An Examination of Quality of Care as a Mechanism Underlying Caregiver Desire to Institutionalize

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Background

- Number of adults over age 65 will nearly double by 2030
- The Institute of Medicine (2008) estimates that a majority of older adults in the coming decades will have at least one chronic condition
- Will also access the health care system more than other generations.
- One of the challenges for health care professionals will be to help older adults with chronic disease or disability maintain their quality of life.
Background: Alzheimer’s Disease

- Chronic disease that dramatically affects the quality of life of older adults and their caregivers.
- Recently surpassed diabetes to become the 6th leading cause of death for adults (CDC, 2010)
- AD rates double every 5 years beyond age 65.
- Require a disproportionate amount of health care resources.
- Also suffer from one or more other chronic conditions.
- Complicates care and requires coordination of care among health care professionals.
Policy

- Timing of institutionalization concern for practitioners and policy makers.
- Goal for older adults to live in community as long as possible.
- Also goal of consumers and families.
- Brings up quality of life and quality of care issues.
Practice

• Timing also important for CGs and CRs.
• CR increased risk for mortality if too early.
• Too late and CG’s resources are exhausted
• May lead to compromised physical and emotional health for CG.
• The thought of institutional placement rarely comes up suddenly.
Research

• Identify consistent predictors of institutional placement.
• Most research on the disease or disabilities of CR.
• Some research focused on CGs has identified burden and role overload.
• Bottom Line: Premature and late placement have been linked to adverse outcomes for both the caregiver and care recipient (CR).
Desire to Institutionalize

- One measure that has been found to be predictive of institutional placement is the Desire to Institutionalize Scale (DTI; Morycz, 1985).
- This brief scale assesses how much a caregiver has considered institutional placement in the past 6 months.
- Previous studies have found both CR (i.e. behavior problems) and CG (i.e. burden) variables that are predictive of DTI.
- However, Quality of care (QOC) provided to the CR has not been examined.
Desire to Institutionalize

- 6-item scale assessing possibility of CG institutionalizing CR
- Past research has correlated DTI with actual institutionalization.
- “In the past six months, have you considered a nursing home, boarding home, or assisted living for (CR)?”
- “In the past six months, have you taken any steps towards placement?”
- “In the next six months, are you likely to move (CR) to another living arrangement?”
REACH II

• Multisite clinical trial (Birmingham, Memphis, Miami, Palo Alto, and Philadelphia).

• Implemented and evaluated a multi-component psychosocial intervention across five sites for 6 months.

• Data for 642 caregiver/care recipient dyads were collected in the randomized clinical trial.
Study Sample

- N = 613 (29 had significant missing data)
- Recruited from multiple community organizations with special attention paid to the recruitment of minority caregivers.
- 34% White, 33% African American, 32% Hispanic
- 42% Spouse of CR
- 82.8% Female
- 19.4% less than HS education
- 36% income less than $20,000
- Average age = 60, Average years in CG role = 4.73
Study Aim

The purpose of this study was to examine the relation between caregiver subjective appraisal (Daily Care Bother, Burden, and Behavioral Bother), Quality of Care (QOC; Exemplary Caregiving and Potential for Harm), and Desire to Institutionalize (DTI). Specifically, QOC was examined as a possible mediator of the effects of caregiver subjective appraisal on DTI.
Basic Study Model

- Caregiver subjective appraisal
- Exemplary caregiving
  - Potential for harm
  - Desire to Institutionalize
  - Controls
Preacher and Hayes SPSS Macro (2008): Multiple Mediation
Method: Step 1

• Correlation analyses were initially conducted to determine variables that were significantly related to DTI.

