

Adaptation and Pilot Testing of an Integrated Intervention targeting Medical and Mental Illnesses in People with Dementia in Nepal

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Key Takeaway: An integrated, dyadic, and integrated intervention targeting physical and mental illnesses showed acceptability and feasibility among people with dementia and their family caregivers

INTRODUCTION

- Fifty-five million people live with dementia worldwide; over two-thirds are in low and middle income countries (LMICs).
- The proportion of older adults in LMICs expected to rise to 76% by 2050.
- The comorbid conditions like non communicable diseases (NCDs [hypertension, diabetes]) and chronic mental disorders (CMDs [depression, anxiety]) can complicate management of dementia symptoms.
- Scalable, evidence-based, and culturally adapted psychosocial interventions are limited in LMICs.
- We conducted a pilot study that adapted the BEhavioral Community-based COmbined Intervention for MEntal Health and Noncommunicable Diseases (BECOME) study addressing NCDs and CMDs.
- The BECOME-Dementia (BECOME-D) intervention was adapted into a dyadic format and acceptability and feasibility study was assessed among 6 dyads and 2 community health workers (CHWs).

Intervention Adaptation Process

- A Multidisciplinary Dementia Advisory Board (MDAB) comprising clinicians, caregivers, and people with lived experience of dementia provided critical feedback.
- Five full-day co-design workshops were conducted to adapt the intervention to the Nepali context.

BECOME-D Intervention

- CHWs received six days extensive training and delivered the intervention in participants' homes.

Intervention Components	Purpose	Week
Dementia Information Session	Information on dementia	Week 1
Stress Reduction	Alleviate anxiety	Weeks 2–3
Behavioral Activation	Reduce depressive symptoms	Weeks 4–5
Motivational Interviewing	Improve motivation for behavioral change	Weeks 6–9

METHODS

Study Site: Five wards in Chandragiri municipality, a semi urban area of Kathmandu, Nepal

Inclusion Criteria

- Age ≥ 60 years; positive cognitive impairment screener (RUDAS ≤ 22); The Hopkins Symptom Checklist-25 (HSCL-25) anxiety and/or depression subscale ≥ 1.75 ; at least one NCD per World Health Organization Package of essential Noncommunicable Disease Interventions criteria.

Exclusion Criteria

- Participants and primary caregivers who could not provide consent to participate in the study.

Recruitment Process

- CHWs identified potential participants..
- Research assistants screened the participants and those screened positive were referred for assessment to a psychiatrist to confirm a dementia diagnosis.

Assessment Timeline

- Quantitative assessments with PwD and caregivers were conducted at baseline, post-intervention, and 2-month follow-up.
- Qualitative interviews with PwD, caregivers, and CHWs were conducted post-intervention and at 2-month follow-up.

Key Outcome Variables	Description of scales
Demographics	Age, education, languages spoken, religion, income, and caste.- PwD and Caregiver
Depression, Anxiety Primary outcome	HSCL-25 – PwD and Caregiver Geriatric Depression Scale (GDS) - PwD Generalized Anxiety Disorder (GAD-7) - PwD
NCD outcomes Secondary Outcomes	Mean systolic blood pressure (SBP), mean diastolic blood pressure (DBP), and fasting plasma glucose - PwD
Isolation and withdrawal	Behavioral Activation for Depression Scale (BADS-SF) - PwD
Quality of life	World Health Organization Quality of Life-BREF - PwD and Caregiver
Tobacco use	Global Adult Tobacco Survey - PwD
Diet quality	Diet Quality Questionnaire (DQQ) - PwD
Physical activity	Global Physical Activity Questionnaire (GPAQ) - PwD
Medication adherence	4-day recall for medication adherence, - PwD

RESULTS

Participant Characteristics People with Dementia (n = 6)

- Mean age: 80.8 ($\pm$ 4.7 years)
- Gender: 4 Female, 2 Male
- Ethnicity: 1 Brahmin, 4 Newar, 1 Dasnami
- Anxiety: 83.3% (5/6)
- Depression: 83.3% (5/6)
- Hypertension: 100% (6/6)

