Understanding adherence to assistive devices among older adults: A conceptual review

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Introduction

- Assistive devices (AD) = physical tools applied to or used by an individual, like prostheses and walking/hearing aids1
- Adherence = extent to which recommendations from a healthcare professional are followed → considered necessary for positive health outcomes2
- Understand AD adherence (conceptualization) through thematic breakdown of factors that can predict use
- Specific attention needed for older adults

Methods

Data Bases: MEDLINE, PubMed and CINAHL

Search terms and criteria: English articles were searched in (1990-2017) for the following key words: “adherence”, “assistive devices”, “concept”, “compliance” and relevant synonyms.

Inclusion criteria: Articles were analyzed if they:
(1) Attempted to define or conceptualize adherence to some degree
(2) related to any assistive device dealing with
(3) older adults aged 65 or older.

Search results summarized in Figure 2.

Aim

How is adherence to assistive devices among older adults conceptualized in the literature? How similar is it to the concept as applied to other health interventions?

Results

463 articles identified through the literature search (including duplicates)
100 from PubMed
185 from CINAHL
175 from MEDLINE
3 from bibliographic searches

384 excluded after review of titles and abstracts. Reasons for omission: Duplicates
No mention of AD as defined by this review
AD not patient-centred

79 full-text reviews
63 excluded after full-text review. Reasons for omission:
No attempt at conceptualization
No patient adherence
Outcome measures irrelevant to AD
Did not meet exclusion criteria

16 articles included in this review

Table 1. Example of a summary of one article4.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Study design</th>
<th>AD Type</th>
<th>Study Population</th>
<th>Defining Adherence</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sakakibara et al. 2013</td>
<td>Pilot study</td>
<td>Manual wheelchair</td>
<td>20 wheelchair users</td>
<td>Participation</td>
<td>Definition contained in article</td>
</tr>
</tbody>
</table>

- Adherence to AD’s among older adults was not explicitly defined
- 3 robust themes of adherence to AD’s were found in the literature
- Each theme possessed unique sets of considerations:
  1) Psychological
    - Confidence, attitudes, perceptions
  2) Contextual
    - Collaborative communication
    - Physical and social environments
  3) Functional
    - Adaptability of the AD to any progression of the client’s conditions

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Conclusions

- Adherence to AD’s among older adults is complex and multidimensional
- Psychological, contextual, and functional factors related to AD use all affect the likelihood an individual will adhere to an AD recommendation
- In the clinical context, each core theme should be applied on a client by client basis because each element contains unique implications

Figure 3. Proposed descriptive model for assistive device adherence among older adults.

- Similar conceptualization between AD and other health intervention like medication use
- Future research should study how these 3 elements work together to influence adherence
- Professionals who assess for, and recommend AD’s should foster a shared-decision making relationship with clients

Limitations

- The studies that were included in this review had small sample sizes
- Articles outside of publication date and language restrictions were not included

References


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