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Bridging preservice teacher practice with general university student health and wellbeing through "I Can Resist"

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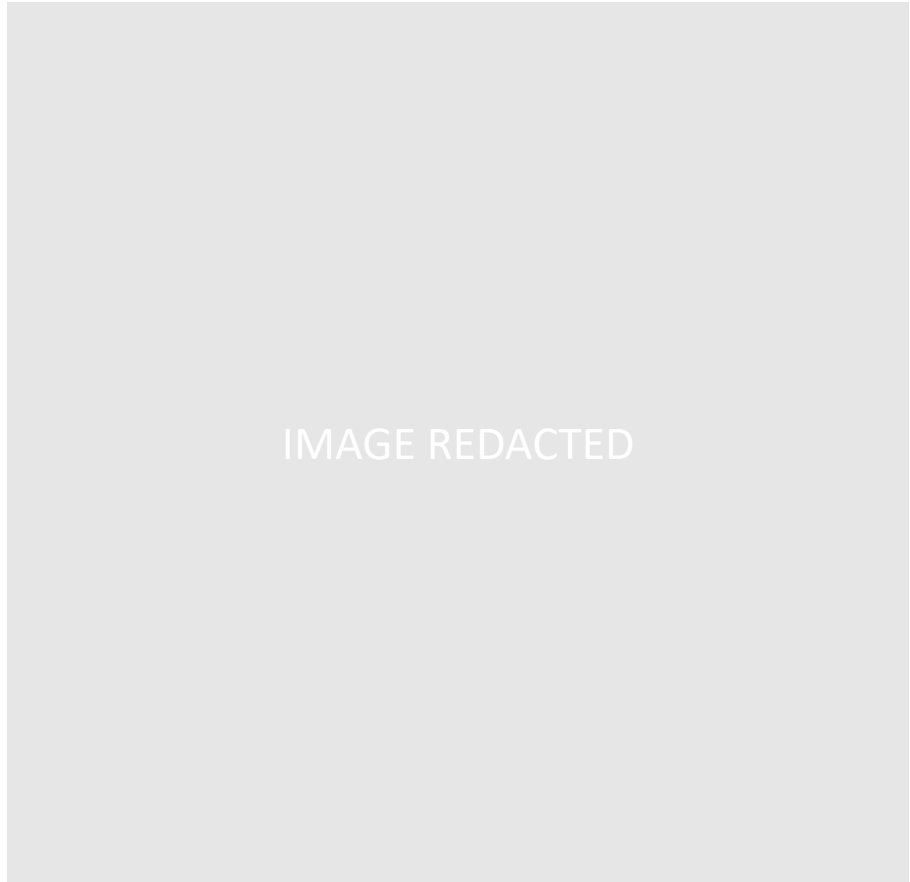


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Bridging Science and Practical Appliance in Resistance Training | IntechOpen

- If of interest, please register and download your free copy of our starting content:
- <https://www.intechopen.com/books/12191>
- <https://www.intechopen.com/chapters/86572>
- Current work is integrating explicit culturally relevant pedagogy into the movement progressions.
- Co-construction with participating students.

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Theoretical and pedagogical underpinning

The “ I Can Resist” progression body resistance spiral (Murray, Murray and Howells, 2023)

Progress competence and confidence in managing their movements in a variety of ways to solve movement challenges.

Seeks to build both physical and emotional strength through collaborative movement problem solving

Collaborations across elementary, middle and high schools in the US and UK into higher education (2014-2023)

Set upon a curriculum spiral (Bruner, 1960).

Rests upon tenets of metacognition (Murray and Napper-Owen, 2021), developmentally appropriate movement practice (Graham et al., 2020), Constraints (Newell, 1986), Intersectionality (Crenshaw, 1989), culturally appropriate wellbeing (Tov & Deiner, 2007).

Sense of belonging: starting with our identity, as informed and illuminated using constraints (Newell, 1976).

Integrating an affective pedagogical strand to the movement progression spiral in order to explicitly engage the concept of emotional resilience as that of physical strength develops.



What?