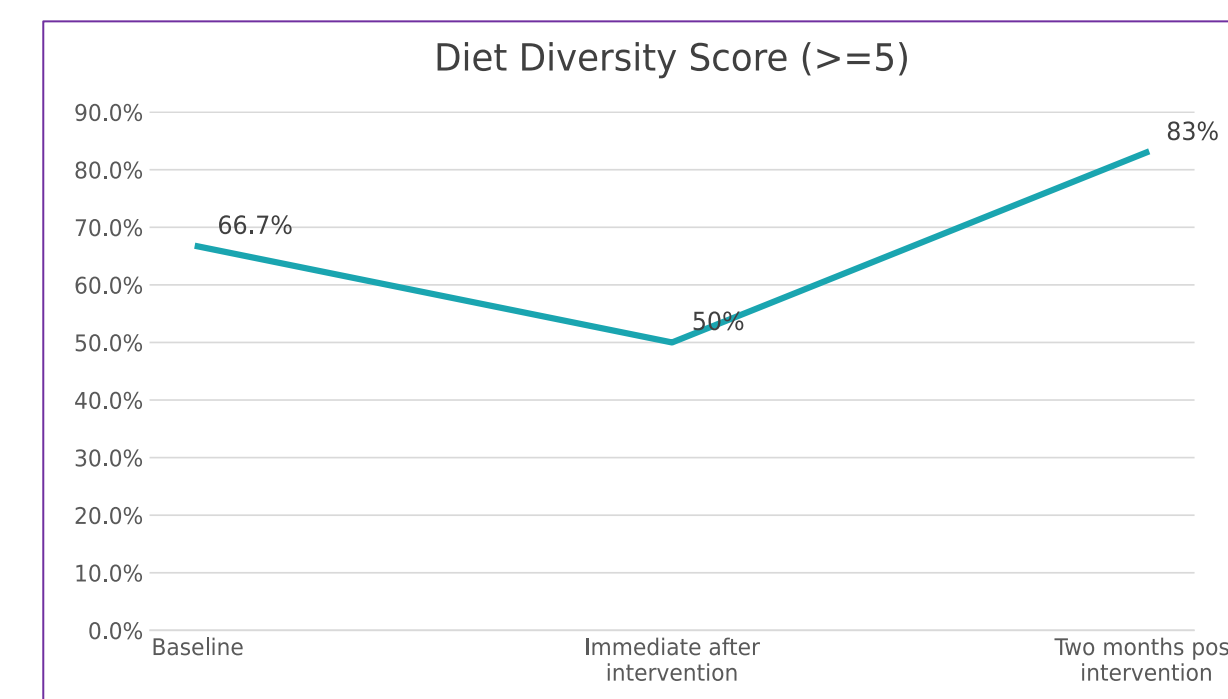
