Developing very brief interventions (VBIs) to promote physical activity in primary care

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Presentation Aims

Aim 1
Illustrate how health psychology methods were used to develop very brief interventions (VBIs) to promote physical activity in primary care.

Aim 2
Discuss the benefits and challenges of this approach.
Background

- Only 6% of men and 4% of women meet current PA recommendations for 30mins per day [Health Survey for England 2008].

- NHS Health Checks offer an ideal opportunity to deliver very brief physical activity advice of approximately five minutes to a large proportion of the population*.

*Patients aged 40-74, not currently diagnosed with vascular disease or with certain high risk factors (e.g. high blood pressure or cholesterol) already treated by medication.

- Very brief physical activity advice should be relatively easy and inexpensive to implement on a large scale, and a small effect could translate into a significant public health benefit.

- We aimed to develop and evaluate very brief interventions (VBIs) to increase physical activity that could be delivered by a practice nurse or health care assistant (HCA) in an NHS Health Check (HC) or other primary care consultation.
VBI Programme Overview

VBI Development

Sources of Evidence
- Systematic reviews
- Behaviour change technique (BCT) taxonomy
- Qualitative research
- Cost estimation
- Stakeholder consultation
- Team discussion

VBI Shortlist
VBI 1: Motivational
VBI 2: Pedometer
VBI 3: Combined (Motivational & Pedometer)

Feasibility Study
- Assessed the feasibility & acceptability of four VBIs.
- Optimised VBI procedures, materials and practitioner training
- Decided which VBIs to evaluate further in a pilot trial.

Pilot Trial
- Assessed the potential effectiveness, feasibility, acceptability and cost of the VBIs.
- Selected best-best VBI for evaluation in a full-scale RCT, evaluating effectiveness and cost-effectiveness.
VBI Pilot Trial: Methods

**Participants**
- N=394
- Recruited from 8 practices (9 Healthcare Assistants & 9 Nurses)
- Received a Health Check plus one of 3 VBIs, or Usual Care (health check only)

VBI 1: Motivational (n=83)  
VBI 2: Pedometer (n=74)  
VBI 3: Combined (n=80)  
Control: Usual care (n=157)

**Measures**

**Potential effectiveness:**
- Objective and self-report measures of physical activity at 4 weeks

**Feasibility and Acceptability:**
- Audio-recorded VBIs (sub-sample)
- Interviews with participants (sub-sample) and practitioners
VBI Effectiveness & Feasibility

Potential Effectiveness:
• VBIs 1 & 2 shown to have a greater than 50% probability of effectiveness.

Feasibility:

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<tr>
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<th>VBI 1 Motivational</th>
<th>VBI 2 Pedometer</th>
<th>VBI 3 Combined</th>
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<tbody>
<tr>
<td>N (useable recordings)</td>
<td>11</td>
<td>13</td>
<td>16</td>
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<tr>
<td>Mean Fidelity</td>
<td>62%</td>
<td>72%</td>
<td>74%</td>
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<td>Mean VBI Duration</td>
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• All VBIs delivered with moderate to good fidelity.
• Only VBI 2 was deliverable within 5 minutes.
VBI Acceptability (Practitioners*)

- Majority of practitioners said the Pedometer VBI was the easiest and quickest to deliver.
  - "I think with the pedometer you can deliver that easily within five minutes […] that's a very quick, easy one to do."

- All practitioners said they felt most confident delivering the Pedometer and/or Combined VBIs, and that these VBIs were the most acceptable to participants.
  - "I liked giving out the pedometer, because I felt we were giving the patients something back."
  - "I think probably, initially, patients reacted best to the pedometer one, or the joint one, because they got to take a pedometer home with them."

- When asked which VBI should be evaluated further in an RCT, six said the Pedometer VBI, five said the Combined VBI and one said the Motivational VBI.
  - "If you've got a choice of which one you prefer to deliver, I would still say my preference would be pedometer, just because I feel I can champion that one better."

- All practitioners were satisfied with the training, and rated the role-play as the most useful (although least enjoyable) aspect of training. Two said that they would have liked more time for training and role play.
  - "Although it was awful and really embarrassing,….I do think I do think that having watched it, and then done it and got feedback from doing it, it was really beneficial."
  - "I am one of those that has to go over it a few times before it sinks in."

*n=12
VBI Acceptability (participants*)

• All participants said that they felt the HC was a good time to discuss PA and that the VBI was a 'good reminder'.
  "Yeah, yeah definitely [it's a good time]."
  "It was a timely reminder really."
  "I needed the push because I'm trying to lose weight….I need the push to motivate me a bit more."

• All participants who received a pedometer (Pedometer and Combined VBIs) said that they would use it, even if they didn’t plan to increase their activity.
  "I'll definitely use it because…more out of curiosity to see what I do."
  "I do need to see how many steps I do, really, and then I'll see if I do what's recommended or not and go from there, because maybe I don't do as many as I think."

• The majority of participants who received the Motivational and Pedometer VBIs reported that the PA advice they had been given was generic (rather than tailored).
  "It was probably general advice. They give the same to everybody. We all should be aware that we need to be more fit anyway."
  "I think until those results come back it can't be tailor-made to myself as an individual so …today's introductory for everybody."

*n=37
Results Summary

Pedometer VBI:
• Most likely to be effective.
• Most acceptable to participants and practitioners.
• Only VBI that was deliverable in 5 minutes.

But:
• Participants felt that the Pedometer VBI was ‘generic’.
• Practitioners wanted more role-play practice in training.

The Pedometer VBI was chosen for evaluation in an RCT.
• Training was amended to emphasize the importance of asking participants about their current activity and giving them feedback.
• Training for the VBI was extended to incorporate more role-play.
Step It Up

**Face-to-face discussion:**
- Feedback on PA
- PA recommendations
- How to use pedometer
- Steps/day goal
- How to self-monitor

**Step It Up Booklet:**
- Feedback on PA
- PA recommendations
- How to use pedometer
- Steps/day goal
- How to self-monitor
- Benefits of PA
- Tips for increasing PA
- Local resources info

**Pedometer & Step Chart**

1.1 Goal setting (behaviour)
1.4 Action Planning
2.2 Feedback on behaviour
4.1 Instruction on how to perform the behaviour
2.3 Self-monitoring of behaviour
5.1 Information about health consequences
5.3 Information about social and environmental consequences
5.6 Information about emotional consequences
8.7 Graded tasks
12.5 Adding objects to the environment
Benefits and Challenges

Benefits
• We were able to systematically identify, develop and test a range of promising VBIs and select the best-bet intervention for evaluation in a full-scale RCT.
• Health psychology contributed to the identification of effective approaches (BCTs) both for VBI content and for practitioner training.

Challenges: translating evidence from experimental studies to interventions that can be implemented in a ‘real world’ setting such as routine clinical practice:

- Practitioners often unfamiliar with delivering BCTs / VBIs
  - Lower fidelity of VBI delivery
- VBIs prompted greater discussion in practice than in role play
  - Increased VBI delivery times
- Practitioners and participants were volunteers
  - ‘Real world’ acceptability is still unknown
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The Role of Health Psychology in Public Health

Behaviours (e.g. of public, patients, practitioners) → Public health problems (e.g. NCDs, pandemic flu etc.)

Health Psychology

- Modifiable behaviours
- Determinants of behaviour
- Effective interventions, strategies & policies

Walk
Dance
Run
Stretch
Move!

The Role of Health Psychology in Public Health

Public health problems (e.g. NCDs, pandemic flu etc.)

Behaviours (e.g. of public, patients, practitioners)