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August 2022

Newsletter IPNFA® research committee

*Dear reader, we hope you can enjoy again new information from the IPNFA® society and the influences from other physiotherapy associations and contributors for high quality physiotherapy. We checked the web, and several resources, and we received from various IPNFA® member some basic information. naturally **several abstracts** with a link to the original publication. We hope that also this edition finds your appreciation and you enjoy reading about PNF related developments*

I wish a joyful reading. Fred.



Tackling the EBP barriers

The world physiotherapy (former WCPT) announced last May that PEDro is offering a campaign to increase the use of Evidence Based Physiotherapy (EBP). There was a review study inspiring the PEDro organization to tackle the barriers. This was:

Paci M, Faedda G, Ugolini A, Pellicciari L. Barriers to evidence-based practice implementation in physiotherapy: a systematic review and meta-analysis. Int. J. Qual. Heal. Care 2021;33:mzab093.: <https://doi.org/10.1093/intqhc/mzab093>

A new campaign, #PEDroTacklesBarriers, will focus on the four biggest barriers to evidence based physiotherapy. Each month the campaign, organized by the [Physiotherapy Evidence Database \(PEDro\)](#), will share tips on how to tackle a particular barrier.

Lack of time was the most frequently encountered barrier, reported by 53% of physiotherapists. This was followed by language (36%), lack of access (34%), and lack of statistical skills (31%).

Watch the #PEDroTacklesBarriers campaign video [#PEDroTacklesBarriers to evidence-based physiotherapy - YouTube](#)

Between May 2022 and April 2023, the campaign will focus on each of the four biggest barriers to encourage physiotherapists around the globe to work collaboratively to implement the most relevant strategies into their practice. Physiotherapists who have encountered these barriers and developed strategies to overcome them will share their experiences, and the campaign will also share information about the methods used to conduct, analyze, report and interpret randomized controlled trials, to help physiotherapists tackle the barrier of lack of statistical skills.

The PEDro initiative is supported besides the World Physiotherapy by the: Australian, Italian French and Dutch associations for physiotherapy.

Anna Rivier spoke at a national conference in Germany Date: 14.05.2022, Bad Soden (near Frankfurt). “Moving the future together”

The title: **Perception to action, action to perception. Senso-motoric loop in the PNF - concept.**

The PNF Philosophy and Basic principles have been explained with an example of a patient after stroke and a PNF intervention on the stairs was used to illustrate shortly the clinical application of PNF based facilitations.



Title:

Perception for Action – Action for Perception, the senso-motoric loop from the PNF concept.

The PNF-concept with its focus on Proprioceptive Stimulation is illustrated with two Patient examples; One after stroke and one with Parkinson's disease.

PNF is an established intervention concept, with its own philosophy as a starting point. The components of the PNF-Philosophy, do exist already since 70 years and they have been confirmed by research in later years. The suggestions from Physiotherapist Maggie Knott, medical doctor and neurophysiologist Dr. Hermann Kabat and their colleagues, has been proven and further developed towards today's standards of Physiotherapy.

The PNF-Philosophy consists of a positive, functional and total (holistic) approach. Secondly, the Mobilization of Reserves (from the patient) and the use of Principles of motor control and motor learning.

PNF introduced already in the 1940's repetitions and intensive training, nowadays general accepted principles in motor learning. ^[1] Furthermore, a positive approach and the stimulus for motivation belong as a standard part to learning and Training processes. ^[1]

From 2002 the ICF has been an standard component within the PNF-concept. The ICF is an important basis for clinical reasoning. The objectives for intervention are discussed with the patient and defined in accordance with the „SMART“ criteria. The movement analysis in PNF finds its foundation motor control research ^[2]. PNF offers both; "Perception for Action" ⁽³⁾ through the use of the basic principles (sensory input) and "Action for Perception" ⁽³⁾ through the facilitation and support for motor activity in various gravity circumstances and goal oriented ADL-context. Based upon the comprehensive philosophy of the PNF-concept, there is a large potential for knowledge transfer to obtain a modern, comprehensive and accepted therapy approach.

