# Impact of an e-learning programme on the biopsychosocial model for non-specific low-back pain on experienced osteopaths' attitudes to back pain: a pilot randomised-controlled trial.

## *E-learning to develop biopsychosocial practice*

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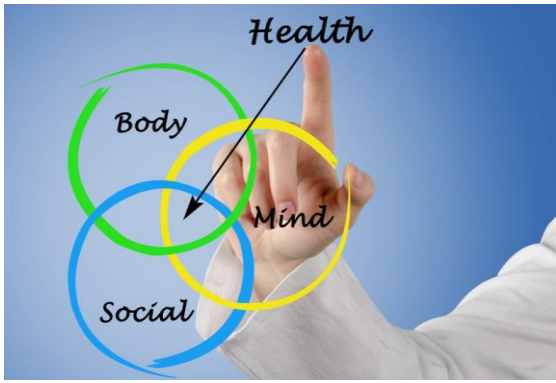
# Biopsychosocial model and low back pain




Osteopathy = holistic medicine

but… a survey of manual therapists (Kent et al. 2009) showed that:

- 100% assessed very frequently or often physical impairment
- 7% assessed very frequently or often psychosocial function

PS assessment usually based on gut feeling (Singla, Jones et al. 2014): not accurate

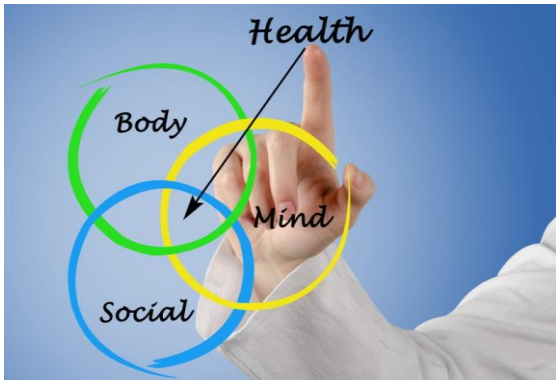
Or PS factors are better predictors of poor recovery than examination findings.

THE BRITISH SCHOOL OF OSTEOPATHY

Kent, P. M., et al. (2009). "Primary care clinicians use variable methods to assess acute nonspecific low back pain and usually focus on impairments." Manual therapy **14**(1): 88.

Singla, M., et al. (2014). "Physiotherapists' assessment of patients' psychosocial status: Are we standing on thin ice? A qualitative descriptive study." Manual therapy.

# Biopsychosocial model and low back pain




- **Problem**: biomedical approach poor advice on work, physical activities and bed rest + concerns about fear avoidance beliefs (Rainville, Carlson et al. 2000, Houben, Ostelo et al. 2005, Poiraudeau, Rannou et al. 2006, Bishop, Foster et al. 2008)

- BPS model recommended for managing NSLBP (NICE 2009, 2016 [consultation phase])

- Unclear how BPS model should be taught

# BPS trainings

- Characteristics of BPS trainings with no or little impact on practitioners' attitudes to back pain
  - Either face-to-face delivery or printed material
  - Face-to-face had limited duration (5 hours)
  - Limited needs and content analysis
  - Not informed by a behavioural change framework

- Recent BPS training attempts have shown positive patient outcome results, e.g. Asenlof, Denison et al. 2009, Vibe Fersum, O'Sullivan et al. 2013, Beneciuk and George 2015.

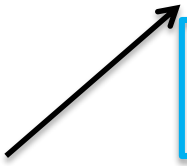
- Effective educational intervention to enhance practice in this area is needed.

