Are mindfulness and other CBT techniques effective in improving communication in people with acquired, non-progressive aphasia?

Systematic Review and Patient and Public Involvement Exercise

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Acknowledgement:

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Background

• Aphasia and anxiety
  – clinical practice
  – literature (e.g. Cahana-Amitay, 2011)

• Aphasia and attention (e.g. Murray, 2012; Korda and Douglas, 1997)
Background

Mindfulness
“paying attention in a particular way: on purpose, in the present moment and non-judgementally” (Kabat-Zinn, 1994)

Evidence for effectiveness in:
• Anxiety and depression (Kabat-Zinn et al., 1992; Teasdale et al., 1992)
• Attention skills (Zha et al., 2007)
• Other health conditions (Baer, 2003)
Are mindfulness and other CBT techniques effective in improving communication in people with acquired, non-progressive aphasia?

- Patient and Public Involvement (PPI) exercise
- Systematic Review
Patient and Public Involvement - Methods

People with aphasia – mild to severe
Recruited from:
• Stroke groups
• Conversation groups
• Mindfulness group for stroke patients
• Patients known to researcher and colleagues

Groups and 1-1 interviews

Thematic analysis used to identify factors of importance to PWA
PPI - Results

• Many people reported fluctuations in degree of aphasia
• Negative factors identified:
  – Stress/anxiety
  – Heightened emotions - various
  – Pain, illness
  – Tiredness
  – Perceived importance of conversation
  – Background noise
• Increase in other stroke symptoms
• Some failed to identify any impact of stress – why?
PPI – Results

Suggested explanations for variability

- “you use all your resources just trying to communicate”
  Resource allocation?

- “you think something will be expected or thought”

- “people listening to me speaking rather than what I said”
  Concern about others’ perceptions?
PPI – Results

Positive variables:

• Disclosure – card, badge
• Environment - secure, supportive, time
• Preparation, planning, rehearsal
What is a Systematic Review?

‘A review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review.’ (Cochrane Collaboration, 2014)
Systematic Review - Methods

**PICO** method used to define question, inclusion and exclusion criteria

- **Population**: adults with acquired, non-progressive aphasia (any aetiology);
- **Intervention**: mindfulness-based approaches and other cognitive behavioural therapies;
- **Comparison**: any other intervention or no intervention
- **Outcome**: improved communicative effectiveness

6 electronic databases scrutinised
461 distinct references retrieved
Systematic Review - Results

**Identification**
- Records identified through database searching (n = 461)
- Additional records identified through other sources (n = 3 posters)

**Screening**
- Records after duplicates removed (n = 307)

**Eligibility**
- Records screened (n = 307)
- Records excluded (n = 302)
- Full-text articles/posters assessed for eligibility (n = 5)
- Full-text articles excluded, with reasons (n = 0)

**Included**
- Studies included in narrative synthesis (n = 5)
- Studies included in quantitative synthesis (Meta-analysis) (n = 0)
Results

• 3 eligible papers, 2 studies from ‘grey literature’ - posters

• Quality assessed – SCED (Single Case Experimental Design) scale
### SCED Scale

#### Rating Scale for Single Participant Designs

For each item, please justify scoring (for both "yes" and "no" responses), by at least mentioning page and paragraph numbers in the field underneath the tick boxes.

<table>
<thead>
<tr>
<th></th>
<th>Rater 1:</th>
<th>Rater 2:</th>
<th>Consensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Clinical history was specified. Must include Age, Sex, Aetiology and Severity.</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<tr>
<td>2. Target behaviours. Precise and repeatable measures that are operationally defined. Specify measure of target behaviour.</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<tr>
<td>3. Design 1: 3 phases. Study must be either A-B-A or multiple baseline.</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<tr>
<td>4. Design 2: Baseline (pre-treatment phase). Sufficient sampling was conducted</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>5. Design 3: Treatment phase. Sufficient sampling was conducted</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>6. Design 4: Data record. Raw data points were reported</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>7. Observer bias: Inter-rater reliability was established for at least one measure of target behaviour.</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>8. Independence of assessors</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>9. Statistical analysis</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<td>10. Replication: either across subjects, therapists or settings</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
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<tr>
<td>11. Evidence for generalisation</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
<td>[ ] yes [ ] no</td>
</tr>
</tbody>
</table>
SCED scale scores

Laures-Gore

Dickinson et al.

Orenstein et al.

Gadson et al.

Wantsala et al.
Conclusions

**PPI**
- PWA can experience marked fluctuations in spoken communication as a result of anxiety, stress and a number of other factors.
- People find strategies that help, but few had heard of or tried mindfulness.

**Systematic Review**
- Language outcomes showed gains (on 4 out of 5 studies).
- Small number of studies, making it difficult to draw conclusions.
- Moderate quality of design and scope for improvement in future study methodology.
- Diverse outcomes reported.
- Studies were positive about the ability of people with aphasia to access mindfulness interventions.
Impact

• Further research into the efficacy of using mindfulness techniques for PWA needs to be explored.
• Exploration of impact on quality of life for PWA.
Thank you for listening!
References (1)


References (2)