Searching... and we found from our Brazilian colleagues two new publications.

Here the **first impressions** by providing **the abstracts**, naturally with a link (DOI) to the full text.

Jéssica da Silva Becker Correia, Gustavo Andrade Martins, [Leandro Giacometti da Silva](#), Erik Menger Silveira, Tainara Steffens, Caroline Pietta-Dias, Eduardo Lusa Cadore

COMPARISON OF THE ACUTE EFFECTS OF THE PNF AND STABILIZATION METHODS (FIFA 11+) ON THE DYNAMIC BALANCE OF UNIVERSITY FOOTBALL ATHLETES

Open Science Research - ISBN 978-65-5360-055-3 - Editora Científica Digital - www.editoracientifica.org - Vol. 1 - Ano 2022

ABSTRACT

Background: Football is the most practiced sport in the world, encompassing professional and amateur athletes, motivating FIFA to elaborate the 11+ Manual. Joint and trunk stabilization exercises are prominent in the rehabilitation and injury prevention process aiming at improving the static and / or dynamic balance. There are proprioceptive neuromuscular facilitation techniques (PNF) with the same objective, such as little used rhythmic stabilization in the sports environment.

Objective: to evaluate the acute effects of the balance exercises protocol proposed by FIFA 11+ compared to the same protocol added to the PNF concept on the dynamic balance of field soccer athletes of the university team.

Population: Field soccer athletes of the Ulbra / Canoas university team (n=18).

Data Collection Procedure: They were evaluated through static baropodometry and SEBT in data collection and immediately after performing a single intervention with PNF and FIFA 11+.

Results: Intervention with PNF increased amplitude in the AM direction and POST performed with leg E ($p < 0.05$). The baropodometry analysis showed a significant increase ($p < 0.001$) in the MEP of the E leg after the FIFA11 + intervention, reduction ($p < 0.05$) in the MEP in the D foot after PNF. On the surface, there was a significant increase ($p < 0.001$) after FIFA11 + in the lower limb E and D.

Conclusion: PNF associated with FIFA 11+ has better acute effects for the dynamic balance of university athletes associated with reduced plantar pressures and maintenance of the contact surfaces.

Keywords: soccer, postural balance, facilitation.

<https://dx.doi.org/10.37885/211207014>

"Wherever the art of medicine is loved, there is also a love for humanity." – Hippocrates

"Medicine and therapy is a science of uncertainty and the art of probability."
(William Osler)

Josepha Karinne de O. Ferro | Alberto G. de Moura Filho | Keytte Camilla S. de Amorim | Claudia Regina O. de P. Lima | Jose Vicente P. Martins | Paulo Jose M. Barboza | Andrea Lemos | Daniella A. de Oliveira

Electromyographic analysis of pelvic floor muscles during the execution of pelvic patterns of proprioceptive neuromuscular facilitation-concept: An observational study

. Neurourol Urodyn. 2022;1 - 10

Abstract

Objective: To assess the effect of pelvic patterns of proprioceptive neuromuscular facilitation (PNF-concept) on pelvic floor muscles (PFM) recruitment, as well as the electromyographic activity of muscles synergic to the pelvic floor in healthy women.

Methods: Observational study conducted with 31 women aged between 18 and 35 years, with mean age of 23.3 [3.2] (22.1–24.4). PFM activity was monitored by surface electromyography during the combination of isotonic technique of four pelvic patterns of PNF-concept (i.e., anterior elevation, posterior depression, anterior depression, and posterior elevation). The electromyographic signal was analyzed using root mean square amplitude. Two-way repeated measures analysis of variance was performed to analyze differences in PFM activity between types of contraction (i.e., concentric, isometric, and eccentric) and the four pelvic patterns.

