

13th World Congress on

Physiotherapy, Physical Rehabilitation & Sports Medicine

October 06-07, 2025 | Dubai, UAE





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**PHYSIOTHERAPY, PHYSICAL
REHABILITATION & SPORTS MEDICINE**

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Letter of Acceptance

Date: March 18, 2025

To

Dr. Arindam Seth

Founder, Physio Care Clinic, West Bengal, 743145, India

Thank you for submitting the abstract

We are glad to inform you that your abstract entitled on **“Effectiveness, importance and impact of biofeedback-based training with Pheeze (a wearable device measuring sEMG and ROM) in patients with non-specific low back pain”** has been accepted by the committee for **Oral Presentation (Virtual mode)** at the scientific sessions of **“13th World Congress on Physiotherapy, Physical Rehabilitation & Sports Medicine**, which is scheduled on **October 06-07, 2025 in Dubai, UAE**.

Theme: *“Innovations in Physiotherapy: Exploring new technologies and techniques”*.

Conference home page: <https://physiotherapymeetings.com/>

We look forward to see you at Dubai, UAE.

With our best wishes,

Renaldo Thomas

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Disclaimer: This invitation is to attend Physiotherapy Conference-2025 Dubai, UAE only

Effectiveness, importance and impact of biofeedback-based training with Pheeze (a wearable device measuring sEMG and ROM) in patients with non-specific low back pain

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Background: Biofeedback training using surface Electromyography (sEMG) is proven to be effective in rehabilitation to improve the overall wellbeing of the musculoskeletal system. The available biofeedback training systems only focus on creative representation of the muscle activity in terms of audio and visual aids. A missing piece in this entire system is to set targets based on the clinical condition of the user and then focus on meeting these targets to eventually help the users improve their motor activity and control.

Method: Pheeze test (measuring sEMG and ROM) was done on 14 patients (9 Female, 5 Male) with non-specific low back pain, while performing lumbar flexion and extension. sEMG of Rectus Abdominus, Multifidus muscles and ROM are recorded. All the 14 patients underwent training with an experimental rehabilitation protocol for an average of 10 weeks. After every training session sEMG and ROM targets are updated and Pheeze tests are taken for comparison. To motivate the users, gamification themes are used as visual and audio aids. The software application with cloud services tracked the progress and set automated targets that are updated throughout the training process.

Results: 86% (12) of the patients showed improvement. Where 50% (7) showed improved symptoms in both sEMG and ROM, 36% (5) showed improvement either in ROM or sEMG and 14% (2) showed no improvement.

Applications: Patients with musculoskeletal, neurological disorders can be benefitted by using the Pheeze biofeedback training. Other applications include pelvic floor muscle strengthening, sports rehabilitation to improve strength, endurance & agility.

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