

Implementation of the DICE approach in family caregivers in Lima, Peru, to assist in the management of behavioral and psychological symptoms of dementia: a pilot study



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BACKGROUND

- Behavioral and psychological symptoms (BPSD) represent one of the greatest challenges for caregivers.
- The DICE approach (Describe, Investigate, Create, Evaluate) offers caregivers a structured method to assess and manage BPSD by identifying underlying causes and applying evidence-based behavioral and environmental strategies.
- Despite its proven efficacy, DICE remains underutilized in Latin America (LA), where family caregivers often lack formal support. This pilot study aimed to evaluate the impact of DICE training on family caregivers' confidence in managing BPSD in Lima, Peru.

METHODS

- A half-day training introduced the DICE model through theoretical explanations and interactive exercises using real-world cases.
- Participants completed pre- and post-training surveys assessing confidence in 12 aspects of dementia care on a 4-point Likert scale. For each item, participants were classified as improved, worsened, or no change.
- Statistical significance was assessed using exact one-sided binomial tests among participants who changed, testing whether the proportion improving exceeded 50%. Bonferroni correction for multiple comparisons was applied ($\alpha = 0.004$).

RESULTS

- n = 35 family caregivers
- 3 of 12 items showed statistically significant improvements after Bonferroni correction ($p < 0.004$): understanding patients' feelings, using past interests, and engaging in creative activities.
- Two additional items showed trends toward improvement ($p < 0.05$ uncorrected), but did not pass Bonferroni corrections: deciding on risk and offering options.
- Across all items, over 50% of participants who changed showed improvement rather than worsening (range: 53% - 89%), suggesting a consistent positive training effect despite limited statistical power. Detailed item-level results are in Table 1.

Item	Participants who improved after the training	Percentage of improvement out of all participants	Proportion of improvement among those who changed	p-value
How well do you feel you can				
understand feelings of patient	14	40%	0.88	0.0021
understand the way the patient interacts with others and his/her environment	12	34%	0.71	0.0717
use information about past interests	18	51%	0.86	0.0007
protect the dignity of the patient	8	23%	0.53	0.5
deal with behavior of the patient	10	29%	0.67	0.1509
decide about risk in patient	14	40%	0.82	0.0064
offer stimulation to the patient	10	29%	0.67	0.1509
offer choices to the patient	18	51%	0.78	0.0053
engage patient in creative activities	16	46%	0.89	0.0007
I know and understand				
the causes of behaviors	11	31%	0.65	0.1662
how to assess and manage BPSD	12	34%	0.71	0.0717
that patient, caregiver, environmental factors can all contribute to behaviors	15	43%	0.65	0.105

CONCLUSIONS

- DICE training can enhance confidence in managing BPSD. The limited number of statistically significant findings likely reflects the pilot study's small sample size rather than a lack of training effect.
- Future studies in LA settings should explore longer, structured training sessions, which may lead to broader and more statistically significant improvements.

CONTACT INFORMATION

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