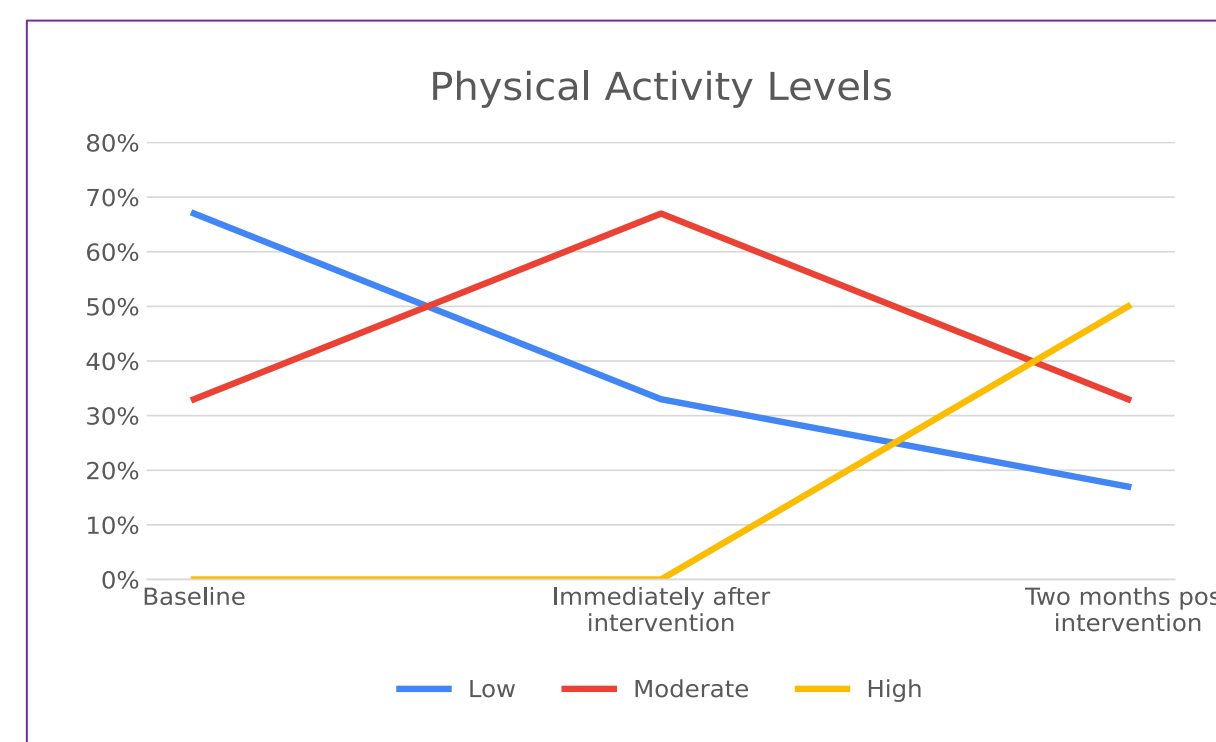
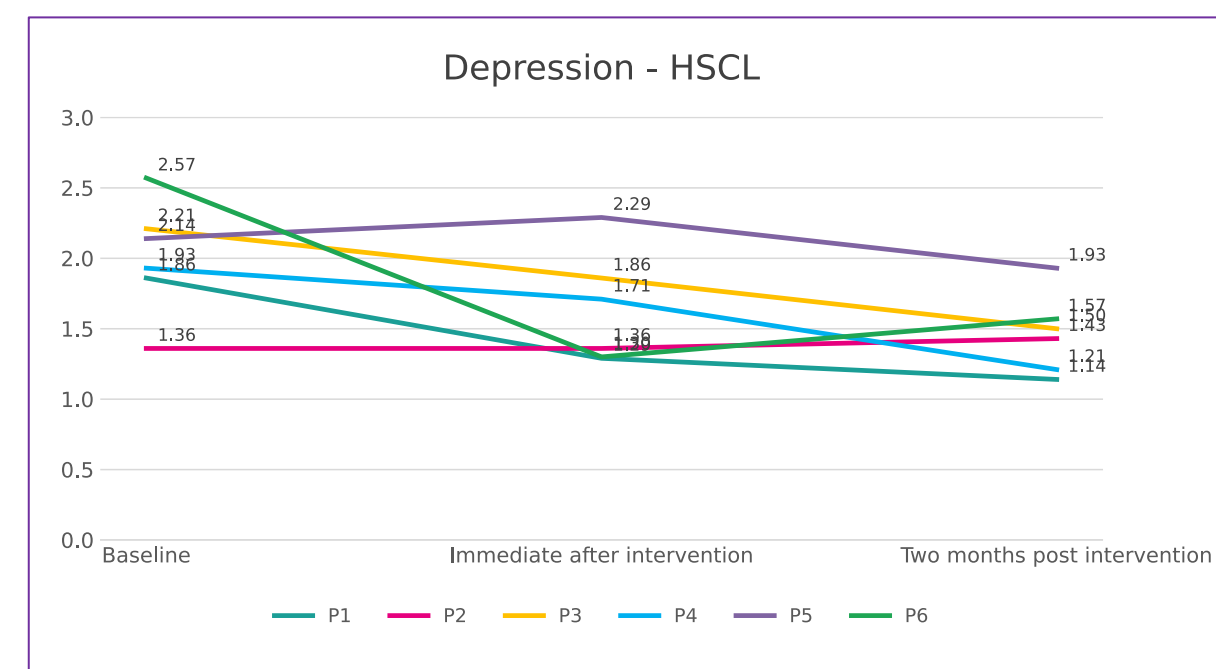