# Research design

1. Scoping review

2. Development, design and implementation of an e-learning programme

3. Evaluation of the e-learning programme
   - Content evaluation
   - Quality evaluation
   - Confirmative evaluation



Mixed methods study

Quantitative: attitudinal questionnaires + satisfaction survey

Qualitative: semi-structured interviews

# Attitudes: prerequisite for behaviour?

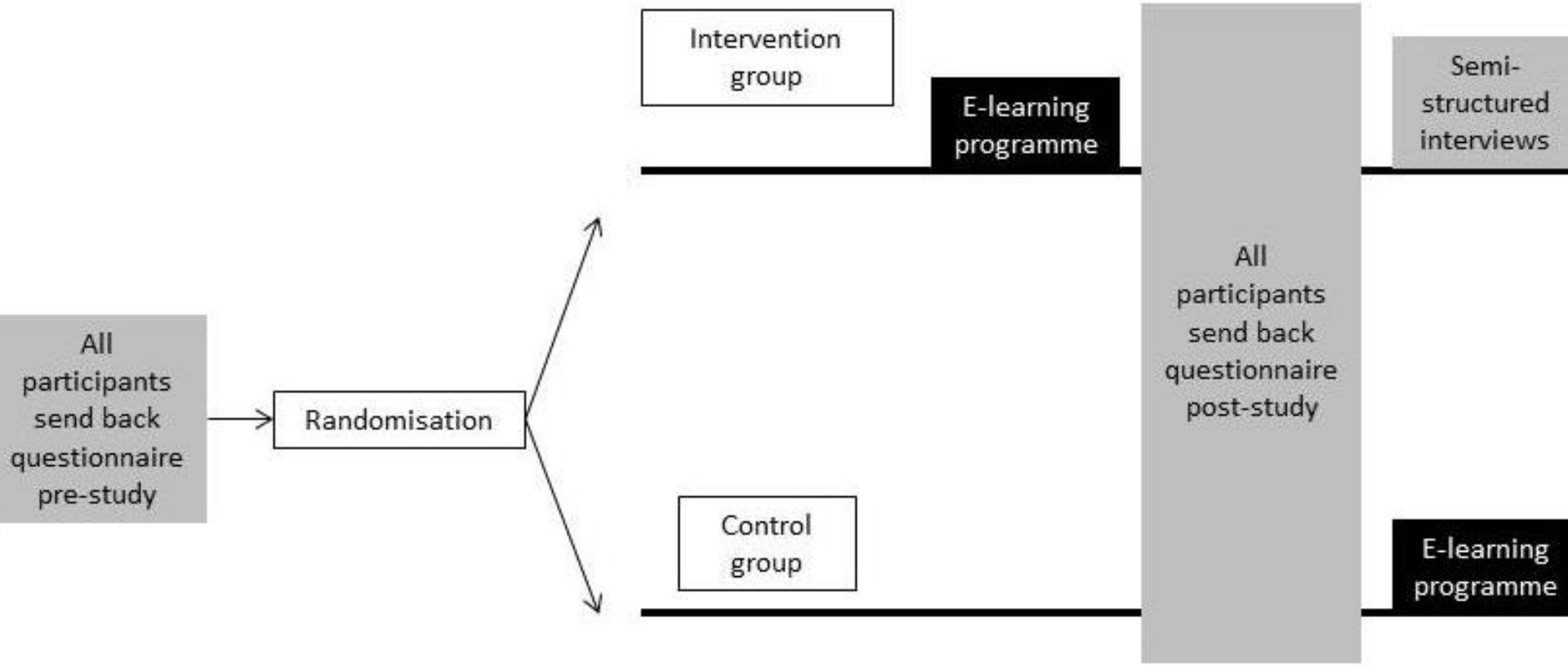
- The Attitudes of Back Pain Scale in Musculoskeletal Practitioners (ABS-mp) (Pincus et al. 2006)
  - good face validity
  - reliability unknown

- The Pain Attitudes and beliefs Scale (PABS) (Houben et al. 2005)
  - evidence for content and construct validity, internal consistency, reliability and responsiveness.
  - Reliability of biomedical domain is good but the behavioural domain reliability is low



Pincus, T., et al. (2006). "The Attitudes to Back Pain Scale in Musculoskeletal Practitioners (ABS-mp) - The Development and Testing of a New Questionnaire." Clinical Journal of Pain **22**(4): 378-386.
Houben, R. M., et al. (2005). "Health care providers' orientations towards common low back pain predict perceived harmfulness of physical activities and recommendations regarding return to normal activity." European Journal of Pain **9**(2): 173-183.

