

Optimising Independence of Older Persons with Cognitive and Functional Decline: Interdisciplinary Home-bAsed Reablement Program (I-HARP)

Yun-Hee Jeon,¹ Lindy Clemson,² Sharon Naismith,³ Sarah Szanton,⁴ Judy Simpson,⁵ Lee-Fay Low,² Loren Mowszowski,³ Peter Gonski,⁶ Richard Norman,⁷ Luisa Krein,¹ Laura N. Gitlin,⁴ Henry Brodaty⁸

¹Sydney Nursing School, University of Sydney, Sydney, Australia; ²Faculty of Health Sciences, University of Sydney, Australia; ³Healthy Brain Ageing Program, Brain and Mind Centre, and Charles Perkins Centre, University of Sydney, Australia; ⁴Johns Hopkins University School of Nursing, Center for Innovative Care in Aging, Baltimore, Maryland, USA; ⁵School of Public Health, Sydney Medical School, University of Sydney, Sydney, Australia; ⁶Division of Aged and Extended Care (Southcare), Sutherland Hospital, South Eastern Sydney Local Health District, Sydney, Australia; ⁷Curtin University, Perth, Australia; ⁸Dementia Centre for Research Collaboration (DCRC) and Centre for Healthy Brain Ageing (CHeBA), UNSW Sydney, Australia

