Mindfulness-Based Stress Reduction for Family Caregivers of Dementia Patients

AHC OCR Pre-Doctoral Summer Fellowship
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Dementia Prevalence

- Older population, longer life ➔ greater risk for dementia
- ~20% of Adults over age 85 affected, but not only older adults.
- Most common form: Alzheimer affecting up to 4 million adults in the US.

Who else is affected?
Who is going to take care of these patients?
Study Population: Family Caregivers of dementia patients

- Majority of care from family members
- Long period of responsibility
- Progressive disease
- Ambiguous loss
- Cost of care
The Effect:

Chronic Stress
The Results:

Physical and Mental Fatigue, Depression, Anxiety, Poor quality of life...
Exhaustion, anger of caregiving get a name

By Andree LeRoy, M.D.
Special to CNN

BOSTON, Massachusetts (CNN) -- Do you take care of someone in your family with a chronic medical illness or dementia? Have you felt depression, anger or guilt? Has your health deteriorated since taking on the responsibility of caregiving? If your answer is yes to any one of these, you may be suffering from caregiver stress.

This condition is increasingly being referred to as "caregiver syndrome," a condition brought on by unrelieved, constant caring for a person over the age of 50. According to the American Academy of Geriatric Psychiatry, the number of Americans over the age of 50 that number is expected to skyrocket. In 2000, the Census Bureau reported, just under 35 million Americans were 65 or over; by 2030, the number is projected to more than double, to more than 71 million.

An increasing number of Americans are finding themselves in the role of caregiver to at least one family member. According to the American Academy of Geriatric Psychiatry, 65 million people care for someone over the age of 50. As America's population ages, that number is expected to skyrocket. In 2000, the Census Bureau reported, just under 35 million Americans were 65 or over; by 2030, the number is projected to more than double, to more than 71 million.

Don't Miss
- Training helps caregivers, but who has time?
- High-tech devices help track patients

Many exhausted, ill caregivers today don't seek help because they don't realize that they have a recognizable condition. According to a report from the National Consensus Development Conference on Caregiving, the most common psychological symptoms of caregiver syndrome are depression, anxiety and anger. Peter Vitaliano, a professor of geriatric psychiatry at the University of Washington and an expert on caregiving, said that the chronic stress of caring for someone can lead to high blood pressure, diabetes and a compromised immune system. In severe cases, caregivers can take on the symptoms of the person they care for, he said. For example, a person caring for someone with dementia may develop progressive...
NEWSWEEK Cover: Caregiving & Alzheimer's

Getting the Word Out

Millions of Baby Boomers Are Caring for Parents and Spouses With Alzheimer's; The Disease is 'A Coming Crisis In Health Care.'

President of Alzheimer's Association.

Many Becoming Activists Demanding an Increase in Research Credits for Caregivers; 'It's So Expensive to the Caregiver's Families at Home.'
Intervention: MBSR

- 8-week course, created by Kabat Zinn at UMass Medical Center
- Mindfulness? Wha?…
- My experience

- Why would this help?
  Change the perception and appraisal of stressors
  ➔ All of you should try meditation!
Study Design:

R21 Pilot Study
-NCCAM funded
-P.I. Dr. Robin Whitebird
-Co-P.I. Dr. Kreitzer
-Partnership with HealthPartners

Figure D.1: Study design for randomized controlled pilot study

Recruitment
* Initial Contact
* Interested Assessed
* Informed Consent
* Randomized
  N=60

MBSR Group
N=30

CCES Group
N=30

wave 1
n =15

wave 2
n =15

wave 1
n =15

wave 2
n =15

•Follow these patients using psychological inventories (stress, depression, caregiver burden measures…)

Planning

Current stage of study
Its just stress right?

Figure 1. Theoretical model of stress and health/illness.
Physical Health of Caregivers

Caregivers report/show (Just Snippet):

- Poorer levels of perceived health
- Greater number of physical symptoms
- More chronic illnesses
- Poorer immune responses to viral challenges
- *Slower rates of wound healing*
- Higher levels of plasma insulin
- *Greater risk for developing hypertension*
- *Greater relative risk for all-cause mortality*
- Elevated basal of plasma catecholamines
- Elevated resting BP
- Reduced NK cell activity
- …
Adding Biological Markers

- **Definition:** A molecular entity that is objectively measured and evaluated as an indicator of a biological process (pathological or normal).

- Why a physical measure rather than just a questionnaire?
Role of Biological Markers

- Help to understand the mechanism/mediators by which stress affects health or illness

- Examples of markers:
  - Traditional stress markers: Cortisol, Catecholamine
  - Non-stress related: PSA and Prostate Cancer
Biological Marker Sub-Study

- Reviewed all the literature on caregivers and physical outcomes and biological markers.

Goal: TO DETERMINE MARKERS THAT ARE ASSOCIATED WITH CAREGIVING AND CHRONIC STRESS
And
DETERMINE POTENTIAL TO EFFECT THESE VALUES THROUGH OUR INTERVENTION.

Final Product: Biomarker analysis and Table -focused on certain aspects
Strongest association with caregiving

- Salivary cortisol (flattening diurnal rhythm)
- IL-6 (elevated)
- D-Dimer (elevated)
- Telomere/Telomerase (caregivers of disabled children, shorter/less activity)
- Functional Immune Assays (less activity)
- Metabolic Syndrome markers
New Study Design

Interventions

Caregiver MBSR

Caregiver CCES

Cross-sectional

Non-Caregiver

vs.

Caregivers

Pre

Post

4 Mo

1) Psychological Inventories

2) Biological Markers
   - IL-6
   - D-dimer

3) BP ...

Plasma Markers
   - telomere/telomerase
   - others …
Reflections

- Clinical research is about collaboration, beyond just your multi-disciplinary team. Part of a larger context and advancing science.
- Learn the intervention (if possible, experience it) and Meet the population
- Top researchers are just a phone call away and the majority are excited to talk to you (they are nerds at heart just like us)
- Students can make a significant contribution if they are proactive and get involved
Acknowledgments

- Special thanks to my research mentor Dr. Mary Jo Kreitzer for giving me this great opportunity
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- OCR for creating this fellowship
I want to learn to live in the moment... just not this moment. Some other moment. Like a moment on the beach.