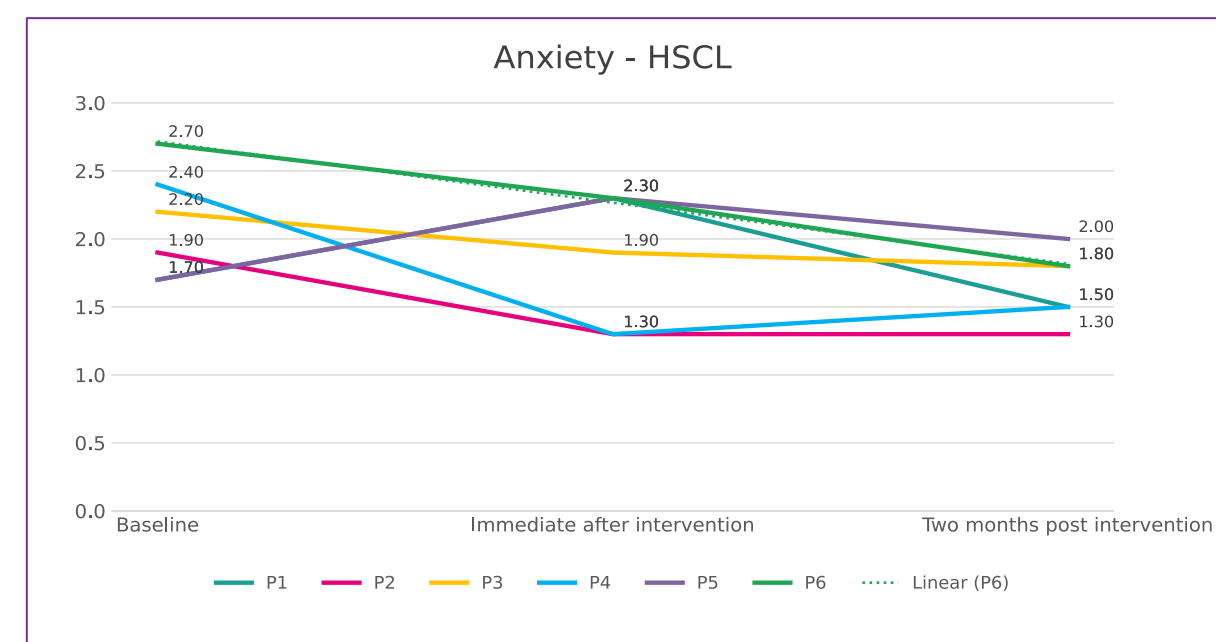
Caregivers (n = 7)

