Family Member Involvement in Older Adults' Diabetes Management: Considerations for Healthy Aging

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Why Type 2 Diabetes?

• A growing public health concern

1 in 4 older adults has diabetes (CDC)

• A threat to healthy aging (e.g., Kirkman et al., 2012)

• Management is difficult, nonadherence is common (Beverly et al., 2008; Broadbent et al., 2011)

• Family members are involved in adherence to self-management behaviors (Wiebe et al., 2016)

• My research focus = The role of family and friends in helping and hindering diabetes self-management
Social Relationships and Health

- Social relationships contribute to multiple aspects of health
  - Healthy behaviors, positive physiological responses, better illness-related outcomes
  - Disease onset and progression, mortality

- Evidence is strong
  - Different methods
  - Humans and animals

August & Rook, 2011; Berkman, Glass, Brissette & Seeman, 2000; Cohen, 2004
Interactions with social network members

Domain of network
- Support (Aid/Care)
  - Beneficial
  - Emotional support, instrumental support versus
  - Detrimental
    - Criticism, support let-downs, demands

Companionship
- Beneficial
  - Shared leisure activities, socializing versus
- Detrimental
  - Interactions that convey exclusion or rejection

Control (regulation)
- Beneficial
  - Health-enhancing social control versus
  - Detrimental
    - Health-compromising social control

Mediating pathways
- Psychological processes
  - Beneficial
    - Positive affect and self-evaluations versus
    - Stress alleviation
  - Detrimental
    - Negative affect and self-evaluations
    - Stress exacerbation

- Physiological processes
  - Beneficial
    - Health-restorative processes (e.g., dampening of stress responses) versus
  - Detrimental
    - Health-eroding processes (e.g., activation of stress responses)

- Health behaviors
  - Beneficial
    - Less health-risk behavior versus
    - Better illness management
  - Detrimental
    - More health-risk behavior
    - Worse illness management

Health outcomes
- Morbidity
  - Disease onset, severity, progression, recurrence
  - Accidents, injuries
- Mortality

Rook, August, & Sorkin (2011)
Handbook of stress sciences
## Family Member Involvement in Diabetes Management

<table>
<thead>
<tr>
<th>Health-Promoting Involvement</th>
<th>Support</th>
<th>Control (positive &amp; negative strategies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Provision of encouragement and positive feedback on health behaviors</td>
<td>Efforts to monitor and influence health behaviors</td>
</tr>
<tr>
<td>Behavioral goals</td>
<td>Shared</td>
<td>Not shared</td>
</tr>
<tr>
<td>Patients’ engagement in positive health behaviors</td>
<td><img src="images/thumb_up.png" alt="Thumb Up" /></td>
<td><img src="images/thumb_down.png" alt="Thumb Down" /></td>
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<tr>
<td>Welcome</td>
<td><img src="images/thumb_up.png" alt="Thumb Up" /></td>
<td><img src="images/thumb_down.png" alt="Thumb Down" /></td>
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<tr>
<td>Affirming</td>
<td><img src="images/thumb_up.png" alt="Thumb Up" /></td>
<td><img src="images/thumb_down.png" alt="Thumb Down" /></td>
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**BUT**... Family members can also detract from adherence (*health-related undermining*).
Methodology

• **Participants**
  - Patients with type 2 diabetes
    - Community samples
    - Patients at primary care/endocrinology offices
  - Spouses of patients

• **Procedures**
  - In-person interviews, self-administered questionnaires, daily electronic diaries, medical record abstraction

*Data collected from 4 samples of 1,916 patients with type 2 diabetes*
Frequency of Family Member Involvement in Diabetes

- Support (82%), positive control strategies (55%), negative control strategies (40%)

August & Sorkin, 2010; August & Sorkin, 2011; August et al., in prep
## Sources of Family Member Involvement in Diabetes

### Racial/ethnic differences in number of family/friends involved in diabetes management (e.g., adult child, other relatives):

- **Racial/ethnic minorities > non-Hispanic Whites**

### Table: Sources of Family Member Involvement in Diabetes

<table>
<thead>
<tr>
<th></th>
<th>MARRIED</th>
<th>UNMARRIED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Spouse</td>
<td>78.1%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>63.1%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Children</td>
<td>30.5%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>47.1%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sibling</td>
<td>8.5%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>16.1%&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Other relative</td>
<td>10.1%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.2%&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Friend/neighbor</td>
<td>5.1%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.1%&lt;sup&gt;b&lt;/sup&gt;</td>
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*Note.* Superscripts that differ in the same row are significantly different at \( p < .05 \).
Family Members’ Involvement in Diabetes: Implications for Patients

<table>
<thead>
<tr>
<th></th>
<th>Health behaviors</th>
<th>Emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support</strong></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Positive control strategies</strong></td>
<td>+ or 0</td>
<td>+ and -</td>
</tr>
<tr>
<td><strong>Negative control strategies</strong></td>
<td>- or 0</td>
<td>-</td>
</tr>
<tr>
<td><strong>Undermining</strong></td>
<td>-</td>
<td>unclear</td>
</tr>
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- **Implications for patients depend on:**
  - Gender, marital status, race/ethnicity, relationship quality, norms for involvement, appraisal of shared responsibility for diabetes management

August & Sorkin, 2010; August & Sorkin, 2011; Henry et al., 2013; Khan et al., 2013; Rook et al., 2011; Stephens et al., 2010; Stephens et al., 2013; Tang et al., 2008
Family Members’ Involvement in Diabetes: Implications for Spouses and Relationship Quality

- **Implications for spouses**
  - **Support:** ↓ stress
  - **Control:** ↑ stress and burden
    - Effects depend on patients’ health characteristics

- **Implications for relationship quality**
  - **Support:** ↑ enjoyable marital interactions
  - **Control:** ↑ tense marital interactions

August et al., 2011; August et al., 2013
Potential *Reasons* for Spousal Involvement in Diabetes

- **Patient and disease factors**
  - Diabetes duration, perceptions of dietary behaviors, patients’ worries
    - Findings differed by race/ethnicity and gender

- **Spouse factors**
  - Spouse awareness of anxiety about nonadherence
    - Related to more social control

- **In progress:**
  - Online dyadic study of patients and spouses
  - Comprehensive set of proximal and sociocultural factors posited to be reasons for spousal involvement

August et al, 2017; August et al, in prep
Preparing Family Members as Coaches for Patients with Types 2 Diabetes

- Multidisciplinary, community-based approach
- Coaching as a strategy to improve diabetes self-management

Can *family members* taught to be coaches?

- **Current stage**: pre-testing
- **Next steps**: pilot testing feasibility and efficacy in patients & family members
Future Directions

- Further understanding of how and why social relationships influence health (and vice versa) in later life

- Expanding upon this work: Opportunities for collaboration
  - Other chronic conditions in later life
  - Considerations of sociodemographic factors
  - Interactions with formal social relationships (e.g., health care providers)

“Human behavior is likely to remain sine qua non of health care delivery for many years to come” (Christensen & Johnson, 2002, p. 97)
Facilitating Collaboration among Researchers Who Do Aging Research at Rutgers: Suggestions for the Future

- Developing a network of faculty doing aging research
  - Online social network (e.g., research interests, seeking collaborators, willingness to consult)
  - Research blitzes/meet-and-greets ~ once/year
  - Research on aging discussion group

- Seed funding for multidisciplinary aging research
Thank You

• Collaborators at Rutgers University and other universities

• Undergraduate and graduate student research assistants in the Relationships, Health, & Aging Lab @ Rutgers-Camden

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? Questions