**REFERENCES:**


Disclosure of Interests: None declared


**FRIO712-HPR**

**Efficacy of Graded Activity With and Without Daily-Monitored-Walking on Selected Clinical Attributes of Patients With Concomitant Low-Back Pain and Type-2 Diabetes**

Opeyomi Idowu1, Ade Adeniyi2, 1University of Benin, Department of Physiotherapy, Benin City, Nigeria; 2University of Ibadan, Department of Physiotherapy, Ibadan, Nigeria

**Background:** Graded Activity (GA) is efficacious in managing clinical attributes in patients with Low-Back Pain (LB) in the general population.[1,2]. It is unclear whether GA is efficacious in managing these clinical attributes in patients with concomitant LB and Type-2 Diabetes (T2D) or additional daily-monitored-walking as a form of physical activity will be required.

**Objectives:** The objectives of this study were to investigate the effects of GA with and without daily-monitored-walking, and also to compare the efficacy of the two treatment modes on selected clinical attributes of patients with concomitant LB and T2DM.

**Methods:** A single-blind controlled trial involving 58 patients (mean age: 48.3±9.4 years, 64.7% females) with concomitant LB and T2DM who received treatment twice weekly for twelve weeks was conducted. Participants were randomized into GA or GA with daily-monitored-walking (GAMW) groups. Pain Intensity (PI), Back Extensors Endurance (BEE), Abdominal Muscular Endurance (AME) and Glycaemic Control (GC) was assessed using Visual Analogue Scale, Biering-Sorensen test, flexor endurance test and HBA1c analyser respectively at baseline, 4th, 8th and 12th week. Data were analysed using repeated measures ANOVA, Student’s t-tests and Mann-Whitney U tests and Unpaired t-tests at α = 0.05.

**Results:** At baseline, treatment groups were not significantly different in their physical and clinical characteristics. There were within-group significant differences in PI, AME and BEE in each of GA and GAMW groups across the time points of the study. Within group difference on GC was significant for GAMW (6.3±0.9%, 5.7±0.7%) but not GA (6.3±0.9%, 6.3±0.9%) groups. There were no significant difference between the effects of GA and GAMW on PI at week 4 (Median=-0.78, IQR=0.06; Median=-1.72, IQR=0.06; Median=-1.71, IQR=0.18) and week 12 (Median=-1.46, IQR=0.10; Median=-1.53, IQR=0.18) of the study. Further there was no significant difference between the effects of GA and GAMW on AME at weeks 4 (6.6±0.10; 6.6±0.09) and 12 (5.16±0.05; 5.19±0.09) of the study. Graded activity with daily-monitored-walking had higher improvements than GA alone on BEE (7.34±0.1; 7.25±0.1) at week 8, but not at week 4 (2.37±0.08; 2.36±0.01) or 12 (4.5±0.06; 4.53±0.08) of the study. The GAMW participants also had significant improvement on glycaemic control than GA participants (-0.5±0.2%, -0.6±0.5%) at week 12. Graded activity relieves back symptoms via the development of a sense of control over pain, elimination of pain avoidance as well as by improving overall physical fitness/function.[3]

**Conclusion:** Graded activity with daily-monitored-walking produced positive effects on GC and yielded better improvement on BEE.