

Home Assessments and people who have dementia. Differences in clinical and home environments

A critical appraisal by Rachel Blair

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Clinical scenario:

The push for elderly patients to return home after hospitalisation is ever increasing with the political push in the health care system for the elderly to remain in their own homes for as long as possible. This is evident in both the 'Ageing in Place' legislation that determines the care of elderly and in the way hospitals or establishments based on the medical model are run. The task of the health professional is to make the judgement call on whether that individual is safe to return home and which level of care they may require. Davis, Hoppes and Chesbro, (2005) state that the recommendations for the individuals living arrangements must be made from the assessment of that person's independence in common activities.

The mismatch of performance in hospital and performance in their own home, is observed in any inpatient rehabilitation setting. A recent experience included a patient who was performing independently in hospital. The Occupational Therapist completed a home visit and the patient was unable to complete the tasks in a safe and independent way. In that case, the medical team has questioned if the patient required a home visit at all, but the Occupational Therapist made the unpopular decision to be thorough. In practice the Occupational Therapist will often send the patient home with only one home visit. This is because the pressure to discharge each patient is substantial, from both the authoritative medical professionals and from the legislative policies that guide them. On that one home visit the Occupational Therapist should remind the patient of everything that they have been practicing on the ward. The presence of the health professional alone can act as a cue to that patient of all the safety factors and different techniques they must

adhere to during the different activities. The therapist should base their recommendations for living arrangements based on this initial visit, rather than the hospital based assessment.

Clinical Question:

What is the evidence that an individual who has dementia will function differently when assessed in their own home compared to in a clinical setting as measured by standardised functional assessments?

Limitation of this CAT:

This critical appraisal has been peer reviewed by one lecturer as part of an assignment.

Summary of Search, 'Best Evidence' Appraised, and Key Findings:

There is a fair amount of evidence available based on the assessment of functional performance of those individuals with dementia. Most of this appears to be related to researching the assessment not the setting that it is completed in. Only a few of the articles were published in well-known Occupational Therapy articles. Therefore, the reliability of articles published elsewhere is sometimes unknown. The criteria for getting an article published varies. This has an impact on the reliability of the research if the process included the article being peer reviewed. The reason these articles were chosen was because they were published within reputed Occupational Therapy articles and they fit the inclusion and exclusion criteria set out below. Key findings were that the quality of the evidence from research done is only sufficient to base further research upon, not to implement into practice.

Clinical Bottom Line:

The implications for practice based on the weight of the evidence presented is that higher level research needs to be carried out on the value of completing functional assessments in the home environment for the individual with dementia.

Search Strategy:

A database search was carried out and then articles that seemed to fit into the criteria were found through a manual search of the Bill Roberston Library and assessed. Find the search log attached.

Inclusion and Exclusion Criteria:

Inclusion criteria:

- Research article must assess the function in their own home and in a clinical setting
- Research article must assess patients with Alzheimer's or Dementia
- Studies published from 2000 onwards
- Research must use a standardised outcome measure that measures a range of functional tasks

Exclusion criteria:

- Articles that are not from a reputable Occupational Therapy Journal
- Those articles which assess patients in the later stages of Alzheimer's or Dementia

Results of Search:

Study Design	Level	Author and Year
Pilot study	11-2	Hoppes, S., Davis, L., & Thompson, D. 2003
RCT	1-2	Schryburt-Brown, K. 2007
RCT	1-2	Hirsch, C, 2007
Case study	11-2	Hartman, M., Fisher, A., & Duran, L. 1999

Best Evidence:

The article's identified as the best evidence for the purpose of this study are: Hoppes, David and Thompson's (2003) article, Environmental Effects on the Assessment of People with Dementia: A pilot study and Tullis and Nicol's (1999) article, A Systematic Review of the Evidence for the Value of Functional Assessments of Older People with Dementia.

These two articles were selected for the following reasons:

- Application of the inclusion and exclusion criteria

- Availability of the article
- The Tullis and Nicol systematic review was provided as part of an assignment, therefore some of the inclusion and exclusion criteria do not apply.

Summary of Best Evidence:

1.

Tullis, A., & Nicol, M. (1999). A Systematic Review of the Evidence for the Value

of Functional Assessment of Older People with Dementia. *British Journal of*

Occupational Therapy, 62(12), 554-653.

Critiqued using Taylor's (2007) guidelines for appraising systematic reviews.

Aim / Objective of the Systematic Review:

To review the evidence available on the value of carrying out a single home visit assessment to determine a patient's ability to return to his or her own home

Are the results valid?

