



Mindfulness and Rumination: Uncovering Stress Pathways in Caregivers of Persons Living with Dementia



Mamta Sapra, MD., Jyoti Savla, Ph.D, Lauren Hagemann, Ph.D., Katherine Luci, Psy.D.
Salem VA Medical Center, Center for Gerontology at Virginia Tech

INTRODUCTION

- Caregivers of individuals living with dementia often engage in rumination, that causes stress and anxiety.
- Mindfulness based interventions may decrease such negative ruminations and help emotional well being.
- There is limited evidence on mechanisms of mindfulness effectiveness in caregiver interventions.
- This study examines whether mindfulness disrupts the anxiety-rumination cycle and have any implications for caregiver 's emotional well being.

PAACC INTERVENTION



PAACC combines mindfulness training and caregiver skill building with the goal to:

- Improve caregiver self-efficacy
- Cultivate compassion towards self and others
- Develop moment-to-moment awareness of stress
- Foster healthier reactions to stressors (which are often progressive and unchangeable)

- Specific mindfulness training incorporated in this intervention includes:

Mindful Eating, Deep Breathing, Mindful Self-Inquiry and Loving Kindness

METHODS

- The study utilized a two arm, blinded prospective randomized controlled trial to compare the PAACC and REACH interventions.
- The sample of 133 caregivers of Veterans with a diagnosis of neurocognitive disorder, were randomized (1:1) to either the REACH-VA or PAACC intervention
- Inclusion criteria consisted of being a family member caring for a patient with AD, ADRD or TBI-AD; assisting with at least 1 ADL or 2 IADLs; moderate to severe caregiver burden; and score of 23 or greater on MoCA.
- Intervention was four 60-minute sessions
- Key measures used before and after the intervention: Perceived Stress Scale, Zarit burden interview for caregiver burden, Rumination scale, GAD-7 for anxiety symptoms, PHQ-9 for depressive symptoms, and Mindfulness, Attention, Awareness Scale(MAAS) for mindfulness.
- Caregivers were instructed to complete mindfulness logs to track progress.

RESULTS

Baseline Sample Description

The overall sample consisted of 133 caregivers with a mean age was 67.2 years (SD = 9.8). Most of the caregivers identified as female (85%) and White (81.7%); most caregivers reported having a high school education (20.8%) or higher (76.9 %). The majority of the caregivers were either spouses (69.7%) or adult children (22.7%). There were no statistically significant differences on demographic characteristics between the two groups at baseline, ensuring comparability.