Results: PFM activity did not differ among the four pelvic patterns. However, PFM activity was significantly different between the combination of isotonic technique and baseline, $F(1.6, 48.2) = 71.5$; $p < 0.000$, with a large effect size (partial $\eta^2 = 0.705$). Concentric (22.4 μV [1.1]), isometric (17.3 μV [0.6]), and eccentric (15 μV [0.5]) contractions of combination of isotonic technique increased PFM activity compared with baseline (10.8 μV [0.4]) in all pelvic patterns. By analyzing the electromyographic activity of the muscles synergistic to the pelvic floor, there is effect of the interaction of the type of contraction, the pelvic pattern of the PNF concept, and the synergistic muscles on the myoelectric activity of the external anal sphincter, $F(3.2, 96.5) = 5.6$; $p < 0.000$, with a large magnitude of effect (partial $\eta^2 = 0.15$). In the anterior elevation pattern, the muscles synergistic to the pelvic floor present synergy in phase with the PFM, and in the posterior patterns there was a decrease in the activity level of all synergistic muscles, without changing the activity level of the PFM.

Conclusion: PFM activity did not differ among the four pelvic patterns of PNF-concept. Nonetheless, the combination of isotonic technique showed a significant effect on PFM compared with baseline, with greater PFM activity during concentric contraction. Pelvic patterns of PNF-concept may be used to increase PFM recruitment in young healthy women.

KEYWORDS

abdominal muscles, electromyography, motor control, muscle stretching exercises, physiotherapy modalities, proprioceptive neuromuscular facilitation

doi: <https://doi.org/10.1002/nau.24981>

Physiotherapy in chronic low back pain, what might PNF contribute

PT, Zeitschrift für Physiotherapeuten, June, 2022

A short publication in the German journal for physiotherapy from [Barbara Dopfer](#), IPNFA® advanced instructor. (freely translated and summarized by Fred)

A successful treatment for people with chronic pains syndromes will only succeed in a multi modal setting. The medical treatment with the correct medication, the psychological care and the occupational and physical therapies with their comprehensive therapy possibilities will act together for an improvement of the life conditions of the involved persons. Specific physiotherapy concepts are able to contribute to the treatment.

Since long it is known that physical activity combined with education is an important component in therapies for non-specific chronic low back pain (NCLBP). The PNF-concept defined in its philosophy to obtain the best possible functional level in activities and participation. The active approach stimulates physical experience for posture and movements, engages the confidence of the participant in his/her own movement competences and senso-motoric learning processes.

Several review studies (*Pincao G et al. 2022; Pouramahdi M et al. 2020; Arancio FL et al. 2021*) indicate a successful use of the PNF-concept. Various RCT demonstrated improvements after using the PNF-concept for CLBP for pain intensity, functional capabilities and patient satisfaction (*Areeumdongwong P et al. 2017; Kofotolis N et al. 2006; Mavromoustakos S et al. 2015*).

In terms of education, the clients need to understand that learned non-use behavior is contra productive, and the return to activities is the first step to improve their own situation. To ensure, that in spite of pain experience they become active, an explanation for the onset and development of chronic pain is needed. Also, knowledge how these are different from known nociceptive pain processes is essential.

Below in impression of how to implement PNF-based exercise for NCLBP.



PNF in Polish universities

The IPNFA Poland group (Katarzyna Fountoukidis, Grzegorz Gałuszka, Joanna Jaczewska, Maciej Krawczyk, Jakub Marciński, Monika Piwnicka, Agnieszka Stępień) has continued training for academic teachers in recent months. After several online meetings, on July 9 we organized one-day practical workshops for 16 teachers from various universities at the Józef Piłsudski University of Physical Education in Warsaw. The main topic of the workshop was the management of patients with abnormal gait pattern.

The meeting was held in a friendly and creative atmosphere and was very positively evaluated by the participants. The next workshop meeting with another group of participants is planned in September at the Academy of Physical Education in Poznań.



From:..... INDIA.....

BPN BANGALORE
PHYSIOTHERAPISTS
NETWORK

The Await is Over !!!!