• Only those that were significantly related to DTI were included as controls in the study.
Control Variables

- Demographics: CG age, gender, education, race/ethnicity and income adequacy.
- CG Stressors: ADL/IADL and frequency of problem behaviors
- CG Emotional well-being: Positive Aspects of Caregiving and Depressive Symptoms (CES-D)
Predictor Variables/Subjective Appraisal

• Daily care bother (ADL/IADL upset)
• Behavioral bother (RMBPC: Conditional Bother)
• Burden (Zarit Caregiver Burden Inventory)
Mediator Variables/Quality of Care: Exemplary Caregiving

• Exemplary Caregiving Scale – 18-item scale adapted from Hinrichsen’s and Niederehe’s (1994) Dementia Management Strategies Scale

• Asks caregivers to report the extent to which they engage in activities regarding their interaction with the care recipient

• E.g., “I show special amounts of physical affection to CR”, “I actively avoid treating CR like a child”, and “I make sure that where CR lives is bright and cheery”)
Mediator Variables/Quality of Care: Potential for Harm

• Potential for Harm – 8-item scale adapted from Williamson et al. (2001) Potentially Harmful Behavior measure.

• Assesses the frequency of indicators of psychological (e.g. yelling; using harsh tone of voice) and physical mistreatment (e.g. hitting; shaking)

• Caregivers were asked how often they “felt like” engaging in potentially harmful behavior rather than if they did.
Method: Step 2

• We tested the indirect effect of each of the three predictor variables in predicting DTI through exemplary caregiving and potentially harmful behavior, while controlling for demographic, stressor, and emotional variables.

• In these analyses the QOC variables were entered into separate equations.
Method: Using the Macro

- (1) From our original dataset of 612 cases, 5,000 bootstrap samples were randomly generated using random sampling with replacement;
- (2) the regression coefficients \((a \text{ and } b)\) and the indirect effect estimates \((a \times b)\) were calculated based on this bootstrap sample;
- (3) by repeating this process 5,000 times, 5,000 estimates of the indirect effect of interest were obtained; and
- (4) the mean of the 5,000 indirect effect estimates was calculated.
- If a zero was not included within the 95% confidence interval of the estimate, we concluded that the indirect effect was statistically significant.
### Bootstrapped Estimates, Confidence Intervals, and Explained Variances for Tests of the Indirect Effects on Desire to Institutionalize

<table>
<thead>
<tr>
<th>IV</th>
<th>Mediator</th>
<th>Effect of IV on M (a)</th>
<th>Effect of M on DV (b)</th>
<th>Direct Effects (c')</th>
<th>Indirect Effect (a x b)</th>
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<tbody>
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<td><strong>DCB</strong></td>
<td>EC*</td>
<td>-1.58 (.44)(^1)</td>
<td>-.02 (.01)(^2)</td>
<td>.28 (.09)(^1)</td>
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<td>PFH*</td>
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<td><strong>Burden</strong></td>
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<td>.18 (.08)(^2)</td>
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\(^1\)p<.01. \(^2\)p<.05
Method: Step 3

• We tested the indirect effect of QOC by entering EC and PFH into a multiple mediation model.

• This enabled us to assess and compare the effects of EC and PFH on the relation between subjective appraisal and DTI.
## Bootstrapped Estimates, Confidence Intervals, and Explained Variances for Tests of the Indirect Effects on Desire to Institutionalize in Multiple Mediator Model

<table>
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<th>Effect of IV on M (a)</th>
<th>Effect of M on DV (b)</th>
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<th>Confidence Intervals</th>
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<td>Contrast</td>
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<td>Up</td>
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<tr>
<td>Burden</td>
<td>EC</td>
<td>-.16 (.05)(^1)</td>
<td>-.01 (.01)</td>
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<tr>
<td>Behavioral Bother</td>
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<td>-.61 (.42)</td>
<td>-.02 (.01)</td>
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<td>-.0165</td>
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\(^1\)p<.01, \(^2\)p<.05
Results

• Suggests that PFH has a larger indirect effect on the relation between subjective appraisal and DTI

• Contrasting the specific indirect effects of EC and PFH was significant for behavioral bother and burden

• Suggests PFH may have a significant unique effect on DTI beyond EC
Discussion

• QOC may play a key role in the CG’s consideration of long-term care placement, especially the potential for harm.

• Assessing QOC may be an important consideration, especially PFH.

• Interventions that improve QOC may prevent premature institutionalization.

• What about CGs who keep loved one in the home too long?
Thank You