Program (content knowledge) and pedagogy (movement concepts coupled with positive “I can” affirmations)

Entry progression spiral

Progress to draw from the full databank of the program

We then extended this to HE for student wellbeing

Complementing with an affective pedagogical strand

Murray, Howells, Murray (2023).

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Combination; self and peer initiated

We can...How can we

I can...How can I

Body resistance progressions-body weight isometrics, dynamic body weight (without added band resistance)

I can participate in a mini challenge or game in my group, including 2-3 resistance moves. I can show a partner my combo exercise

routine and have them try it. I can try their routine.

I can combo 2-3 exercises of my own choice to create a dynamic movement routine (e.g. lunge to line forwards, side lunges, back)

I can travel from one point to another (about 5 meters) on all fours facing down, and then facing upwards

I can perform a series of 5-8 superheroes (face down plane positions) using proficient form

I can perform a series of 3-5 V sits using legs bent or straight

I can squat 5-10 times a stay balanced as I lower and stand up

I can perform a series (5-10) of superheroes (plane positions) using proficient form and control

I can perform a series of V sits (3-5) using proficient form and control

I can perform a series (5-10) of curl ups using proficient form and control

I can hold a plank for a set target time (from 10-30 secs) and move my feet and then hands (one at a time)

I can hold a plane shape (facing downwards; superhero) keeping feet and arms off the ground

I can start in a dish and move into a V shape, and hold a V shape (facing upwards) (3-5 secs)

I can hold a dish shape (lying on floor, facing upwards) with feet and shoulders off the floor

I can hold a sky-plank (facing upwards, keeping hips up) (5-10 secs)

I can hold a side plank (both sides keeping my core tight) (5-10secs)

I can hold a plank (facing downwards), in a straight form (and avoid a banana or bridge shape) (5-10 secs)

I can hold a squat position and stay balanced (lower as if I am sitting on a chair, and stay there)

I can push press my hands toward the ceiling (as if I am lifting and lowering a heavy boulder)

I can lunge sideways (to right and to left)

I can lunge backwards (right and left)

I can get into a (static like a statue) a lunge position and hold it (10-20 secs), or some balanced position using my preferred mode of stable mobility

**Table 1. Show
& Tell a
'graduated'
peer/tutor check
off progression aid
memoir**

Table 2. The I Can Resistance Movement Bank (summary)

Participants graduate to use this following completion of their self selected version of the resistance movement

#1. Squats (quadriceps and hamstrings)
#2. Hamstring (and gluteus maximus) resistance curl and extensions
#2. Floor star shapes. Floor 4 point contact points (hand-hand-foot-foot**) position
#3. Reverse Lunge/*forward Lunge (*only if comfortable)
#4. Single-leg and double squat thrust repeats (quadriceps and gluteus maximus)
#5. Heel Raise (gastrocnemius)
#6. Seated/standing tibial toe raise
#7. Adapted versions of 1-6 to suit; engage and inspire learner **
#8. Curl up (rectus abdominus)
#9. V – Sit (rectus and transverse abdominus)
#10. Plank/Side Plank (oblique abdominal)
#11. Seated row (back and forearms)
#12. Back extension (erector spinae and gluteus)
#13. Standing shoulder press
#14. Mini Push up (chest; pectoralis, with upper body and core) to plank and back to push up position repeats, resistance push ups
#15. Upright row (shoulders, upper back; delts and traps)
#16. Adapted versions of 8-16 to suit; engage and inspire learner
#17. Latissimus dorsi pull down
#18. Deltoids (and trapezius) Lateral raise
#19. Biceps curl
#20. Triceps extension
#21. Combinations of 2-3 exercises sequentially connected
#22. Adapted versions of 17-21 to suit; engage and inspire learner

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Pedagogical blending

How?

Varied pedagogies crossing a direct-indirect teaching and learning, through a curriculum spiral (Bruner, 1960, 1966) through skills themes (Graham et al., 2020)

Development of pedagogical content knowledge (PCK) around skills, concepts as varied with resistance to build physical literacy across all domains (IPLA, 2017), focusing upon emotional resilience.

Sense of belonging: starting with our identity, as informed and illuminated using constraints (Newell, 1976; Murray and Kaitell, 2022) and then celebrated through the creation of class identity puzzles (Adams and Murray, 2022).

