Get Into The Groove:
Using the Power of Sound to Promote Physical Activity

Dr Costas I. Karageorghis & Leighton Jones
School of Sport & Education
Brunel University, West London
North West Health and Physical Activity Forum, Preston, 10 February 2011

Musical warm-up (Exercise 1)
Underlying concepts
Recent research findings
Workshop exercises
Conclusions and recommended reading
Questions and discussion

Common Responses to Music

- Happy
- Lifted
- Invigorated
- Energised
- Stronger
- Inspired
- Like dancing?

Music Ubiquitous in PA Contexts
**‘Functional Music’**

- **Volume** not obscured by environmental noise
- **Tempo** congruence with expected HR
- **Rhythm** congruence with nature of activity
- **Melody** pleasing to the ear
- **Harmony** inducing positive mood
- **Instruments** yielding an appropriate beat
- **Lyrics** which include affirmations of activity

*Karageorghis & Terry (1995)*

---

**Conceputal Framework for the Prediction of Responses to Asynchronous Music in Exercise and Sport**

![Conceputal Framework](frame.png)

*Karageorghis et al. (1999)*

---

**Conceptual Framework for the Benefits of Music in Sport and Exercise**

![Conceptual Framework](frame.png)

*Terry & Karageorghis (2006)*

---

**Latest Research Findings**

![Latest Research Findings](frame.png)
Means (+1SD) for Treadmill Walking Endurance under Conditions of Synchronous Motivational Music, Synchronous Oudeterous Music, and a No-music Control

Perceived Exertion under Conditions of Synchronous Motivational Music, Synchronous Oudeterous Music and a No-music Control

Feeling States under Conditions of Synchronous Motivational Music, Synchronous Oudeterous Music and a No-music Control

Music Condition x Gender Interaction for Circuit Total Repetitions (p < .05)
How Can Music Be Used?

- Pre-task
- In-task
  - Asynchronously
  - Synchronously
- Post-task

Music for Stimulation & Sedation

1. Fast tempo >120 bpm to ↑ heart beat and arouse subject
2. Lyrics that affirm aspects of activity and extra-musical associations
3. High intensity (>70 dB)

1. Slow tempo ~60 bpm to ↓ heart beat and relax
2. Neutral in emotion - music must not evoke any emotions unless specific to a session/treatment
3. Soothing, healing and warm instruments; e.g. sax, cello, oboe, gentle piano, breaking waves
Exercise 2  Pre-task Music
Now find an example for each activity from your own music libraries (yoga / cycle ergometry / resistance training).

Exercise 3  Asynchronous Music
- Think of a specific client and a repetitive training task for them to complete
- Select an appropriate piece of asynchronous music you have brought with you.....
- Briefly evaluate the merits of the music in terms of:
  - Rhythm
  - Tempo
  - Lyrics
  - Melody / Harmony
  - Associations
  - Fit with person
  - Fit with activity

Exercise 4  Work out the tempi of the following four tracks:

Exercise 5  Contouring Tempi
Contour the tempi of a music programme to a cardio workout; select five tracks from your own music libraries
- Warm-up (~100 bpm)
- Stretching (~70 bpm)
- Light intensity (~130 bpm)
- Sprint (~150 bpm)
- Moderate intensity (~140 bpm)
- Cool-down (~85 bpm)
Exercise 6  Ego-strengthening

Pick an ego-strengthening piece of music from your own library, analyse the lyrics, and explain why it has this effect...

Conclusions

- The power of music can be tapped to promote health and PA
- Music can be applied as ......
  - pre-task stimulant/sedative
  - dissociative technique
  - analgesic
  - pacesetter
  - ego-strengthenener
  - prompter of positive associations/imagery
  - mood regulator
SUGGESTED READING

(Books & Book Chapters)


SELECTED JOURNAL ARTICLES


Thank you so much for your participation!

Dr Costas I. Karageorghis & Leighton Jones
School of Sport & Education
Brunel University, West London
costas.karageorghis@brunel.ac.uk/leighton.jones@brunel.ac.uk