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A Study to Evaluate the Effectiveness of Isometricexercise in Reducing Pain and Improved Functional Performance among the Patients with Osteoarthritis in Selected Hospital, Krishnagiri

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ABSTRACT

A true experimental study was performed to assess the effectiveness of Isometric exercise in reducing pain and improved functional performance among the patients with osteoarthritis in selected hospital, Krishnagiri. Forty patients was selected using probability simple random sampling technique. Data were collected using a demographic, questionnaire, numerical pain intensity scale and modified WOMAC scale followed by pretest and Administration of isometric exercise for after seven days post test was conducted by the same questionnaire. The data obtained were analyzed using descriptive and inferential statistics. The study concluded that Effectiveness of Isometric exercise on level of pain and functional performance

Keywords*: Effectiveness, Isometric Exercise, Pain and Improved Functional Performance, Osteoarthritis.*

INTRODUCTION

Osteoarthritis (OA) is the most common form of arthritis and a leading cause of disability in older adults. It accounts for more limitations in walking, stair climbing, and other daily activities than any other disease. The individual, societal, and financial burdens of this disease warrant rigorous scientific investigation in order to identify coping strategies for those affected.

The pathology is the OA which causes body structural and functional limitations such as muscle weakness, decreased joint range of motion (ROM), joint instability, fatigue, stiffness, and pain.

The consequences are activity avoidance, muscle atrophy, difficulty in performing functional tasks involving ambulation and transfer and reduced quality of life.

OBJECTIVES

1) To assess the level of pain among the patients with osteoarthritis of before & after administering isometric exercise in both experimental and control group.
2) To evaluate the effectiveness of isometric exercise in reducing pain and improved functional performance among patients with osteoarthritis in selected hospital, Krishnagiri.
3) To compare the level of pain and functional performance among the patients with osteoarthritis of experimental and control group.
4) To find out the association between level of pain and functional performance of patients with osteoarthritis and selected demographic variables.

HYPOTHESES

H01: There is no significance relationship between the effectiveness of isometric exercise in reducing pain and improved functional performance among the patients with osteoarthritis

H02: There is no significant relationship between effectiveness of isometric exercise in experimental group with selected demographic variables.

ASSUMPTION

Isometric exercises may be effective in reducing pain and improving the functional performance among the knee osteoarthritis patients.