10 th - Annual Conference

Venue: ITC Gardenia Bangalore –
Near Kantererva Stadium

The PNF-concept has been presented in relation to orthopedics and clinical reasoning
A video presentation by Fred, and hands-on demonstration on stage by Dr. Prem PT. PhD.
Dr. Prem is a former participant in PNF 1,2 and 3 courses.

The **P**eople **N**eed **F**un corner: 😊

"Study hard until you can say: "I am a IPNFA® - certified therapist", everything is gonna be alright."

***"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."* – William Osler**

World PT Day 2022

The toolkit for World PT Day 2022 includes information sheets and posters aimed at the general public promoting the role of physiotherapists in the prevention of osteoarthritis and in the management of people affected by osteoarthritis. There is also a resource list for facts and additional reading for physiotherapists. In 2023 the focus will be on other rheumatological conditions.

The materials are currently available in English and Spanish, French will be added shortly. Volunteer translators are working on more versions and these will be published when they are available.

Why World PT Day matters

In 1996, 8 September was designated as World PT Day. This is the date World Physiotherapy was founded in 1951.

The day marks the unity and solidarity of the global physiotherapy community. It is an opportunity to recognize the work that physiotherapists do for their patients and community. Using World PT Day as a focus, World Physiotherapy aims to support member organizations in their efforts to promote the profession and advance their expertise.

Reports from around the world indicate that World PT Day activities have a positive impact on the profession's profile and standing with both the public and policy makers.

Many World Physiotherapy member organizations already have their own national physiotherapy days, weeks and months. However, organizations that have no designated day of their own often choose 8 September.

[World PT Day toolkit | World Physiotherapy](#)



July 2022



World PT Day materials are available in eight languages!

World PT Day materials are now available in eight languages. You can download the materials NOW from our [website](#). The theme of this year's World PT Day is osteoarthritis, and the materials include information sheets, posters, social media graphics, banners - and more!

The materials are available now in:

- [Dutch - Belgian](#)
- [English](#)
- [French](#)
- [Hindi](#)
- [Polish](#)
- [Portuguese - Brazilian](#)
- [Romanian](#)

Click on the blue link above the picture to get access to all material in various languages

To support activities on World PT-Day 2022

SEPTEMBER 8

Josephine Key

‘The core’: Understanding it, and retraining its dysfunction

Journal of Bodywork & Movement Therapies (2013) 17, 541-559

Summary

“Core stability training” is popular in both the therapeutic and fitness industries but what is actually meant and understood by this concept? And does everyone need the same training approach? This paper examines the landscape of ‘the core’ and its control from both a clinical and research perspective. It attempts a comprehensive review of its healthy functional role and how this is commonly changed in people with spinal and pelvic girdle pain syndromes.

The common clinically observable and palpable patterns of functional and structural change associated with ‘problems with the core’ have been relatively little described.

This paper endeavors to do so, introducing a variant paradigm aimed at promoting the understanding and management of these altered patterns of ‘core control’.

Clinically, two basic subgroups emerge. In light of these, the predictable difficulties that each group finds in establishing the important fundamental elements of spino-pelvic ‘core control’ and how to best retrain these, are highlighted.

The integrated model presented is applicable for practitioners re-educating movement in physiotherapy, rehabilitation, Pilates, Yoga or injury prevention within the fitness industry in general.

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<http://dx.doi.org/10.1016/j.jbmt.2013.03.012>

The **P**eople **N**eed **F**un corner: 😊

“A physio, like anyone else who has to deal with human beings, each of them unique, cannot be a scientist; he is either, like the surgeon, a craftsman, or, like the physician and the psychologist, an artist.

This means that in order to be a good physiotherapist one must also have a good character, that is to say, whatever weaknesses and foibles one may have, one must love his fellow human beings in the concrete and desire their good before one’s own.”

Quate by— W. H. Auden

Adjusted to PT by F. Smedes