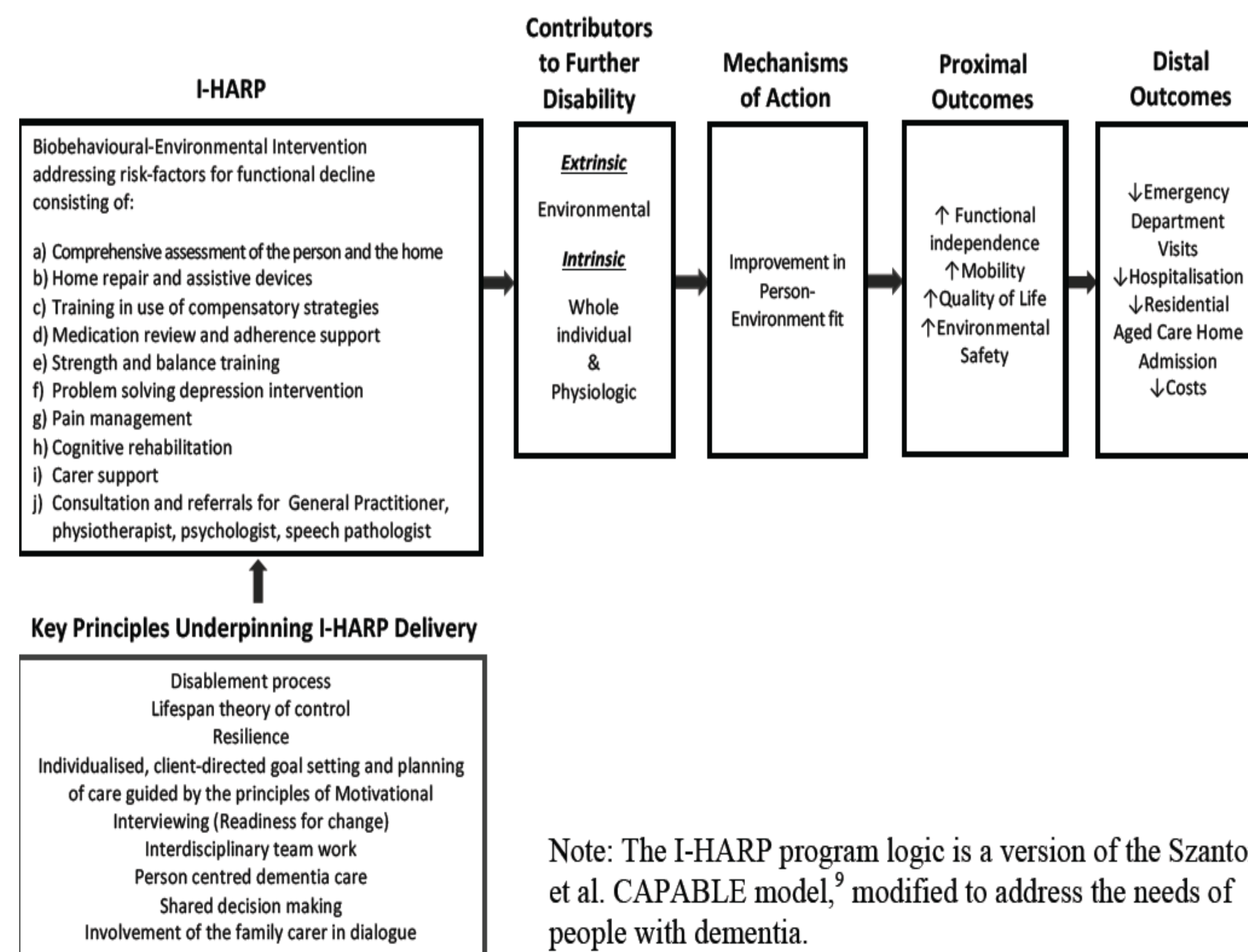
Background

- Psychological, neurological, and social impairments caused by dementia limit the person's everyday living and experiences
- Those affected still retain the capacity to enjoy a meaningful life.
- Reablement approaches to care maximise the health and wellbeing of older people through engagement in daily, physical, social & community activities.
- I-HARP, based on a bio-behavioural-environmental model, integrates proven strategies into a comprehensive, person-centered, interdisciplinary program.
- I-HARP has adapted and expanded the US reablement program CAPABLE¹
- I-HARP is delivered over 4 months with a goal to enhance the function of older persons with dementia and alleviate chronic age related conditions, such as pain, incontinence, and polypharmacy.



Program Logic

Figure 1. Program Logic for Interdisciplinary Home-bAsed Reablement Program (I-HARP)



Note: The I-HARP program logic is a version of the Szanton et al. CAPABLE model,⁹ modified to address the needs of people with dementia.

Sample and Methods

- Parallel-group RCT design
- Objectives: to determine impact of I-HARP on client's daily activities, mobility and health-related quality of life, home environmental safety, and caregiver burden and quality of life.
- Three assessments: Time 1, prior to the intervention; Time 2 (after the intervention); and Time 3 (12 months after Time 1).
- Inclusion criteria:**
 - ≥60 years old;
 - Mild cognitive impairment, early – moderate stages dementia
 - Difficulty with ≥1 activities of daily living (ADL) and/or ≥2 Instrumental ADL, as a result of, for example, physical illness, surgery or chronic medical illness able to stand with or without assistance
 - live within 25 kms of Sydney CBD
 - have conversational English
 - have carer - co-resident or ≥ 4 days or 7 hours per week contact
 - consent to study participation
- Exclusion criteria:**
 - in-home rehabilitation (nursing, physio, occupational therapy);
 - home modification assistance within 12 months;
 - terminal diagnosis (< 1 year expected survival) or active cancer treatment;
 - plan to move elsewhere in <1 year;
 - on a cholinesterase inhibitor (and/or memantine) for < 3 months;
 - severe dementia

Results

- 18 client-family carer dyads (9 dyads in each control and intervention group)
- Clients aged 64-91y (mean 79), with mild to moderate cognitive impairment (MMSE mean 23, range 16-30), 10 females
- Diagnoses: 9 Alzheimer's disease; 8 mixed, vascular or fronto-temporal dementia; 2 amnesic MCI
- Carers mean 64 years old (range 30-85); 15 were female.
- At four months - promising results in terms of goal attainment, improved mobility and independence, no entry to higher care levels, and both observed and client's self-perceived wellbeing and confidence
- I-HARP group - 1.83 point improvement in self-care and independence using the Disability Assessment for Dementia (DAD) scale² while the control group (usual care) had a decline of 4.22, a difference of 6.06 (SD 9.95), giving a clinically meaningful effect size of 0.61.while the control group had a further decline (Cohen's $d=0.36$).

- 12 home visits of 1.5 hours (5-6 x Occupational Therapist, 3-4 x Registered Nurse, plus 2 additional options of an allied health professional), tailored to the individual client's needs;
- ≤ A\$1000 home maintenance and assistive devices;
- working in partnership with the carer throughout the process, with 2 carer support sessions at the beginning stage of I-HARP; and
- Interdisciplinary teamwork and coordination of the program facilitated by a face-to-face case conference meeting after initial assessments.

Corresponding author: Yun-Hee Jeon (email: yun-hee.jeon@sydney.edu.au)

Results (cont.)

- Reasons for success:
- one-on-one, hands-on approach;
 - established good relationships between I-HARP clinicians and clients;
 - positivity and reassurance, and trusting clinicians' judgement;
 - continuity and regularity of visits taking sufficient time with visits;
 - specialised, yet easy to follow suggestions from each clinician; and
 - I-HARP gave more confidence and physical strength.

I-HARP carers' burden increased, warranting further evaluation.

Qualitative data from a carer:
"My mother has more confidence to use skills than she has used all her life" and "she's got the confidence to go ahead with some of them again. It has been such a wonderful thing to have that outlook and that positivity rather than saying well 'you can't do this and you can't do that' all the time... if we hadn't had this support from everyone this would have been dramatically different."

Conclusions

- I-HARP addresses a major gap that exists in ways of providing care for people at early to moderate stages of dementia with multi-morbidities where interdisciplinary team efforts would likely have higher impact.
- The program has now been adapted and refined after extensive consultation and feedback.
- Two additional components are now added to the proposed larger trial: stronger carer support (3 carer sessions, instead of 1) and speech pathology support (as well as psychology and physiotherapy).