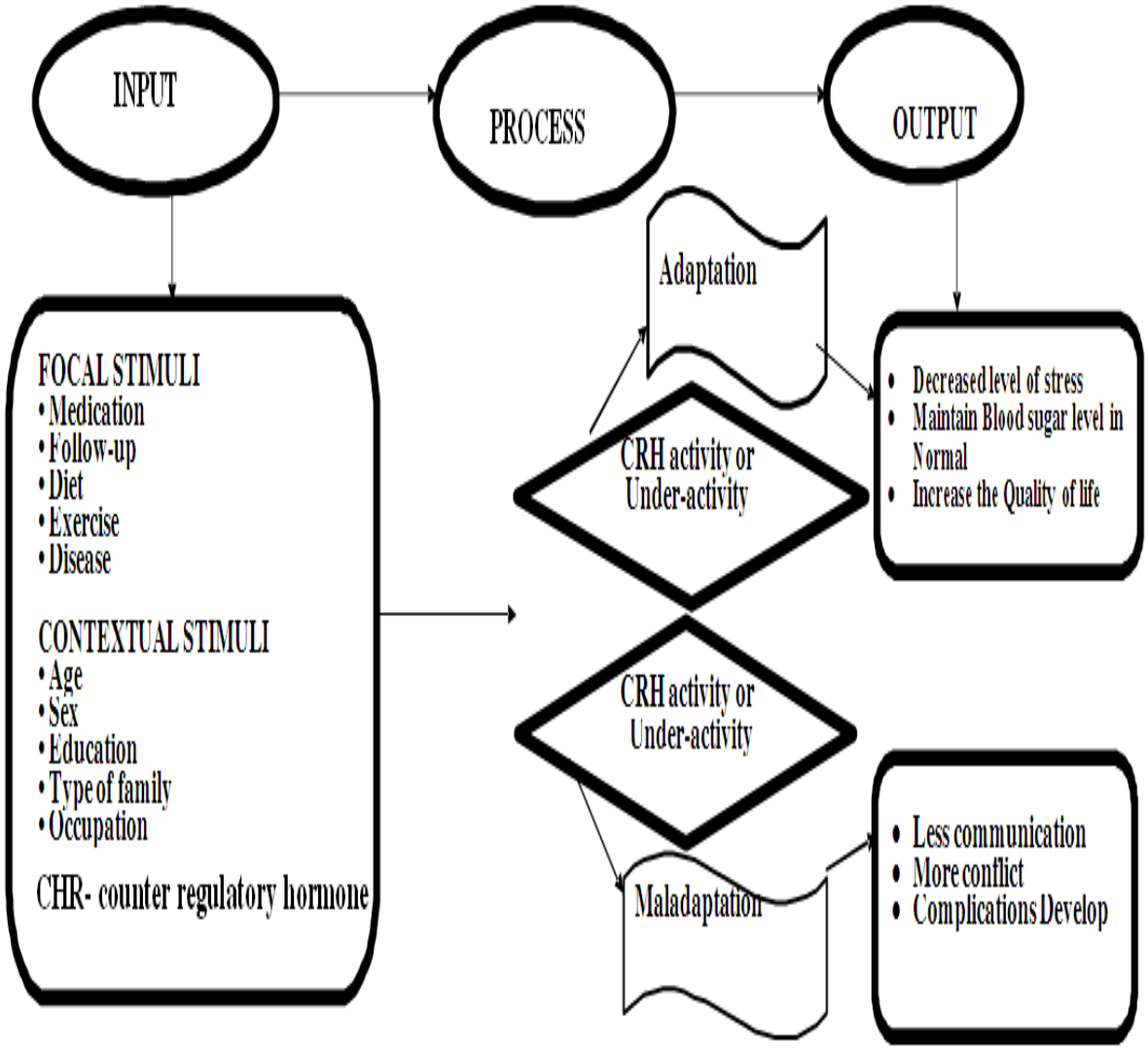

Fig.1. Conceptual Framework Based on Modified Roy's Adaptation Model 1996

RESULT

Level of pain in the experimental group, the post test mean score was 3.20 with S.D 1.24 and in the control group the post test mean score was 6.55 with S.D 1.36. The calculated't' value of 8.153 was statistically highly significant at $p<0.001$ level. Level of functional performance in the experimental group, the post test mean score was 31.05 with S.D 11.88 and in the control group the post test mean score was 60.35 with S.D 15.09. The calculated 't' value of 8.916 was statistically highly significant at $p<0.001$ level.