- Mean age: 46.8 $\pm$ 9.5 years
- Gender: 3 Female, 4 Male

Community Health Workers (n = 2)

- Gender: 2 Female

Study Outcomes of PwD



Qualitative Feedback

“I now feel that I should spend time with her (grandmother), she becomes really happy and fresh when I spend time with her. And when I teach her exercises, I do the deep breathing myself as well and feel refreshed.” - Caregiver

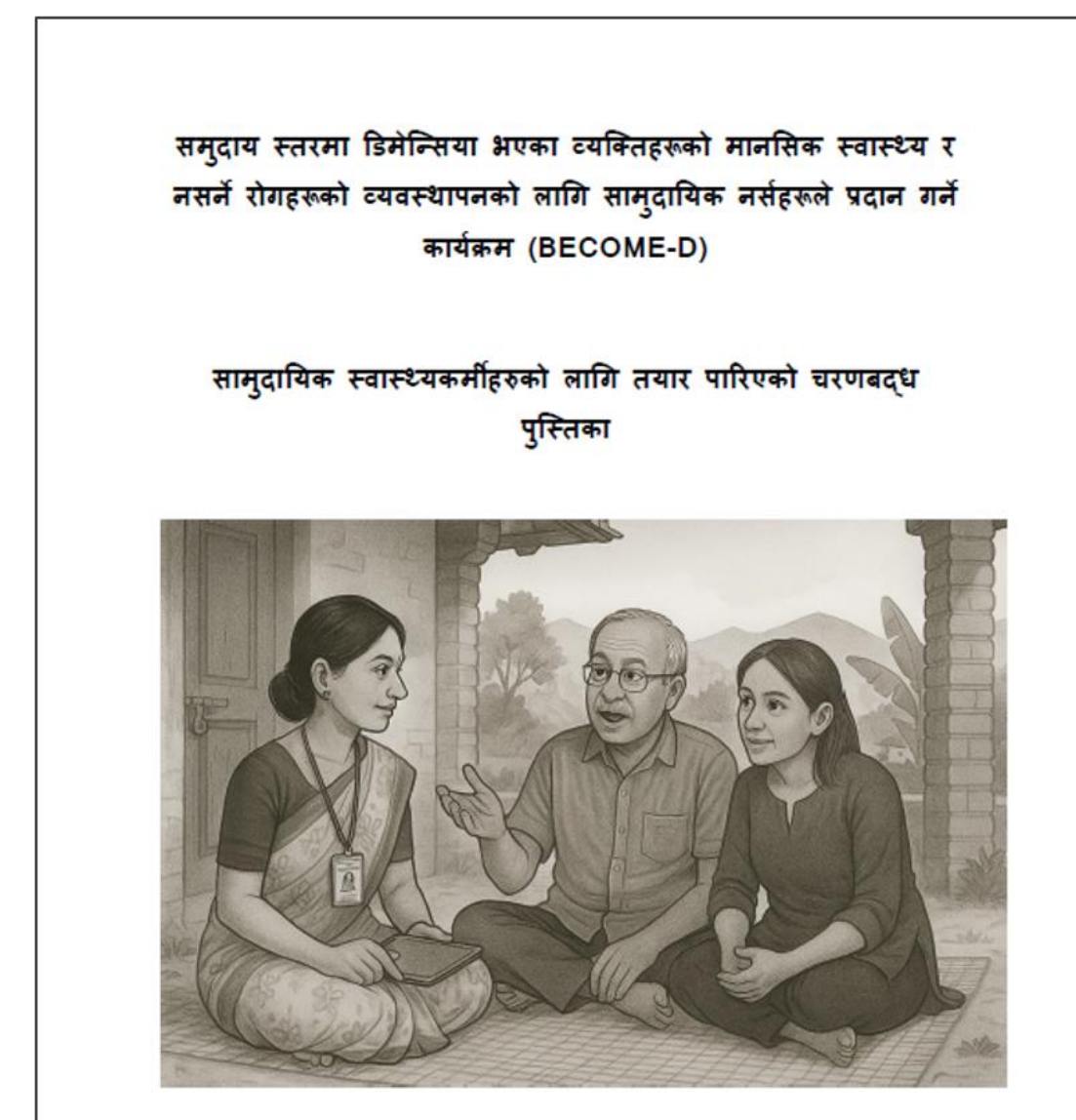
“I have made her do the same exercises, and have her wash the dishes so that she isn't just sitting around. Mother does most of the chores quite well.” - Caregiver

“She (mother) has started getting less angry, and it has become easier to bathe her, and she has also started walking a little.”- Caregiver

“I feel relaxed while doing breathing exercise.” - PwD

“One caregiver, also had blood pressure that was slightly above the normal range. I involved him in all the activities as well. I encouraged them to practice EBSR and deep-breathing exercises and to teach these techniques to other family members. They shared that these practices had been helpful for everyone at home.” - CHW

“If I tell him (father) to make traditional baskets or even engage in daily household tasks like peeling garlic, he does it easily. He is calmer and less angry.”- Caregiver



CONCLUSION

- Our study demonstrates feasibility and acceptability of a culturally-adapted and integrated intervention for PwD and their caregivers.
- A larger study to assess the efficacy & effectiveness of BECOME-D is needed.

CONTACT



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