Motivational Interviewing: Ineffective in physical activity promotion?

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Overview

- The importance of physical activity (PA) as an intervention, an adjunct to existing therapy or a means of managing ill-health?
- PA counselling is dramatically under-used
- Do we know if MI is being delivered?
- The title – MI: Ineffective in PA promotion?
What aspects of PA are we working with?

Environment

Behavioural  Cognitive

Physiological
Health Promotion / Exercise / Fitness


## The evidence would suggest….perhaps!

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Outcome measure &amp; results (-ve/+ve)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillsdon et al. (2002)</td>
<td>RCT, brief negotiation?</td>
<td>Epid/behav, +ve (no time details)</td>
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<tr>
<td>Brodie &amp; Inoue (2005)</td>
<td>RCT / MI?</td>
<td>MI +ve (no time details)</td>
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<tr>
<td>Havenar (2007)</td>
<td>RCT/ AMI*</td>
<td>Cog/Beh, +ve</td>
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<tr>
<td>Breckon (2007)</td>
<td>RCT/BCC*</td>
<td>Cog/beh/epid, +ve</td>
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Primary Illness at Referral

- N/A or unknown
- Anxiety
- Hypertension
- Diabetes
- Rehabilitation from coronary artery disease
- Osteoarthritis
- Social interaction
- General fitness & well-being
- General fitness
- Mental health
- Musculoskeletal
- Weight reduction

Percent

Gender

- Male
- Female

Childhood obesity?
Are we using the right version of MI?
Three methods for behaviour change consultations

1. Brief advice
2. Behaviour change counselling
3. MI

Self-help & spontaneous
1. Brief advice

- 5-10 minutes
- Mostly opportunistic
- Demonstrate respect, communicate risk, provide information
- Initiate thinking about behaviour change

2. Behaviour change counselling

- 5-30 minutes
- Opportunistic or help-seeking
- BA goals plus: establish rapport, identify BA goals, establish rapport, identify ambivalence, develop discrepancy
- Motivate strategies on client-readiness
- Build motivation for change

3. Motivational interviewing

- 30-60 minutes
- Mostly help-seeking
- Mostly opportunistic
- BA & BCC goals plus: develop relationship, elicit commitment to change
<table>
<thead>
<tr>
<th>Skills</th>
<th>Brief advice</th>
<th>Behaviour change counselling</th>
<th>Motivational interviewing</th>
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<tbody>
<tr>
<td>Ask open-ended questions</td>
<td>**</td>
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<tr>
<td>Affirmations</td>
<td>**</td>
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<tr>
<td>Summaries</td>
<td>*</td>
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<tr>
<td>Ask permission</td>
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<td>Encourage recipient choice and responsibility in decision making</td>
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<tr>
<td>Provide advice</td>
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<tr>
<td>Reflective listening statements</td>
<td>*</td>
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<td>***</td>
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<tr>
<td>Directive use of reflective listening</td>
<td>*</td>
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<tr>
<td>Variation in depth of reflections</td>
<td>*</td>
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<tr>
<td>Elicit change talk</td>
<td>*</td>
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<tr>
<td>Roll with resistance</td>
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<tr>
<td>Help client to articulate deeply held values</td>
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Currently……