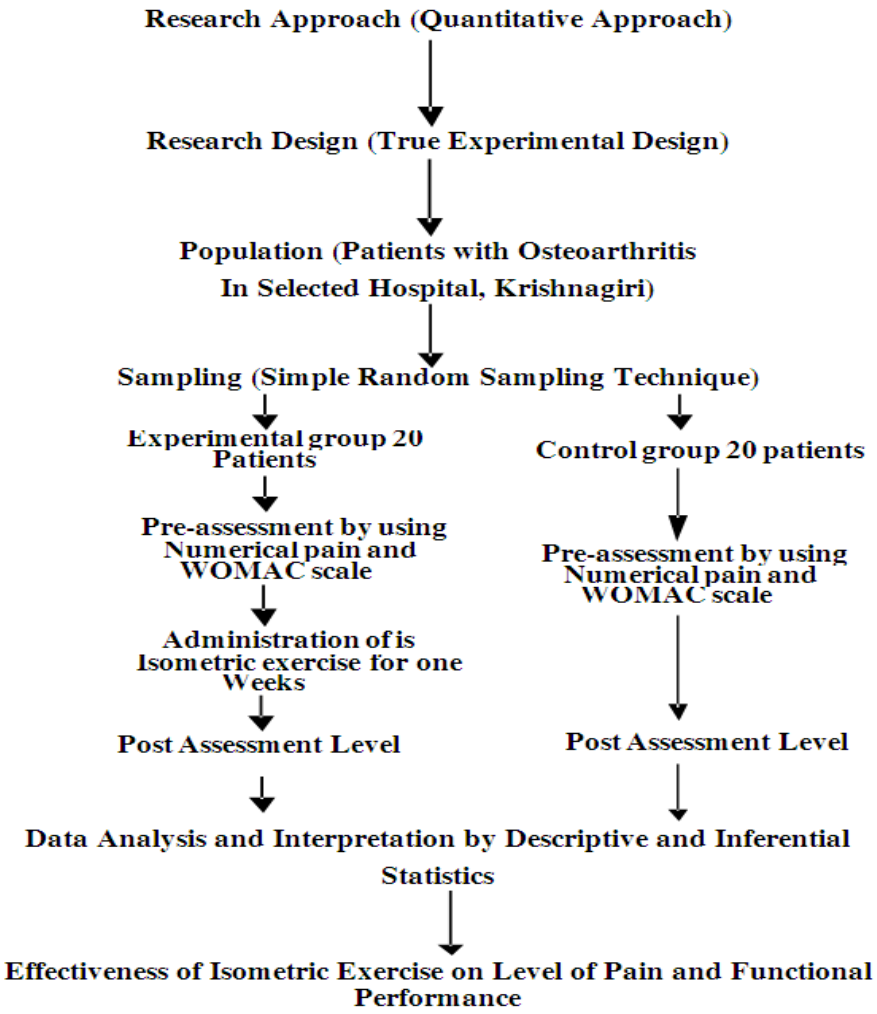

Fig. 2. Schematic Representation of Research Study

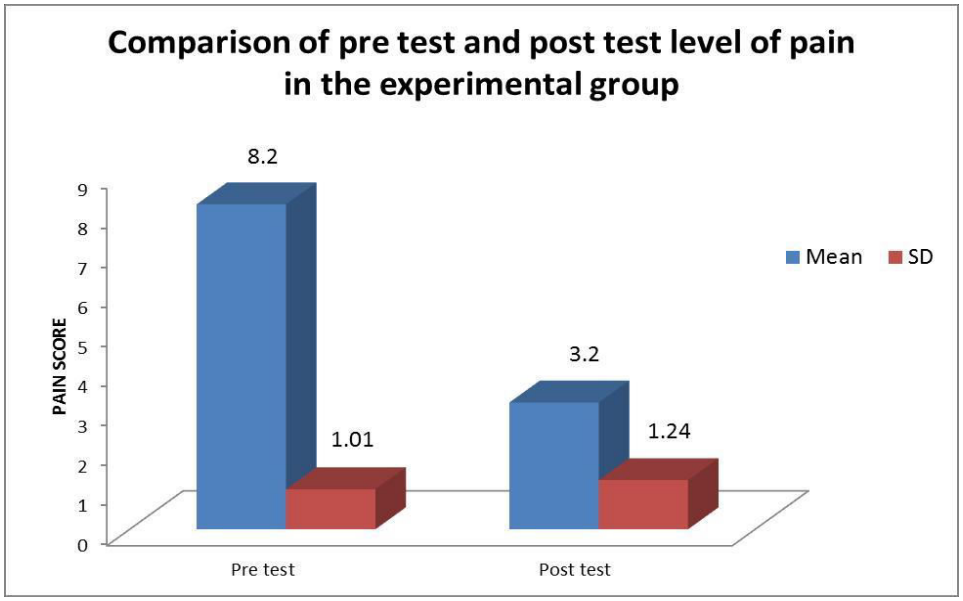

Fig.3. Comparison of Pre-Test and Post-Test Level of Pain in the Experimental Group=

The above bar diagram represents that in the experimental group, the pre-test mean score was 8.20 with S.D 1.01 and the post-test mean score was 3.20 with S.D 1.24. The calculated't' value of 15.811 was statistically highly significant at $p<0.001$ level which clearly shows that there is a significantly mild level of pain among patient with osteoarthritis before and after giving the isometric exercise in the experimental group.

CONCLUSION

The study concludes that the isometric exercises had significant effect by reducing the pain and improving the functional performance in the experimental group than the control group. As by concluding that the stated null hypothesis was accepted.

REFERENCES

1) Brunner & Suddarth (2004) Text Book of Medical Surgical Nursing 10th Edition Phladelphia Lippincott Williams & Wilkins P.No.1627.1628
2) F.A.Davis (1992) "Knee pain & Disability" 3rd Edition New Delhi Jaypee Brothers publications P.No.149-154
3) John Crawford Adams, Davis L. Hamblen (2001) "Outlive of Orthopaedics, 13th edition P.No.126.128. Churchill Livingstone, Harcourt Publishers Limited.
4) John Ebenezer (2000). Text Book of orthopedics 2nd edition, New Delhi, Jaype Brothers P.No.393.
5) Joyce M. Black (2009) Medical-Surgical Nursing 8th edition. Missouri Elsevier publications
6) Lewis "Medical Surgical Nursing". 7th edition Missouri Mosby Elsevier Publications P.No. 1693-1702
7) Phipps (2009) Medical Surgical Nursing 8th edition Published by Elsevier U.P. India P.No. 1618-1638
8) Prakash P.Kotwal, Mayilvahanan Natarajan (2005). Text Book of Orthopedics, 2nd edition New Delhi, Jaypee Brothers .P.No.393.
9) Abdul Kalam Azad. [2011] Role of muscle strengthening exercise on osteoarthritis'' Indian Journal of Physitheraphy, vol.5P.No.50-52.
10) A.Mahajan S.Verma, V.Tandon (2005),: Osteoarthritis–Jammu Physiotherapy India Journal- vol 53, P.No-634-638"
11) Aparna Sarkar, Nitish Bansal (2010) Effects of obesity on quadriceps dynamic strengthening and isometrics exercise for the treatment of knee osteoarthritis". British Journal of Sports Medicine vol .44 .No. 13
12) Berman BM. (2204) "Effectiveness of acupuncture as adjunctive therapy in osteoarthritis of the knee". American Journal of Rheumatology Vol. 12 P.No.141.
13) Brenda Good Man (2011) "Risk of knee Osteoarthritis is greater than the lifetime risk of diabetes" Arthritis Today vol 4 P.No. 250-252
14) Carol Eustice (2007) "The effect of exercise on older adults and obese people." Issues of Arthritis care and Research. Vol 4. P.No.410-412
15) http..//www.emedicine.ehealth.com/osteoarthritis
16) http..//www.osteoarthritis.research_today.net
17) http..//www.emedicine.medscape.com
18) http..//www.clinicaltrails.gov