W21: Revisiting What Works and Why in Pelvic Floor Muscle Exercise Prescribing - a Biopsychosocial Integration of Science to Help Achieve Better Behavioural and Health Outcomes

Workshop Chair: Sarah Dean, United Kingdom
25 October 2024 09:00 - 10:30

Start	End	Topic	Speakers
09:00	09:10	Introduction to session & case studies followed by a refresh of exercise science and the principles of muscle strength training	Sarah Dean
09:10	09:20	What does work in PFME prescription? update of clinical trial evidence	Malgorzata Starzec-Proserpio E Jean C Hay-Smith
09:20	09:30	Assessment, planning and progressing of PFME prescriptions in clinical and non-clinical settings	Helena Frawley
09:30	09:40	Behavioural science theory and techniques to promote adherence to PFME	Sarah Dean
09:40	09:50	Widening implementation of PFME - adapting exercise parameters for population and prevention approaches	Victoria Salmon
09:50	10:20	Discussion	Sarah Dean Helena Frawley Victoria Salmon Malgorzata Starzec-Proserpio
10:20	10:30	Summary & evaluation	Sarah Dean

Description

Background Information: The workshop is open to all with an interest in supporting women to do their PFME. It will combine case-based studies and short talks with interactive discussion followed by panel debate, to revisit what works and why. Participants will be invited to rethink their prescribing habits and / or what they might say to support women to do their exercises. There will be opportunity to learn more about how to integrate evidence from exercise science, behavioural science and clinical trials with clinical practice and service implementation to maximise success in supporting women achieve pelvic floor health.

Sarah Dean will chair the session. Time will be given for participants to re-read the clinical vignettes. Sarah will start the session with a revisit of exercise science underpinning the principles of exercise for muscle strengthening (2). The second speaker, Malgorzata Starzec-Proserpio, will cover two aspects of evidence from recent Cochrane reviews (3,4). The first considers what 'type' of PFME is best, for example: direct versus indirect exercising (i.e. pelvic floor muscle exercise versus thigh or stomach 'core' exercises). The second considers the comparison investigating the teaching and supervision of PFMT, i.e., what exercise 'delivery' is best. Here, the results about group versus individual supervision of training will be discussed.

The third speaker, Helena Frawley, will discuss how to launch a PFME programme successfully through good assessment and exercise instruction (5). She will cover variations in prescription when clinic assessment or ongoing clinical supervision is not possible; when there is only one versus multiple contacts or group supervision.

Sarah Dean will then provide a resume of the underpinning behavioural science including the Behaviour Change Technique taxonomy (6). Initially focusing on what change techniques are typically used (goal setting techniques) Sarah will ask participants to consider how well these are used and what could still be done to enhance use, for example are women asked to verbally commit to their exercise goals and do they sign an exercise behavioural contract. Sarah will also introduce less well used techniques, such as credible source (of information) and prompts and cues and explain how these might be used.

The fourth and final speaker, Victoria Salmon, will describe the challenges of implementing PFME services in different social and health care contexts, with a focus on how we might widen access for all women to receive pelvic health care (7). Participants will be asked to consider how their prescriptions may need to be adapted if the purpose is a public health, population-based approach designed to be inclusive for all women without any pelvic floor dysfunction to prevent future problems. Finally, participants will be asked to consider the role of PFME specialists versus other health professionals and support workers, and what can be done to ensure all women receive consistent messages about PFME for pelvic floor health from everyone they encounter.

Throughout the session speakers will invite participants to return to the two clinical vignettes and reconsider their prescription choices. For the discussion panel section of the workshop all the speakers will be available to take questions from participants; panellists will also offer what aspects of PFME prescription still need further research.

To end the workshop Sarah will summarise the key learning points and check that participants are taking away messages that underpin the biopsychosocial approach. There are three messages for participants to consider: is their biological science (exercise physiology) up to date? Are they using psychologically informed behavioural science techniques in the best way possible? and have they considered how the overall evidence base should be adapted for individuals, for differing social contexts and for the different purposes of PFME prescription?

Key learning points: by the end of the workshop, participants will have:

1. Refreshed their understanding of exercise science, in particular the physiological principles of muscle strength training in the context of clinical trial evidence for PFME prescription.
2. Increased their awareness of underpinning behavioural science theory and techniques that have been shown to help optimise exercise adherence.
3. Considered how training parameters may differ for prevention versus treatment versus maintenance PFME regimens.
4. Reflected on their own PFME prescription habits and what else they could do implement scientific evidence and best practice principles into their own clinical practice.

Take home messages: There is more that can be done to maximise the success of PFME for women with common pelvic floor dysfunction such as urinary incontinence and pelvic organ prolapse. Asking clinicians to revisit their knowledge and understanding of muscle strength training is a start for ensuring their clinical practice is up to date with the science of muscle exercise physiology and clinical trial evidence; combining this with increased awareness and use of behavioural science theory and techniques could optimise their success with patients.