• PA counselling guidelines have been available for a while
• E.g. Loughlan & Mutrie (1995)
• However, there are issues;
  – What is the setting, time, frequency of PA counselling?
  – Who delivers the intervention?
  – What training have they had?
  – Can they demonstrate competence?
  – Do we ever check?
  – Therefore, how do we know if MI (or AMI) is being delivered?
<table>
<thead>
<tr>
<th>Component of treatment fidelity</th>
<th>Definition and description</th>
<th>Application to an exercise counselling intervention</th>
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</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>Treatment fidelity applied at the design stage to ensure that the intervention can adequately test the proposed hypotheses. This in relation to underlying theory and clinical processes.</td>
<td>Intervention consistent with behaviour change theory such as stages of change, self-determination or social learning theory. Clear exercise counselling protocol developed.</td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td>To ensure that those delivering the intervention have been satisfactorily trained, assessment is carried out of their skills and competencies in relation to the study.</td>
<td>A combination of supervised role-playing, clinical supervision and reviews of audiotapes applied as an adjunct to a training manual.</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td>Treatment fidelity processes are applied to monitor that the intervention is delivered in line with the proposed design.</td>
<td>Exercise counselling interventions audio taped and reviewed using a behavioural checklist based on the study protocol. Correction of observed intervention deviations.</td>
</tr>
<tr>
<td><strong>Receipt</strong></td>
<td>The focus is toward the recipient of the intervention. The fidelity facet here aims to ensure that the intervention or treatment received is understood by the individual and that they can apply the intervention at a cognitive and behavioural level.</td>
<td>Evaluation of the effects of the exercise counselling intervention using post-session questionnaires (cognitive) and checklist of participant strategies employed (behavioural).</td>
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<tr>
<td><strong>Enactment</strong></td>
<td>An analysis is taken of the application of the treatment by the individual. This monitoring ensures that behavioural and cognitive strategies are applied in real-life settings.</td>
<td>Completion of intervention strategy goals specific to the study outcomes. Clients encouraged to record accurately completed and missed sessions and to report occurrences of relapse.</td>
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Adapted from Bellg et al. (2004)
• MI may have another problem in terms of its theoretical underpinning
• TTM: SoC or PoC or SE or DB
• What about SDT?

TTM*: Transtheoretical model
*SoC: Stages of Change
*PoC: Processes of Change
*SE: Self-efficacy
*DB: Decisional Balance

SDT: Self Determination Theory
Stages of Behaviour Change
Prochaska & DiClemente (1983)

- Pre-Contemplation
- Contemplation
- Preparation
- Action
- Maintenance
- Termination
Motivational Interviewing
- Present clear and neutral information about behaviour and outcome
- Help the client develop appropriate goals
- Provide positive feedback
- Support self-efficacy

Motivational Interviewing
- Avoid coercion
- Roll with resistance
- Explore options
- Encourage change talk
- Let the client make decisions about what and how to change

Motivational Interviewing
- Express empathy
- Explore client's concerns
- Demonstrate understanding of the client's position
- Avoid judgement or blame

Non-Self-determined
- Amotivated
- External regulation
- Introjected regulation
- Identified regulation
- Integrated regulation
- Intrinsic regulation

INCREASING SELF-DETERMINATION

Structure
- Autonomy Support
- Involvement

Competence
- Autonomy
- Relatedness
Three studies
STUDY 1: Breckon et al (in review)

Method

• Interventionist assessed for MI competence prior to RCT intervention
• 16 week PA intervention for hypokinetic patients referred by GPs
• Patients randomised into treatment (MI + PA) and control (PA only)
• Prior to 16 week intervention MI-based counselling was delivered
• Measures included readiness, exercise motives, behavioural (adherence) and qualitative interpretations

Design based on Breckon, Lavallee & Golby (2003)
**Results**

- Interventionist was competent based on MISC and MITI coding
- No significant differences between groups for exercise motives
- Surprisingly, in relation to programme completion, partial or full completion rates were significantly higher ($t(82) = -2.185, p=0.032$) for the control group (63%) than for the treatment participants receiving the intervention (37%).
- The majority of the treatment group (61%) either never started or dropped out very soon after starting.
- Again surprising was the control which indicated only 36% either never starting or immediate drop out.
MISC & MITI results

- Acceptance
- Egalitarianism
- Empathy/Understanding
- Genuinesness
- Warmth
- Spirit
- Affect
- Cooperation
- Disclosure
- Engagement
- Collaboration
- Benefit

Therapist
Client
Interaction

MI category
Global rater score

- Giving information
- MI adherent
- MI Non-adherent
- Closed questions
- Open questions
- Simple reflections
- Complex reflections

Categories
Frequency of occurrence

MI category
STUDY 2: Havenar & Breckon, 2007 (in review)