Intersectionality (Crenshaw, 1989). Purposefully acknowledging and integrating the richness our students bring to the learning experience.

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University of Stirling Initial Teacher Education Health and Wellbeing-conundrum

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Program Aims

To share resistance movement
practice

Potential element in ITE health and
wellbeing teaching toolkits

National curriculum

Students

- Wondered why they don't have the same chances to build their wellbeing as they are being told to create for their pupils in schools.
- What about other peers on campus?

Why?

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Physically active learning	Pedagogical Content Knowledge	Physical literacy as an entry point to healthy active living and eating	Identity - who we are as part of our HWB belonging	Progression spiral of emotional resilience alongside physical strength	Creation of progression spiral of Literacy/Numeracy using these HWB
Promoted now as a viable means to elicit health and education based outcomes for pupils	Variety of FMS (CK) Explored via variety of M concepts (PK) Scaffolded Developmentally appropriate	Opportunities to engage in movement engaging all learning domains to acquire holistic skill, competence & attitudinal set	Systematic way to think, plan and model how individual identity blends into the large class identity	Physical literacy entry point through FMS with concepts that build agency of self, in relation to the move, the environment & others ahead of AMS	Celebratory mastery exit from scope and sequence, underpinnings of assignment
Whole school approach, part of school pedagogy	From curricular area to wider school practice	Whole school approach as initiated from Physical Education	Think about PCK combined	Developmentally appropriate way to PAL into PA that can start in PE and move out to accessible exercise beyond the school	HWB interconnecting toolkits- for placement and beyond
Chalkley et al (2023)	(Graham et al., 2020)	(Whithead, IPLA, 2017) Principles of healthy eating	Newell (1987) Adams & Murray (2022) Murray & Kaitell (2022)	WHO and UK Gov guidelines into curricular learning practice Murray, Murray & Howells (2023)	University of Strirling-workshops and accreditation
Move around your classroom, school and local environments	Exemplify the movement concepts & extend across other HWB areas	PAL across food education	Curricula as supported with extra curricula and whole school and informed by wider community	Collegial exploration and consideration through SERA (2023) NAKHE (2024)	Bringing together elements of HWB into one CPD. Celebrated with our (student) colleagues in our next Health & Wellbeing Research 10

Literacy & Numeracy underpinned by Health and Wellbeing curriculum spiral

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<https://en-gb.padlet.com/alikawali1/health-and-wellbeing-developing-practice-padlet-p3-iw092ye1saj45vxt>

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Health & Wellbeing through Literacy and Numeracy Class example

Experiences and Outcomes

Preservice teacher worked example

Challenge aim: I can create a progression spiral to plan how and where to embed HWB through my Numeracy planning

https://padlet.com/oh00074_/health-wellbeing-and-numeracy-4of96pt2x71xzt9f

Where, how ,what, when and why....

RATIONALE

Through our Literacy and Numeracy module, we have explored and progressed our Health and Wellbeing practice initiated from a simple tenet of seeking and exploring and practising ways to embed opportunities to include

- **Mental, emotional, social and physical wellbeing**
- **Planning for choices and changes**
- **Physical activity and sport**
- **Relationships**

...across your HWB scope and sequence

"Learning through health and wellbeing promotes confidence, *independent thinking* and positive attitudes and dispositions. Because of this, it is the responsibility of every teacher to contribute to learning and development in this area."

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Student Example

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Issues and opportunities

- Students own efficacy to move (exercise as well as move around the classroom)
- Barriers to working out on campus, to joining the gym, clubs.
- University identity?
- Health and Wellbeing crisis
- Sense of belonging to Intersectionality
- Adams and Murray (2023) –take the time to create identity puzzles and bring them into your planning and teaching
- Murray and Kaitell (2022)-recognise constraints of all as affordances to maximise (and celebrate)- using Newell's constraints theory as a starting point.
- Murray, Howells and Murray (2023)- what of our students wellbeing and willingness to give to themselves what they give to others...
- What then of building a shared acumen- of words, of efforts, of experiences- in our free weekly club for women varied in interests, cultures and exercise experience.

Next steps

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In this resistance education movement program,

Attained a grant

Create a club for students wishing to enjoy getting together, moving and sharing their experiences as the group builds its collective identity.

