

The Technology in Caring Questionnaire (TCQ)

Development and Psychometric Properties

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BACKGROUND

Caregivers of persons with dementia (PWD) are increasingly using technology-based strategies to manage symptoms and improve quality of life

However, we lack measures to assess this phenomenon

OBJECTIVE

Our goal was to develop and pilot test the Technology in Caring Questionnaire (TCQ), a self-report measure of technology-based strategy use among caregivers

We had four primary objectives:

1. Develop and refine an item pool for this new scale
2. Evaluate its internal consistency
3. Assess its construct validity by examining relationships between TCQ scores and scores from measures of technology use.
4. Assess whether TCQ scores provide insight into modern hypotheses of technology use in aging and dementia (i.e., that technology-based strategies will improve symptom management and reduce care strain)

METHODS

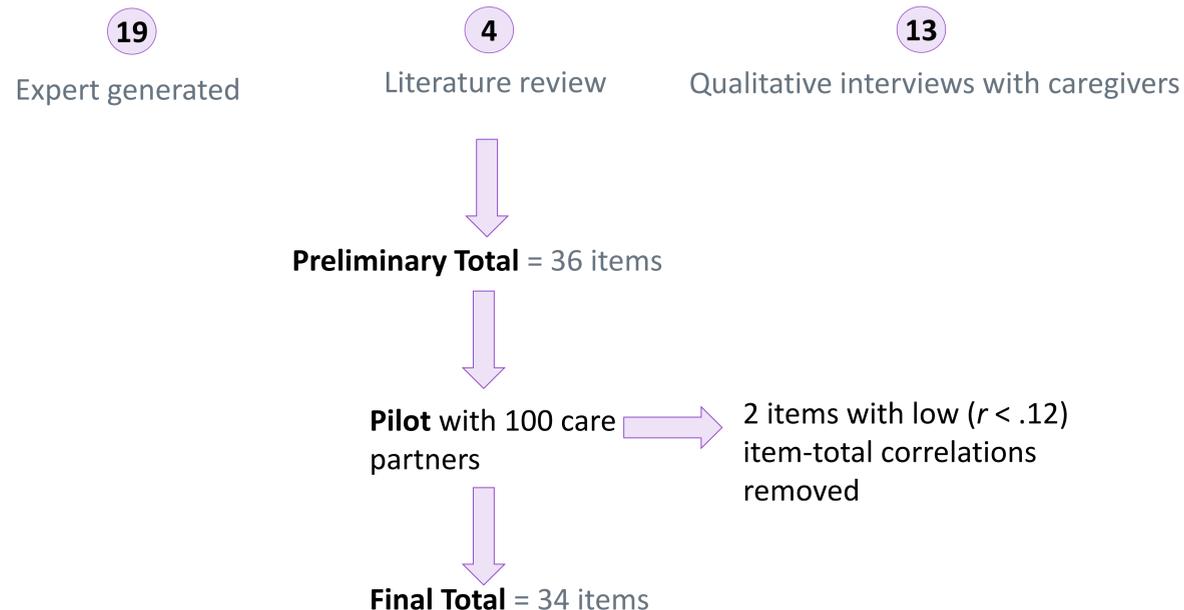
One hundred caregivers completed an online survey that included TCQ items, along with measures of technology proficiency and patient and caregiver-centered outcomes.

Caregivers were primarily White (83%), Non-Hispanic, and had an average of 16.13 years of education

Reported family incomes ranged widely: <\$30,000 (13%), \$30,000-\$60,000 (24%), \$60,000-\$100,000 (30%), ≥\$100,000 (31%)

RESULTS

Scale Development



Internal Consistency

The final 34-item TCQ scale had adequate to excellent internal consistency (raw Cronbach alpha = 0.75; standardized Cronbach alpha = 0.95; Guttman lambda-6 = 0.97).

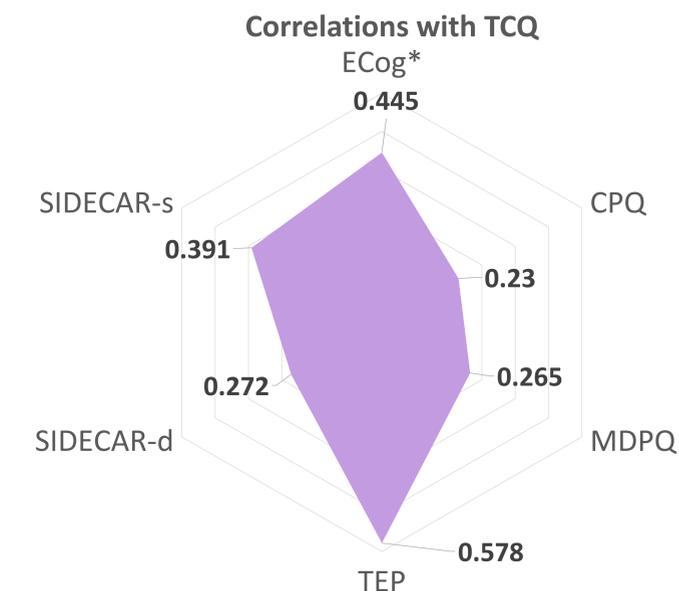
CONCLUSIONS

TCQ has good reliability and strong convergent validity

Technology-based strategies are associated with improved access to support and information and better symptom management, but also more direct care strain

Directions of effects remain unclear—higher symptoms and more care strain may be a reason for turning to technology-based strategies

Construct and Concurrent Validity



Ecog = Everyday Cognition Scale; CPQ = Computer Proficiency Questionnaire; MDPQ = Mobile Device Proficiency Questionnaire; TEP = Technology Experience Profile; SIDE CAR-d = Scales measuring the Impact of DEmentia on CARers—direct impact; SIDE CAR-s = Scales measuring the Impact of DEmentia on CARers—support.*Correlation with ECog was negative; relationship is flipped for illustration purposes. All presented correlations were statistically significant ($p < .05$).

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