- 12 month prospective study
- 3 month AMI intervention
- Examine efficacy as applied to PA
- Treatment manual and equal contact time across groups (fidelity)
- SDT framework
  - Constructs as potential mediators
  - Increased PA via increased intrinsic motives
Allocation, Treatment, Assessment and Retention Rates Throughout Trial

**Treatment**

- N = 21 allocated
- N = 17 included
- 4 revealed illness
- 2 dropped
  - 1 not enough time
  - 1 not what thought
  - N = 15 (88%)

**Control**

- N = 20
- 3 dropped
  - 2 unable to contact
  - 1 moved out of state
  - N = 17 (85%)

**Baseline**

- N = 15 (88%)

**6 weeks**

- N = 15 (88%)

**12 weeks**

- N = 15 (88%)

**6 months**

- 1 Dropped
  - Unable to contact
  - N = 14 (82%)

**12 months**

- N = 16 (80%)

**12 months**

- N = 16 (80%)
## Contact and Assessment Schedule for Treatment and Control Groups

<table>
<thead>
<tr>
<th>Week</th>
<th>0</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>6 mos.</th>
<th>12 mos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face</td>
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<td>Email &amp; Phone**</td>
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<td>X*</td>
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<tr>
<td>Assess</td>
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<td>X</td>
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<td>X</td>
<td>X*</td>
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</tbody>
</table>

* *Assessment only
  - (7 Day PAR)
  - Treatment Self-Regulation Questionnaire (TSRQ)
  - Perceived Competence Scale (PCS)

** Phone call within seven days of email
  - Answering Questions / Comprehension Check
  - Positive Reinforcement
AMI Face to Face Session Content

1. Exercise history/linking past to present
2. Assessing and building importance
3. Motivational Grid
4. Description of ideal future
5. Assessing and building confidence
6. Action Plan

AMI Email and Phone Content

1. Email 1 (Week 2)
   - Understanding intrinsic and extrinsic motives
   - Hypothetical PA satisfaction
2. Email 2 (Week 4)
   - Motivational Grid
   - Re-assessing importance and confidence
3. Email 3 (Week 8) Revisiting action plan
4. Email 4 (Week 10) Maintenance/Preventing relapse
Control Group Content

• General PA information published by ACSM
• Different topic for each of seven contacts

Results

• Significant within AMI group increases for total PA min/wk
  – From baseline to 3 months
  – From baseline to 6 months
• AMI group significantly higher PA than control group
  – Moderate PA min/wk at 3 months
  – Vigorous PA min/wk at 6 months
  – Energy expenditure (kcal/kg/wk) at 3, 6, and 12 months
  – Autonomous motivation to exercise regularly at 3 months
• 41% inc. in total PA min/wk from baseline to one year
STUDY 3: Breckon, Johnston & Hutchison (in press)

• Qualitative systematic review
• Aims;
  – To examine the theory upon which PA counselling interventions were based
  – To examine the level of treatment fidelity embedded at all stages of the interventions

• The design used the BCC treatment fidelity stages to frame the systematic review
• 529 hits filtered to 24 that met inclusion criteria
• 15/24 published after 2000
Results

• Most studies reporting a PA counselling component were underpinned by the TTM (SoC) specifically

• Very few described the frequency or duration of training or indeed the competence level of the interventionist

• Most common outcome measures were behavioural and physiological – very few included a cognitive or emotional outcome
Conclusions
Client readiness is key

- Research in PA and MI has shown that ‘stage matching’ is essential
- We need to consider carefully how ‘action-orientated’ the client is
- There is a risk of client regression with ‘pure’ MI for an action client
- We need a more robust appreciation of ‘competence’ of the interventionist in community and RCT settings
- Self-efficacy and competence appears an essential ingredient
- Measurement can take different forms;
  - Readiness rulers
  - Decisional balance
  - Specific inventories (MPAM, BREQ-2, EMI-2)
Information Sources

- www.motivationalinterview.org
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