Affective piece- co-constructed with the students e.g. they will set their 'I cans' to help them build resilience with what they need to deal with.

Start with this spiral, and have the group create their own, then move to another environment and affordance opportunity

Continuing Professional Development course – for pre and in service educators to engage resistance movement in their physically active learning pedagogies.

Consider how to combine this through an affective strand that represents and reflects the needs and aspirations of the group.

Integrate this CPD into our PETE and general programs.

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- Adams, S. and Murray, A. (2022). Primary Physical Education and its complex puzzle of diversity. In Karin Doull (Ed.) Teaching a Diverse Primary Curriculum. London: Sage.
- Bülbül S (2020). Exercise in the treatment of childhood obesity. *Turk Pediatri Ars.* Mar 9;55, 1:2-10. doi: 10.14744/TurkPediatriArs.2019.60430. PMID: 32231444; PMCID: PMC7096559.
- Campbell, L., Gray, S., MacIntyre, T., & Stone, K. (2020). Literacy, numeracy and health and wellbeing across learning: Investigating student teachers' confidence. *International Journal of Educational Research*, 100, 1–12. <https://doi.org/10.1016/j.ijer.2020.101532>
- Chalkley, A., Mandelid, M.B., Singh, A. *et al.* (2023). Reframing physically active learning as movement-centred pedagogy: a European priority action framework. *Int J Behav Nutr Phys Act* 20, 101 (2023). <https://doi.org/10.1186/s12966-023-01503-4>
- Murray, A. and Kaitell, E. (2022). Educational Gymnastics. Embodiment of a constraint's agility approach. In Gerald Griggs and Victoria Randall (Eds) An introduction to primary physical education. Second edition. Routledge.
- Murray, A.M., Murray, P.F. and Howells, K. (2023). Accessible resistance movement experiences for elementary students and educators. In Bridging Science and Practical Appliance in Resistance Training. Daniel A. Marinho, Pedro Forte, Maria Cirilo-Souse and Henrique P. Neva (eds). Intechopen. ISBN 978-1-83768-551-6.
- Murray, A. M. (2013). Skill and fitness related development via metacognitive instruction. *Physical Education Matters*. Official Journal of the Association for Physical Education. Summer, 8, 2; 59-64.
- Murray, A.M., Murray, P., Woods, G., Patel, B. and Palouseo, J. (2013). Developmentally appropriate resistance training in physical education. *American Alliance for Health, Physical Education and Dance. Strategies, a Journal for Physical and Sport Educators*. March/April, 26, 2; 23-29.
- Murray, A.M., and Murray, P.F. (2014). Developmentally Appropriate Health and Skill Related Fitness Training in Physical Education. *Physical Education Matters*, Official Journal of the Association for Physical Education. Spring, 9,1; 62-67.
- Murray, A., Howells, K. and Murray, P. (2023). 'Itness' rather than Fitness. Building a sense of 'itness' through belonging, being and becoming. International Conference Emerging Horizons: bridging the borders between Physical Education Research and Practice. AIESEP. Santiago, Chile, July 4th-7th. <https://aiesep2023.com/>
<https://www.youtube.com/watch?v=UN4lcwyHyRE>
- Murray, A., and PE Specialist Students, University of Roehampton (2023). Enacting our Children's Alliance Reports through physically active learning in, around and beyond Physical Education. The Child of Today is the Adult of Tomorrow. Pathways to a Healthy and Productive Society in the 21st Century. Children's Alliance. University of Worcester. Blended Presentation. Keynote Speakers. <https://childrensalliance.org.uk/2023/05/10/childrens-alliance-conference-2023/>, June 26th.
- Murray, A., Howells, K. and Murray, P. (2023). Motivating children to acquire motor competence through resistance-based movement experiences. 8th Self Determination Theory Conference, Florida, May 31st-June 3rd.
- Murray A.M., Napper-Owen G. (2021). Metacognition, the METAPE-3, a New Instructional Model for Physical Education. In: Peters M.A. (eds) Encyclopedia of Teacher Education. Springer, Singapore. https://doi.org/10.1007/978-981-13-1179-6_421-1