Knowing how to adapt exercise parameters according to the primary purpose of the prescription and reflecting on what is considered good practice in exercise prescription are additional take home messages.

Taking part in this workshop will help support all clinicians to take a fully integrated biopsychosocial approach, and for clinicians with differing backgrounds and expertise to give consistent messages, thereby supporting all women in their pelvic floor health.

Additional references

1 Kolb, D.A. (2015) Experiential learning: experience as the source of learning and development. 2nd edn. New Jersey: Pearson Education.

2 American College of Sports Medicine. (2009). Progression Models in Resistance Training for Healthy Adults. Medicine and Science in Sports and Exercise. 41(3) 687-708. doi: 10.1249/MSS.0b013e3181915670

3 Hay-Smith J, Starzec-Proserpio M, Moller B, Vesentini G, Cacciari L, Aldabe D, Dumoulin C, Homsi Jorge C, Frawley H, Morin M, Pitangui A, Wallace S, Weatherall M, Woodley S. (submitted). "What is the most effective pelvic floor muscle training type, dose, and delivery method for females with urinary incontinence? A Cochrane review with meta-analysis".

4 Woodley SJ, Lawrenson P, Boyle R, Cody JD, Mørkved S, Kernohan A, Hay-Smith EJC. (2020). Pelvic floor muscle training for prevention and treatment of urinary and faecal incontinence in antenatal and postnatal women. Cochrane Database Syst. Rev. doi.org/10.1002/14651858.CD007471.pub4

5 Slade, S. C., Morris, M. E., Frawley, H. & Hay-Smith, J. (2021). Comprehensive reporting of pelvic floor muscle training for urinary incontinence: CERT-PFMT. PHYSIOTHERAPY, 112 pp. 103-112.

6 Michie S, Richardson M, Johnston M, et al. (2013). The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions. Ann Behav Med;46(1):81-95. doi: 10.1007/s12160-013-9486-6

7 Salmon VE, Hay-Smith EJC, Jarvie R, Dean S, Terry R, Frawley H, Oborn E, Bayliss SE, Bick D, Davenport C, MacArthur C, Pearson M, and on behalf of the APPEAL study. (2020). Implementing pelvic floor muscle training in women's childbearing years: A Critical Interpretive Synthesis of individual, professional, and service issues. Neurourology and Urodynamics 39; 863-870. DOI: 10.1002/nau.24256

Aims of Workshop

This workshop aims to revisit the science underpinning pelvic floor muscle exercises (PFME) and what may make optimal exercise prescription depending on the target outcomes. Consideration will be given to different pelvic floor dysfunctions (stress, urge and mixed urinary incontinence; mild to moderate pelvic organ prolapse). Material covered will draw from clinical trial evidence; exercise science (physiological principles of muscle training) and from tried and tested behavioural science techniques. In addition, variations in exercise parameters will be discussed for prevention versus treatment versus maintenance regimens, with debate focusing on what else might be done to optimise adherence and outcomes.

Educational Objectives

Educational value occurs in three ways.

Firstly, it offers interactive learning by using case-based materials to facilitate participant involvement. Using a modified version of educational theory known as Kolb's reflective learning cycle (1) participants will read brief clinical vignettes of women with pelvic floor dysfunction. There will be options for deciding what PFME to prescribe, creating hypothetical but realistic experience for participants to reflect upon as speakers present. Participants refresh their knowledge and understanding of exercise and behavioural science allowing further evaluation of their PFME prescription decisions; this learning cycle stage is known as conceptualisation of better or alternative ways and analysing what could be done differently next time. The final stage in the learning cycle, active experimentation, is modified to become an action plan (of what to do next time). This can be discussed with the panel to help participants decide whether, or how, to update their practice.

Secondly, to facilitate interactive learning, the workshop is led by a team from different disciplines and work settings. All have a background in physiotherapy but bring additional skills and expertise that enable the workshop to have a multidisciplinary focus.

Thirdly, content focuses on biopsychosocial integration of science and evidence with clinical practice. It offers participants the chance to reflect on whether they are up to date with the underpinning science and clinical trial evidence; how they make sense of this evidence (based on an average patient) and then tailor care to an individual.

Learning Objectives

1. To refresh knowledge and understanding of exercise science principles for muscle strength training, including the current clinical trial evidence underpinning PFME prescriptions.

2. To raise further awareness of behavioural science theory and techniques that can be used to support change of behaviour needed for PFME adherence.

3. To reflect upon and discuss the practice of PFME prescription: assessment and exercise instruction for clinical and non-clinical settings and consider what variations in exercise prescription may be needed for treatment versus prevention or population-based approaches, and for different contexts and service settings.

Target Audience

Conservative Management

Advanced/Basic

Intermediate

Suggested Learning before Workshop Attendance

The two clinical vignette 'case studies' (see below) are for prior reading and will be used during the workshop.