The aim is identified in the abstract and explained in the opening two chapters of the systematic review, but no clinical question is explicitly stated. The key words meant that the evidence gathered was quite broad in what it addressed. Reviewed was the evidence for functional assessments in general and then this was broken down into different strands. Four of the sixteen articles specifically assessed the home based assessment of the person with dementia.

The broad approach to this review, leads onto the fact that of the 16 studies included, there were only a few that actually proposed to measure similar aspects of the functionality of the person with dementia. Moreover there was a huge range in the methodology of the studies with differing outcome measures. The methodology consistency is non-existent; therefore the information gained from the summary of these articles is non-conclusive.

The inclusion and exclusion criteria are clearly stated and evidentially applied in the selection of the articles for the review, as the literature reviewed is in keeping with the criterion identified. In keeping with the clinical question and criteria, the majority of the articles focus on people who have been diagnosed with Alzheimer's, excluding those who are under 65 years of age. The search method itself is not well explained, the authors only identify the databases that have been searched, not how or when or the results gained from each database. No quality criterion is identified in looking at the methodology of the studies reviewed nor does any appear to have been applied in the selection process. It is not identified how many articles were excluded through the application the criteria, if any were at all. Whether both authors have been included in applying the criteria is not identified, therefore it is impossible to know if author biases have been considered or eliminated.

What are the results?

The findings of the sixteen articles were presented in narrative form. The authors identify the limitations of each study during the explanation of each of the three strands, as well as identifying what conclusions or questions can be drawn from the results. Often the limitations include the fact that the results of the studies are identified as a non-significant statistical result but not well explained. This clarification assists in identifying which of the information from these sixteen studies of differing methodology, can be applied as evidence for the home visit assessment. The narrative discussion is the only information upon which the reader can assess the validity and reliability of the articles, as the authors have included a limited amount of statistical evidence in their summary of each article. No standardised method of information synthesis has been identified as being employed in the review of this evidence. Therefore it is impossible to know how the reviewers developed the three strands evident throughout the literature; or to know if all the information available was established or as mentioned above; any biases were eliminated. The limited amount of statistical information available to

the reader makes it difficult to determine any statistical relevance from the information in the review.

The conclusions and recommendations are in keeping with the summary of evidence presented. Tullis and Nicol (1999), the authors, identify that very few conclusions can be drawn, as the evidence was either not specifically relevant or not statistically significant. They conclude with 4 aspects for assessing the functionality and safety of a person with dementia before discharging them. These four do appear to have been drawn directly from the literature reviewed. They recommend further research into these four areas, as it appears the significance of one home visit assessment pre-discharge has not been identified with significant evidence as yet. These four areas are:

1. That the functional performance of the person with dementia should be assessed in their natural setting, their own home rather than in a ward setting.
2. Everything that can be done, should be done in regard to getting the view of the person with dementia themselves.
3. If that person with dementia is in the very sever stages, one should attempt to gain information about them from a family member or caregiver.
4. Standardised scales are useful but no one in particular is evidenced as being the best to use.

2.

Hoppes, S., Davis, L., & Thompson, D. (2003). Environmental Effects on the Assessment of People with Dementia: A pilot study. *The American Journal of Occupational Therapy*, 57(4), 396- 402.

Critiqued using the McMaster guidelines for a critical review, quantitative studies.

Study Purpose:

The purpose of the study is well introduced and thoroughly explained. The research question is clearly labelled as: Do individuals with dementia perform differently on a standardised assessment of independent living skills administered in three environments: clinic, adult day-services facility where they regularly attend, and home?

Literature:

Included in the introduction is a thorough literature review, looking at other studies who have proposed to answer a similar research question. It also reviews the philosophy behind Occupational Therapy and models of practice. While this is informative and builds an appropriate background to the study, it is all presented before the actual study and in essence backs up the research before introducing the research purpose itself. This was quite confusing until further on in the introduction.

The literature review summaries the available research and identifies the areas of knowledge or evidence that are lacking.

Design:

The research was conducted in a Case Study design; the authors describe it as a quasi-experimental design. The purpose is to determine the relationship between particular interventions and the measurable outcome of such. The McMaster guidelines explain that the Case Study design is often employed to explore a new treatment possibilities and ideas. The standard of evidence gained from this study design is generally only sufficient to justify further research. The authors state this was their intention in conducting the research, completing a pilot study to determine the angle for further research to determine implications for practice.

This study design does eliminate the need for a control group, as the variable is the setting that the participants are assessed in; each participant is assessed in each of the three different settings. The focus is on determining which setting affords the best functional performance.

Biases:

Sample/ Selection Bias:

The article identifies that the participants are volunteers and informed consent was gained from both the caregivers and the participants prior to the study, as approved by the 'Institutional Review Board'. What is not identified though is how the volunteers were recruited, this makes it difficult to assess whether any biases were identified or eliminated.