# Trial design

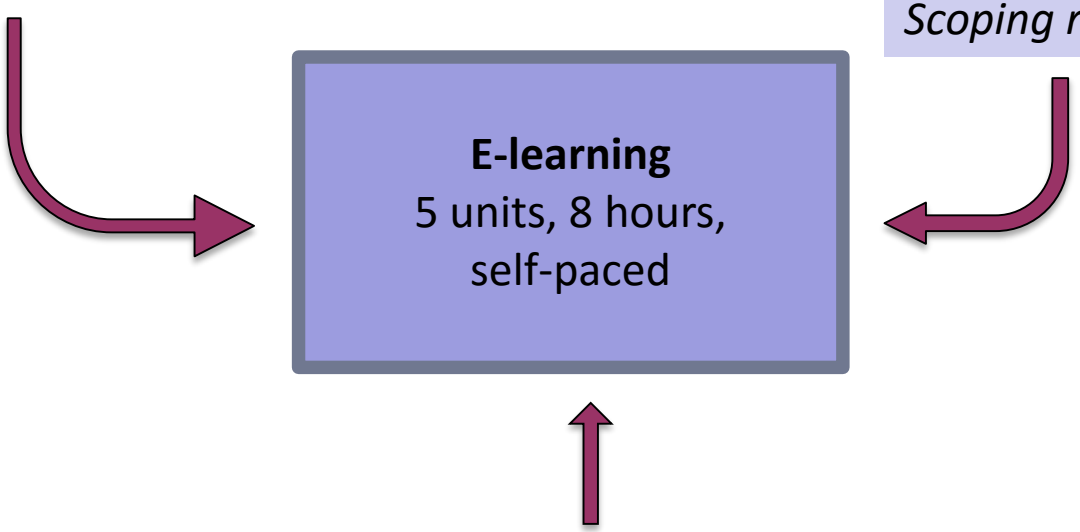


# Intervention

*Behavioural Change Wheel*

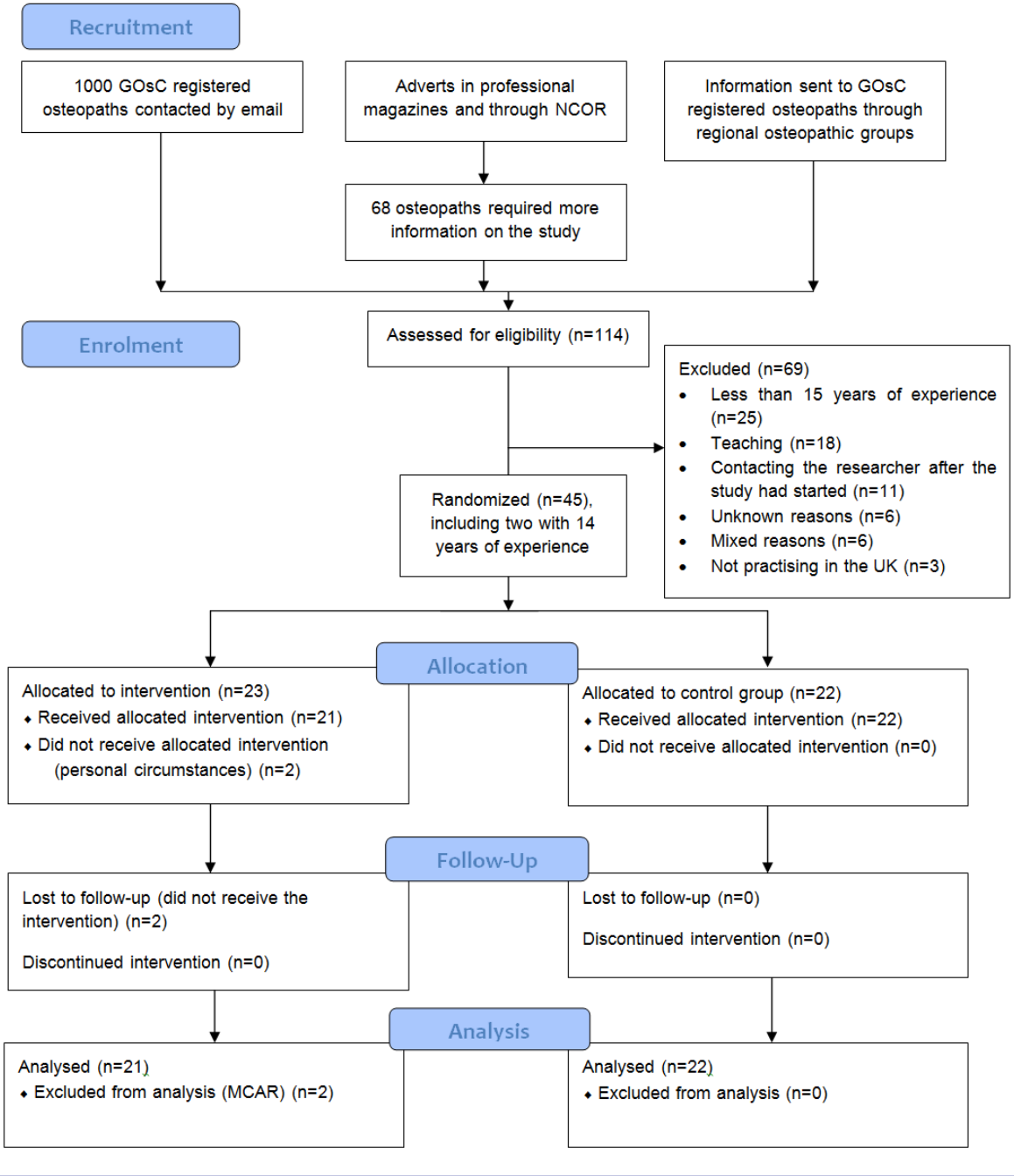
(Michie, S., et al. (2011). "The behaviour change wheel: A new method for characterising and designing behaviour change interventions." Implementation Science **6**(42).)

*Scoping review*




*ADDIE model*

(Ghirardini, B. (2011). E-learning methodologies: A guide for designing and developing e-learning courses.)




45 participants randomised

2 lost to follow up

# Characteristics of participants

| | Intervention group (n=23) | Control group (n=22) |
|---|---|---|
| Gender % (n) | | |
| Male | 52% (12) | 77% (17) |
| Female | 48% (11) | 23% (5) |
| Age group median (IQR) | 4.00 (1.00) (50-59) | 3.50 (1.00) (40-59) |
| Years in practice Mean (SD) | 22 (6) | 23 (5) |
| Special interest in LBP % (n) | | |
| Yes | 61% (14) | 27% (6) |
| No | 39% (9) | 73% (16) |
| Other special interest % (n) | | |
| Yes | 57% (13) | 55% (12) |
| No | 43% (10) | 45% (10) |

# Completion rate

- 41/45 (91%) completed the course

  → use of reminders

- 43/45 (96%) completed the questionnaires

# ABS-mp: within and between group changes

| ABS-mp | Intervention group | Control group |
| --- | --- | --- |
| Limitations on sessions | | |
| Psychology | | |
| Connection to health care system | | |
| Confidence and concern | | |
| Reactivation | | |
| Biomedical | | |

