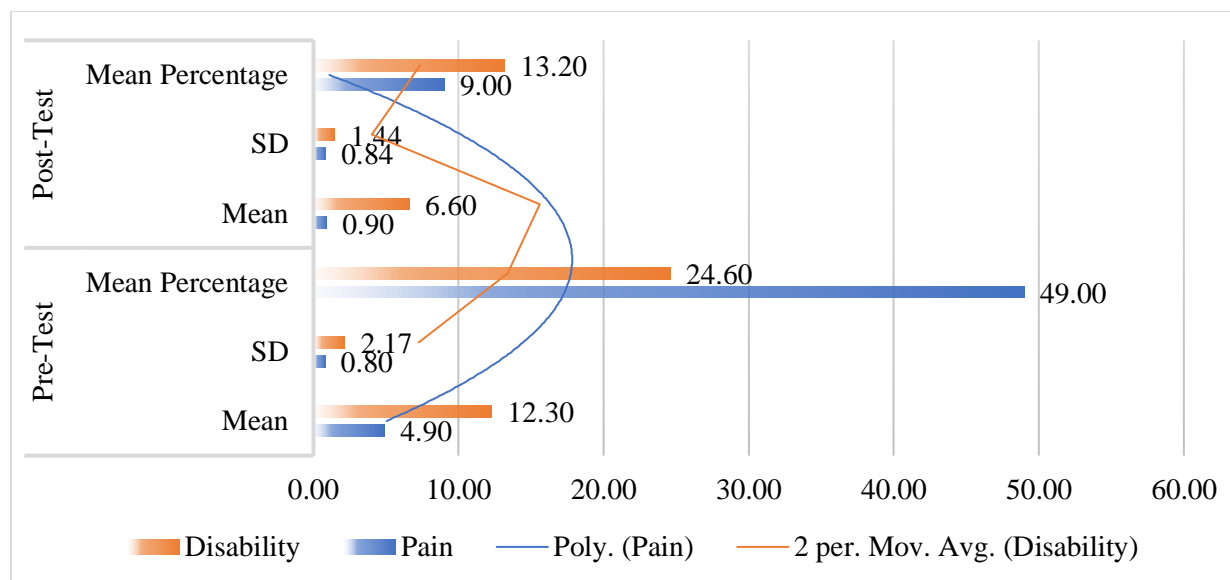
Yoga therapy for lower back pain complainants. The patients were in the age bracket of (30 – 50) years. Patients were asked for informed consent. Ethical review permission was also taken before the commencement of research protocols. A questionnaire was prepared which included fourteen sociodemographic items, ten low back pain disability items along with a (0 – 10) points scale. The questionnaire was validated by an expert. Data was collected through planned interviews. Data collection was completed in three different stages including the pretest, during intervention and posttest. On the first day, we conducted pretest to evaluate the pain and disability levels. We also demonstrated and instructed about Yoga therapy on the first day. Yoga therapy included different steps and exercises. After one month we conducted posttest. Outcomes were studied in the perspective of set objectives by using inferential and descriptive statistics.

RESULTS:

The outcomes of this research reveal that most involved age groups (70%) were from 36 years to 40 years. Most of the females’ height was in the range of (150 – 160) cm. Half of the females were in the weight category of more than sixty kilograms. Average BMI of 60% females was in the bracket of (19 – 25). About 60% of females were educated up to secondary education. Majority of females (74%) were housewives. Majority of them used to perform moderate level work, used to travel by bus and also used two-wheelers (motorbikes). Pretest mean pain score was more than posttest mean pain score (90% Versus 40%). The posttest mean pain score was (0.9 ± 0.84). Pretest disability mean score was also more than the posttest disability mean score (13.2% Versus 11.4%). Posttest mean disability score was (12.3 ± 2.17). Outcomes show that Yoga therapy reduces pain in a significant proportion (t- 3.98, P-Value < 0.001). Detailed outcomes about pain and disability during pretest and posttest are given in Table with respect to Mean, SD, Mean Percentage and Difference in the mean percentage.

Table: Pretest and Posttest comparison of Pain and Disability

Area	Pre-Test			Post-Test			Difference in Mean Percentage
	Mean	SD	Mean Percentage	Mean	SD	Mean Percentage	
Pain	4.90	0.80	49.00	0.90	0.84	9.00	40.00
Disability	12.30	2.17	24.60	6.60	1.44	13.20	11.40



DISCUSSION:

All over the world women are increasingly facing the incident of low back pain. According to Peter, low pain causes reduced and restricted activity among those who are under the age of forty-five years [7, 9]. Women dominate men in terms of low back pain occurrences. It is estimated that ninety percent population experiences low back pain at the same time and among adult's, fifty percent suffer from low back pain. A higher reoccurrence rate of 85% has been reported for low back pain in the lifetime [10].

We report that women experienced a moderate level of disability and pain. Wong also presented similar outcomes back in 2010 in a series conducted to evaluate low back pain and disability among females. The outcomes of this series reveal that 72% of women experienced a moderate level of low back disability and pain [11, 12]. Such patients also miss their offices and frequently require to leave. Yoga therapy brings effective outcomes among affected women and Yoga significantly reduces disability and pain in an effective way [13]. Various other authors also support the implementation of Yoga to manage low back pain and related disability (P-Value > 0.05) [14].

CONCLUSION:

There was a significant correlation among marital status, pain, transportation facilities, medical measures and related illness. Weight has an association with disability along with transportation facilities and related medical measures. Therefore, Yoga therapy is an effective approach to reduce disability and pain caused due to low back pain along with improved life quality among women experiencing low back pain.

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