Measurement/ Detection Bias:

The authors attempted to limit this by ensuring that the outcome measure used in the study was standardised with well-established inter-rater reliability scores, test-retest reliability and validity, as evidenced by Sanford, Guyatt, Law and Swanson (1994, as cited in Hoppes, Davis & Thompson, 2003) and Mahurin, DeBettignies, & Pirozzolo (1991, as cited in Hoppes et al, 2003).

As the assessment is administered by 4 independent raters, any biases are towards particular patients are eliminated by ensuring that each rater only assessed each participant once. They were also blind to the participant's results of the assessment in the different settings and of the results carried out by the different raters, until the end of the study. The order of participants being assessed as well as the different environments they were assessed in was randomised.

A recall bias was considered in the design of the study, the assessments were carried out a week apart, with the assumption that this space of time would limit the participant's ability to recall the assessment and 'learn' the answers.

Intervention/Performance Bias:

As identified by the authors of this study, the participants had been living in their environments for differing periods of time. This could have impacted the assumed familiarity one has in their home environment and could therefore be part of the reason limited differences were evidenced in performance.

The 4 raters involved in conducting the assessments were all educated on the standardised method of administration, practicing on each other as well as independent individuals. Any concerns or

discrepancies in this practice phase were discussed as a group and each rater implemented the conclusion reached.

Sample:

The sample size and demographics are well described, with the common characteristics identified. Of the 12 participants, half were male and half were female. Two of these participants did not complete the three assessments and this is explained. The inclusion criteria are well detailed, though not explicitly stated as such. There is no indication of how the sample was gathered or if any exclusion criteria were enforced. There was also no justification for the small sample size. The participants are within similar ranges for both age and cognitive functioning. As stated above participation was voluntary with informed consent gained from both the participant and their caregivers, with ethical approval from the 'Institutional Review Board'. The article does not state that ethical consent was gained or sought.

Outcomes:

As stated above, the outcome measure used is standardised and has well-established reliability and validity as an assessment tool. The assessment itself is thoroughly explained in the article and its use as the outcome measure justified. The 'SAILS' assessment is purposefully designed to measure exactly that which the researchers wished to measure, functional abilities of individuals with dementia.

Intervention:

The implementation of the study is described in detail, only lacking in explaining the exact activities used in the assessment. The focus of the study was not to trial a specific intervention but to establish the optimal environment for intervention to take place. Therefore it is relevant to Occupational Therapy but more research is needed to enforce the results of this study before one would be able to base

their evidence-based practice on the results presented in this article.

Results:

The results are presented both in narrative form and statistically. There was no overall change in performance between the different settings in the SAILS scores. An analysis of variance showed that there was a difference however in the motor performance within the home setting. This method was appropriately used to measure the outcomes due to the number of different settings assessed. This result was analysed using, post hoc, pair-wise comparisons, to show statistically that the mean score was higher, 3.5 points higher. This method is not described or justified within the article; the value of the 3.5 points is also not explained.

Dropouts:

The participants who did not participate in the full study were identified with reasons given for the non-completion of part of the assessment process but the authors of the article do not state whether or not their results have been then eliminated from the statistical analysis.

Conclusion and Clinical Importance:

The discussion provides a sound summary of the results, as well as proposing possible reasons for the results the study concluded with. The conclusion is reflective of the information presented in the article. In the final summary though, the authors do appear to make recommendations for practice that go beyond the strength of the results of the study.

Implications for Practice, Education and Future Research:

What is the evidence that an individual who has dementia will function differently when assessed in their own home compared to in a clinical setting as measured by standardised functional assessments?

The combination of the articles Tullis and Nicol (1999) reviewed provided some evidence for assessing the individual with dementia in their own home. While there may be some relevant evidence within this systematic review, the evidence is not statistically supportive of changing one's practice solely on the evidence presented. Though it does identify key areas to delve into further research and clarification for practice. The implications for moving practice more into the home rather than the ward setting are not well discussed. One would have to take into account the limited time available for travelling and one on one therapist time, as well as the increased costs of this method. Also as no one standardised scale was identified, one is unable to practically apply that information without more research. The Hoppes, et al (2003), article uses the Structured Assessment of Independent Living Skills (SAILS) assessment to gain the evidence. As this is a standardised assessment, the information gained can be trusted in a statistical sense. The results of the study show that the patient with dementia does perform slightly better in their own environment. The weight of the evidence was limited because of the number of participants in the study. It could be assumed that the same study completed, with a larger study population, would show more significant results. Therefore the conclusions that can be drawn, again relate more to furthering the research in this area rather than in implications for practice.

Reference List :

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