Help to anticipate

Evaluation of psychosocial interventions for people with dementia: what to learn from the Cochrane Library?

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Psychosocial interventions

- Psychosocial Interventions: improving quality of life and maximising function in the context of existing deficits (Rabins et al., 2007).

- Several researchers have shown concern about methodological issues of evaluation of PI’s (Mayo-Wilson, 2012; Vernooij-Dassen & Moniz-Cook, 2014).

- In France, 95% of dwelling facilities declare using at least one (sometimes unidentified) « non-pharmacological » interventions to care for people with dementia (Fondation Médéric Alzheimer, 2014).

- Facilities invest a limited range of PIs due to:
  - Costs
  - Lack of knowledge on impact of PIs
  - Lack of staff able to implement PIs
  - Lack of evaluation of efficiency

The main risk of such issues is to consider PIs as general programmes to occupy people with dementia without a meaningful purpose.
Method

- Cochrane reviews on PI’s for people with dementia
- Content analyses of recurrent observations for research purposes as well as for clinical practice.

Results

- 20 meta-analyses on dementia and PIs:
  - 4 were not complete
  - 2 were excluded by reviewers of the journal because did not rigorously fit the definition of PI (aromatherapy and light therapy)
  - 2 were not specific to one intervention but a set of interventions for one symptom
  - 1 was not specifically on dementia (aging and MCI)

11 Meta-analysis on 12 interventions were selected for the purpose of this study
Selected PIs

- Physical activity
- Functional analysis
- Cognitive training
- Massage & touch
- Music therapy
- Educational programmes
- Psychotherapy
- Cognitive rehabilitation
- Snoezelen©
- Cognitive stimulation
- Reminiscence therapy
- Validation©

All were completed or actualised between 2008 & 2014, except for Reminiscence (2005)
Raw results

- 443/510 studies (87%) excluded from meta-analyses!
  - 57% not RCTs (case studies, comparative studies, reviews, theoretical papers, qualitative studies, observational studies...)
  - 33% methodological issues (blindness, randomisation, experimental design, sampling, statistics...)
  - 11% unclear objectives (hypothesis operationalisation, implementation preciseness)
  - <1% non-English written articles (under-estimated)

- Probability of methodological biases (selective reporting, attrition, selection, detection or performance biases) of included studies (n = 67, 13%):
  - 56% low risk
  - 18% high risk
  - 26% uncertain risk

An important source of potentially interesting information is excluded from Cochrane reviews!!
Quasi-systematic outcomes of Cochrane Reviews

- Implication for practice:
  - “we can not endorse [...] nor refute any positive effect”
  - “no sufficient evidences showing the efficacy [...] on mood, behavior or social interactions of people with dementia”
  - “plenty of non-randomized evidence ”
  - “need for training, support and supervision for staff”

- Implication for research:
  - “There is a clear need for more randomized controlled trials” or “rigorous research”
  - “Need of broadening of outcome measures to include well-being, mood and quality of life is welcome”
  - “research is needed to differentiate between various [...] approaches”
  - “The effects of severity of dementia and different modalities need to be systematically evaluated.”
Main discussion points

- Poor conceptual framework:
  - PI induced psychological, cognitive, behavioural, emotional, social, motivational, and sensory-perceptive mechanisms and processes are not sought enough
  - Therapeutic relationship

- Implementation procedures:
  - Lack of preciseness of implementation procedures
  - Identical interventions with different implementation procedures: impossible comparison
Main discussion points

- Assessment criteria and tools:
  - Quality of Life should be systematically assessed
  - Assessment scales are not the same and don’t enable comparison

<table>
<thead>
<tr>
<th>Assessment Area</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>BPSD (agitation, anxiety, wandering, sleep ...)</td>
<td>79 %</td>
</tr>
<tr>
<td>Cognition (executive functions, memory, ...)</td>
<td>64 %</td>
</tr>
<tr>
<td>Mood/ emotions /depression</td>
<td>57 %</td>
</tr>
<tr>
<td>ADL's / autonomy</td>
<td>43 %</td>
</tr>
<tr>
<td>Quality of life</td>
<td>36 %</td>
</tr>
<tr>
<td>Social Cognition (social Interactions, communication, empathy, TOM...)</td>
<td>29 %</td>
</tr>
<tr>
<td>Carer evaluation (depression, respite, burden ...)</td>
<td>14 %</td>
</tr>
<tr>
<td>Medical prescriptions</td>
<td>7 %</td>
</tr>
</tbody>
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Mainly symptomatic targets in a therapeutic issues → medical model
How about compensating deficits and supporting people? → disability model
Main discussion points (2)

- **Participants profile:**
  - An intervention will not have the same impact according to psychological status, and type of dementia
  - Impact according to severity dementia is poorly or not assessed

- **Dosage and sensitiveness to an intervention**
  - Differentiation of dosage (length, periodicity and duration) are not assessed or acknowledged
  - Sensitiveness according to BPSD and to participant individual characteristics is not differentiated
Conclusions (1)

- Necessity to adopt an investigation methodology adapted to specific characteristics of psychosocial interventions;
  - Placebo: PI’s cannot be evaluated against but with it.
- Other research methods than RCTs are susceptible to give as much, if not more, informative results (Orrell, 2012).
  - Observational studies, case studies, comparison studies, qualitative studies
  - Non RCT studies are not scientifically flawed
- Implementation of randomised control trials call for necessary fundamental prerequisites in order to attenuate methodological weaknesses;
  - Standardisation of intervention protocols: Implementation error (Vernooij-Dassen & Moniz-Cook, 2014)
  - Outcome measures (Vasse et al, 2011):
Conclusions (2)

- Prescription of painkillers on samples without any pain: they won’t show any effect, they don’t do any immediate observable harm, but would we go on prescribing them anyway?
  - randomly assign people with dementia to an intervention or another?
  - Find clear treatment indications to address people’s needs → PI’s with narrowed intervention targets seems to show better results (reminiscence, cognitive stimulation,...) : dosage and sensitiveness

- It takes 10 to 20 years for a molecule to get tested and marketed: why should it be easier for psychosocial interventions?

- Selective reporting: Negative and null results are too often put aside and not analysed nor interpreted: the goal is to present positive result (condition for publication)

Are Cochrane Reviews reliable sources, at this point, to judge efficacy and efficiency of interventions that have difficulties fitting RCT’s gold standards?
Thank you

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