References

- Szanton SL, Wolff JW, Leff B, Thorpe RJ, Tanner EK, Boyd C, Xue Q, Guralnik J, Bishai D, Gitlin LN. 2014. CAPABLE trial: A randomized controlled trial of nurse, occupational therapist and handyman to reduce disability among older adults: Rationale and design. *Contemporary Clinical Trials*, 38(1): 102-12. doi: 10.1016/j.cct.2014.03.005
- Feldman H, Sauter A, Donald A, Gelinias I, Gauthier S, Torfs K, Parys W, Mehner A. 2001. The disability assessment for dementia scale: A 12-month study of functional ability in mild to moderate severity Alzheimer disease. *Alzheimer Disease and Associated Disorders*. 15(2):89-95. <https://www.ncbi.nlm.nih.gov/pubmed/11391090>

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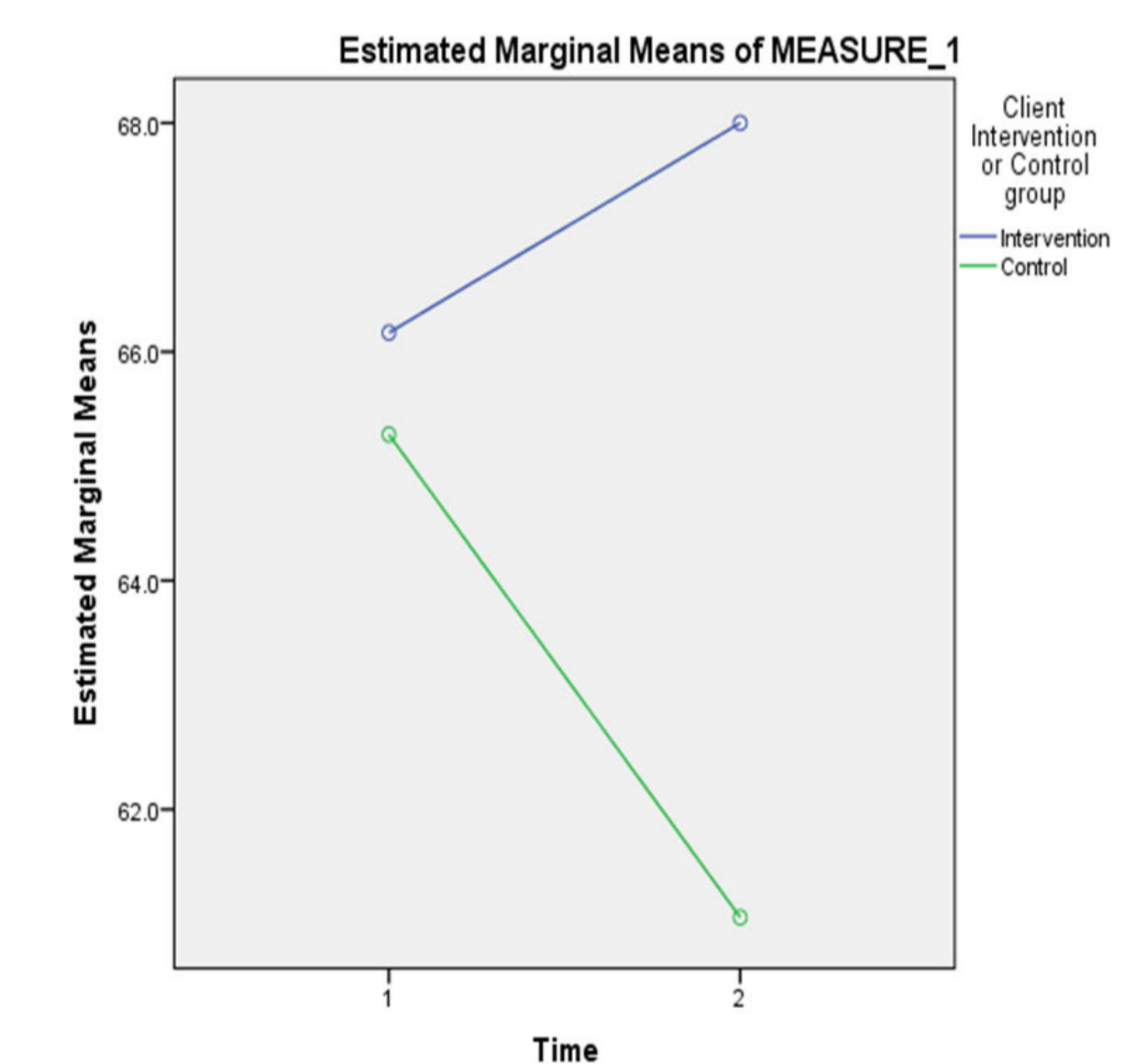


Figure 2. Disability Assessment for Dementia (DAD) scores at Time 1 and Time 2. Higher scores equals less impairment