# PABS: within and between group changes

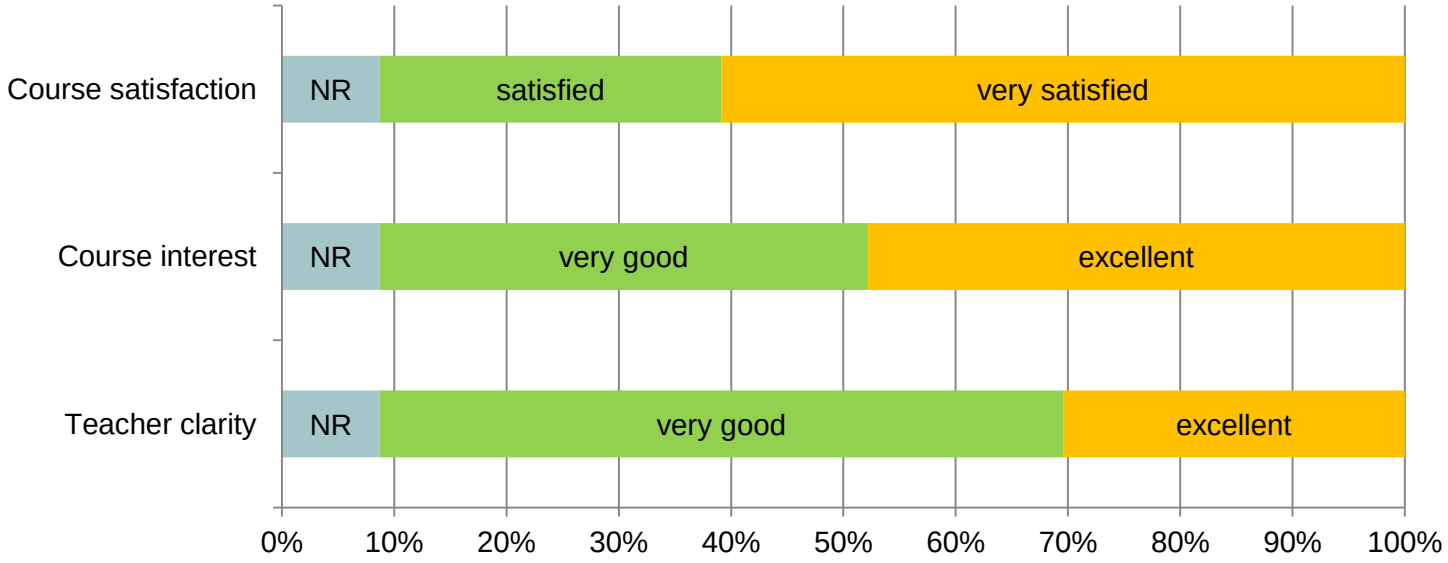
| PABS | Intervention group | Control group |
| --- | --- | --- |
| Biomedical | | |
| Behavioural | | |

# What does that mean???

| Mean (SD) | | PABS Biomedical | PABS Behavioural |
|---|---|---|---|
| **Changes in our study** | Osteopaths > 15 years experience | - 9.6 | + 5.1 |
| **(Beneciuk and George 2015)** | Physiotherapy students | - 4.5 | + 5.5 |
| **(Overmeer, Boersma et al. 2009)** | Physiotherapists | - 8.1 | + 2.1 |

# Satisfaction survey

21/23 answered after taking e-learning programme



# Survey (cont.)

- Three most useful things (20/21):

Content analysis, 4 categories:

  - pain theory (21)
  - management (18)
  - BPS influences and diagnosis (18)
  - other (1)

# Survey (cont.)

- Other feedback (14/21)

Content analysis, 4 categories:

  - content of the course (33)
  - e-learning (14)
  - effects of the course (6)
  - suggestions (4)

# Summary

- Feasibility using e-learning
- Key aspects for developing e-learning programmes
- Promising tool to give a different stance on BPS

# Qualitative results


Insights on:

- practical experience
- engagement with the content
- perceptions of the BPS model

| Not structural enough | Already done | Fascinating |
| --- | --- | --- |

# Thank you very much for your attention

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