THE USE OF CONCEPT MAPPING TO ENHANCE STAFF KNOWLEDGE AND MANAGEMENT OF BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

Suzanne Aberdeen
Dr Sandra Leggat
Dr Graeme Byrne
Dr Simon Barraclough
Background and Literature Review

- Whilst recommended, there seems to be no evidence of the effectiveness of a person-centered team problem-solving approach to BPSD.
- Current documentation for BPSD is of questionable quality and does not demonstrate problem-solving.
- Staff are not encouraged to reflect on, and learn from, failures to succeed and feelings about care provision.
Person Centred Approach

Activities

Psychosocial

Identity

Neurological Impairment

Physical Environment

Health

Resident
CONCEPT MAPPING

Impact of psychosocial environment

Dementia type, progression and effect

Identity and story – culture, family, beliefs, interests etc.

Task, activities or ADLs: enabling or disabling

Impact of physical environment

Health and well-being
Concept Mapping Research

Mapping:

– creates confidence in existing knowledge and skills;
– links new and old knowledge, and encourages learning from the process;
– can be evaluated using scoring for comprehensiveness, organization of concepts and correctness of logic and facts; and
– can be computer-based and linked to computerised record keeping and care planning.
Research Population

• Representative sample of 15 Victorian RACF and their staff (148 pre-test and 103 post-test):
  – three year accreditation;
  – facilities had accessed Dementia Essentials training courses within previous six months;
  – regional and metropolitan;
  – For-, and not-for-profit;
  – 30-90 beds;
  – multicultural; and
  – high and low care.
## Residential Aged Care Facilities

<table>
<thead>
<tr>
<th>For-Profit</th>
<th>Not-for-Profit</th>
<th>High Care Beds</th>
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Instruments for Data Collection

• Data collection tools continued:
  – Summative assessment tool to measure the knowledge required for the competency: *Provide care support which is responsive to the specific nature of dementia* (CHCAC15A) comprising:
    • a case study and questions; and
    • a marking rubric designed to differentiate between the expected quality of the answers from Associate Degree, Certificate IV and Certificate III level staff based on the Australian Qualifications Framework.
Evidence of Validity of the Scores of the Marking Rubric

• Establishing evidence of:
  – the adequacy of the test’s representation of the national dementia care competency;
  – the relationship between the test items and the construct on which the test score interpretations are based; in this case the AQF levels for Cert III, IV and Associate Degree; and
  – responses to the test by staff who had just successfully completed a Dementia Essentials Course (47 at Cert III, 46 at Cert IV and 39 at Associate Degree levels).

### DISCRIMINATE ANALYSIS CLASSIFICATION TABLE

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<th>Ed Level</th>
<th>Predicted Group Membership</th>
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<td>100.0</td>
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</tbody>
</table>

- 76% of original grouped cases correctly classified.
- 100% of degree level group correctly classified.

- **THE RUBRIC SCORE HAS A REASONABLE CERTAINTY OF PREDICTING THE AQF GROUP.**
Instruments for Data Collection

• Data collection tools:
  – Audit of 25% of care plans using a 3 point rating scale for 20 questions evaluating:
    • Problem statements
    • Goals
    • Interventions or care strategies
    • Evaluation criteria.
  – Concept Mapping Rubric
Instruments for Data Collection

Validated 5 and 7 point survey scales from Amy Edmondson (1999) testing staff perceptions of:

- the supportiveness of the organization towards working and learning;
- team leadership – available, initiates, consults;
- team learning behaviour (working together to reflect and find things out).
- sense of safety and support within the team;
- team efficacy (the belief that the team can problem-solve and care-plan); and
- having clear working goals.
Structural Equations Model

CMIN = 636.127 on 397 df giving CMIN/df = 1.602
The comparative fit index CFI = .847
The Bentler-Bonett normed fit index NFI = .686
root mean square error of approximation RMSEA = .064
RESEARCH MODEL

Antecedent conditions

Organizational Support

Team leader actions

Psychological Support

Team efficacy

Team beliefs

Team Learning Behaviour

Team behaviour

Intervention Team Concept Mapping

Team performance

Staff knowledge and care planning

Adaptation of Edmondson’s (1999) model of team learning
TEAM LEARNING

The graph illustrates the comparison between control and experimental groups in terms of total knowledge score over pretest and posttest. The blue line represents the experimental group, showing a significant increase in knowledge score from pretest to posttest. In contrast, the red line for the control group shows a decrease in knowledge score over the same period.

Markers/lines show the mean scores for each group.
TEAM LEARNING

**Group: Control**

**Group: Experimental**

<table>
<thead>
<tr>
<th>Work Level</th>
<th>Mean Total Knowledge Score</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Div 1 and above</td>
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<tr>
<td>Div 2 and activities</td>
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<tr>
<td>PCA and kitchen etc</td>
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</table>
Knowledge Improvement by Facility

Pre-test

Post-test

Dementia Essentials Mean Score

Facilities
ANOVA shows that the Group*time interaction is highly significant ($p = 0.005$) which strongly supports the hypothesis that concept mapping improves care planning performance.
Variation between facilities may be explained by a strong positive correlation between the quality of concept mapping and the quality of care plans ($r = .75$).
Conclusions

• Team’s perceptions of psychological safety are strongly and positively associated with learning behaviour.
• Organizational supportiveness and team leadership are strongly correlated and positively associated with a belief that the team can learn and care-plan, controlling for the effect of psychological safety.
Conclusions

• Concept mapping for BPSD in a safe psychological environment with organizational support and leadership can improve residential aged care team’s knowledge of dementia and care planning for BPSD over time.