Additional prior reading:

Frawley HC, Dean SG, Slade SC, Hay-Smith EJC. (2017). Is pelvic floor muscle training a physical therapy or a behavioral therapy? A call to name and report the physical, cognitive, and behavioral elements. Physical Therapy 97:425–437. PMID: 28499001 DOI: 10.1093/ptj/pzx006

Salmon VE, Hay-Smith EJC, Jarvie R, Dean S, Terry R, Frawley H, Oborn E, Bayliss SE, Bick D, Davenport C, MacArthur C, Pearson M, and on behalf of the APPEAL study. (2020). Implementing pelvic floor muscle training in women's childbearing years: A Critical Interpretive Synthesis of individual, professional, and service issues. Neurourology and Urodynamics 39; 863-870. PMID: 31845393 PMCID: PMC7079154 DOI: 10.1002/nau.24256

Workshop Case A

Maria is a 58-year-old woman (female at birth) and mother of two children (normal vaginal delivery). She has a part time office-based job. She has stress urinary incontinence symptoms, and grade I (posterior compartment) pelvic organ prolapse on examination (asymptomatic). Muscle assessment grade 3 Oxford, no palpable 'detachment' or unequal (left-right) contraction. She is overweight but not obese. She does a yoga class twice a week and joins a walking group with friends on Sunday mornings.

Consider your usual practice. Would your prescription of home pelvic floor muscle exercises (PFME) to treat the stress urinary incontinence (Maria's primary problem) be based on:

a) Repeated, isolated, voluntary pelvic floor muscle (VPFM) contractions (traditional, direct PFME)
b) VPFM contractions before/after other muscle contractions e.g. TrA, hip rotators (combined PFME)
c) VPFM contractions during activities of daily living e.g. cough, sneeze, sit to stand, lifting
d) VPFM contractions during other exercises e.g. plank, bridging, etc (coordinated PFME)
e) A mixture of all of the above
f) Other muscle contractions e.g. exercise classes, hypopressives without any VPFME (indirect PFME)

Would you ask Maria to do PFME at home

a) Twice or more every day
b) Once every day
c) 5 days a week
d) 3 days a week
e) 1 day a week
f) Whenever she remembers

How many contractions would you aim for in a row? (number of reps in a set). Assume you progress to this from an initial starting dose.

a) Don't have an upper limit, depends on re-assessment and progress
b) 30
c) 12
d) 10
e) 8
f) 5

How many sets per 'exercise' session?

a) Don't have an upper limit, depends on re-assessment and progress
b) 4 to 6 sets
c) 2 to 3 sets
d) 2 sets
e) 1 set
f) Cluster sets

Does your exercise prescription typically include

a) Near to full maximal effort contractions, short hold time (up to 10 secs) with rest in between
b) Quickly repeated contractions, no hold or rest time (quick flicks)
c) Near maximal effort contractions, longer hold time (more than 10 secs) with rest in between
d) A and B
e) A and C
f) A and B and C

Anything else?

Workshop Case B

Sophia is a 28-year-old woman (female at birth) who is planning to get pregnant. She has a very busy job with an international company, work involves travel and long hours. She has no symptoms of pelvic floor dysfunction. She is slightly overweight. She likes Pilates, and walks/jogs the local Park Run, but these activities are not easy to fit around her job. She wants an on-line consultation; she heard about pelvic floor muscle exercises but is not sure how to do them.

Consider your usual practice. Would your prescription of home pelvic floor muscle exercises (PFME) to prevent pelvic floor dysfunction (for Sophia before & when she is pregnant) be based on:

g) Repeated, isolated, voluntary pelvic floor muscle (VPFM) contractions (traditional, direct PFME)
h) VPFM contractions before/after other muscle contractions e.g. TrA, hip rotators (combined PFME)
i) VPFM contractions during activities of daily living e.g. cough, sneeze, sit to stand, lifting
j) VPFM contractions during other exercises e.g. plank, bridging, etc (coordinated PFME)
k) A mixture of all of the above
l) Other muscle contractions e.g. exercise classes, hypopressives without any VPFME (indirect PFME)

Would you ask Sophia to do PFME at home

g) Twice or more every day
h) Once every day
i) 5 days a week
j) 3 days a week
k) 1 day a week
l) Whenever she remembers

How many contractions would you aim for in a row? (number of reps in set). Assume you progress to this from an initial starting dose

g) Don't have an upper limit, depends on re-assessment and progress
h) 30
i) 12
j) 10
k) 8
l) 5

How many sets per 'exercise' session?

g) Don't have an upper limit, depends on re-assessment and progress
h) 4 to 6 sets
i) 2 to 3 sets
j) 2 sets
k) 1 set
l) Cluster sets

Does your exercise prescription typically include

g) Near to full maximal effort contractions, short hold time (up to 10 secs) with rest in between
h) Quickly repeated contractions, no hold or rest time (quick flicks)
i) Near maximal effort contractions, longer hold time (more than 10 secs) with rest in between
j) A and B
k) A and C
l) A and B and C

Anything else?