

Efficacy of two Multimodal Treatments on Physical Strength of Occupationally Sub Grouped Male with Low Back Pain

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Introduction

The authors in this different occupational male with low back pain have attempted to design multimodal treatment to develop physical strength. The multimodal treatment includes ultrasound, short wave diathermy, lumbar strengthening and dynamic muscular stabilization techniques experimented on five subgroups on the basis of their occupation [1]. The different subgroup includes sedentary, desk worker, movement job, shopkeeper and others. The total 102 subject were categorized into two group that is conventional group and DMST group, the conventional group includes ultrasound, short wave diathermy and lumbar strengthening exercise and in DMST group was requirement of muscle with direct attachment to lumbar spinal segment are stabilize the joints, neutral zone and prevent excessive deflection [2,3].

In this study large number of outcome measures includes level of pain and physical strength. Level of pain was assess using visual analogue scale where as physical strength was measured by pressure measuring device in terms of back pressure changes and abdominal pressure changes [4]. The categorization of subgroup on the basis of his occupation including "sedentary" includes physical instructor, policeman and house servant; "desk workers" were constructor, medical representative and marketing jobs; "shop keeper" were general shopkeepers and others were students with some occupation, teachers researchers, farmers and heavy load lifter [5].

This study were cited by seven author, "Robert Froud" conducted a systematic review and meta-regression and reports that the absence of associations between effect size and impact factor, reporting sources of funding, and conflicts of interest reflects positively on research and publisher conduct in the field [1]. "Suenimeire Vieira" experiment to determine the association between abdominal muscle strength and quality of life among older adults with lumbar osteoarthritis and this study suggested older adults with lumbar osteoarthritis with greater abdominal muscle strength have a better quality of life [2]. In another study "Safoora Ebadi" comparing therapeutic ultrasound versus placebo or versus exercise alone did not report on overall satisfaction with treatment, or quality of life [3]. There was low quality evidence that spinal manipulation reduces pain and functional disability more than ultrasound over the short to medium term. There is also very low quality evidence that there is no clear benefit on any outcome measure between electrical stimulation and therapeutic ultrasound; and that phonophoresis results in improved SF-36 scores compared to therapeutic ultrasound. "Martin Gustaf Byström" explain in research titled 'Motor Control Exercises Reduces Pain and Disability in Chronic and Recurrent Low Back Pain A Meta-Analysis' and conclude that in patients with chronic and recurrent low back pain, Motor Control Exercises seem to be superior to several other treatments [4]. "Mai Xu" found in his study that Acupuncture achieved better outcomes when compared with other treatments [5]. Acupuncture is an effective treatment for chronic low back pain, but this effect is likely to be produced by the nonspecific effects of manipulation. "Xue-Qiang Wang" found in the study titled A Meta-Analysis of Core Stability Exercise versus General Exercise for Chronic Low Back Pain and suggested that Compared to general exercise, core stability exercise is more effective in decreasing pain and may improve physical function in patients with chronic LBP in the short

term [6]. However, no significant long-term differences in pain severity were observed between patients who engaged in core stability exercise versus those who engaged in general exercise. "Suraj Kumar" in his another publication titled Comparative efficacy of two multimodal treatments on male and female sub-groups with low back pain (part II) conclude that DMST as well as CONV treatments are more effective in males than the females. Study also concluded that subgroup "female" may need more clinical attention during the management of LBP [7].

In our main study on comparing, the pretreatment average of BPC, APC and pain in all subgroup of two treatments were found to be the same ($P>0.05$) while in both the treatment (within), these variables improved that is change from pre to post significantly ($P<0.01$) in all subgroup and improvement was comparatively high in DMST than CONV. The two treatment subgroups improved differently. The comparisons showed that in both the treatments desk workers and shopkeepers improved the most while movement job and others the least. This study conclude that both treatment group found to effective but subgroup of DMST showed more significant improvement in whole variables [7]. The conventional group lacks because of the limited muscle group were involved and not aimed at improving the strength in term of back pressure changes and abdominal pressure changes. The DMST group more improved may be due to restoration of muscle strength in combination with balance, posture, position and co-ordination in presence of pain and functional disability.

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