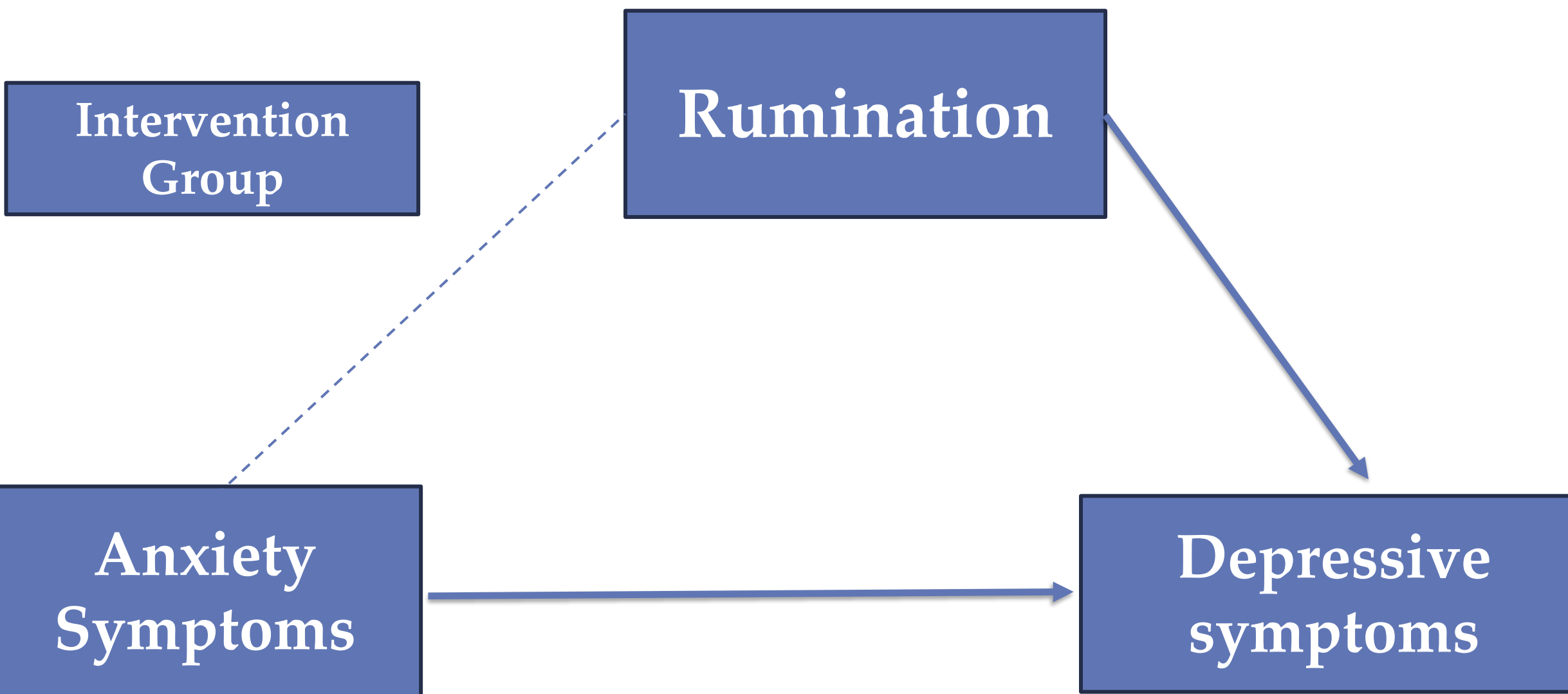
Baseline Comparison of Study Outcomes

Outcome Measures	Acronym	REACH-VA (n=66)	PAACC (n=67)	Comparison t-statistic
		M (SD)	M (SD)	
Zarit Burden Interview	ZBI	72.44 (11.7)	75.42 (11.39)	-1.49
Patient-Health Questionnaire-9	PHQ-9	8.56 (5.14)	10.73 (6.6)	-2.11*
Perceived Stress Scale	PSS	20.11 (6.75)	21.76 (7.11)	-1.37
Generalized Anxiety Disorder Screener	GAD-7	7.42 (5.12)	9.54 (5.58)	-2.27*
Mindful Attention Awareness Scale	MAAS	61.92 (12.34)	56.86 (13.88)	2.21*
Compassion for Care Recipient	-	123.55 (13.59)	121.54 (15.27)	0.80
Rumination Reflection Questionnaire	RRQ	36.73 (9.95)	37.69 (11.71)	-0.50

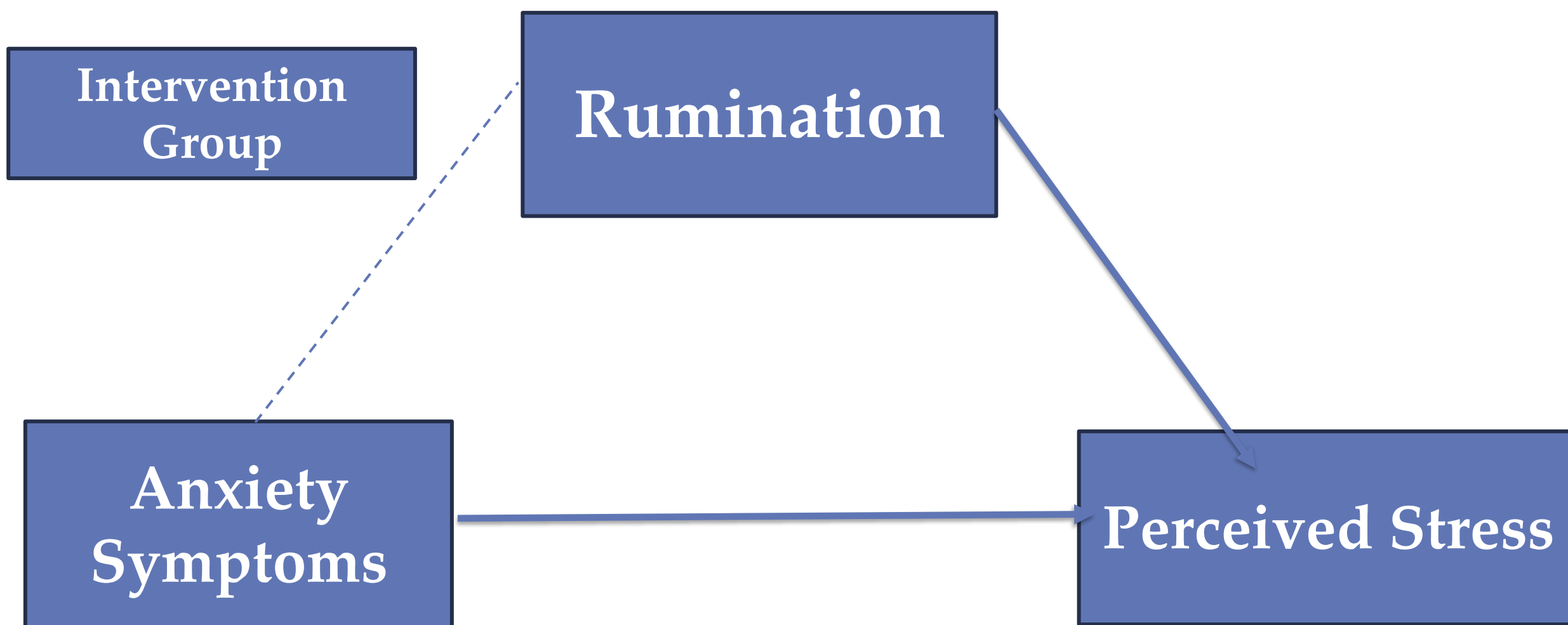
Mean Comparison of Measures (REACH versus PAACC)

Measures	REACH (n=66)		PAACC (n=67)		Treat P-value		Treat x Time p-value
	Baseline M (SD)	End of Study M (SD)	Baseline M (SD)	End of Study M (SD)		Time p-value	
PSS	20.11 (6.75)	15.49 (5.98)	21.76 (7.11)	15.35 (5.13)		**	0.21
ZBI	72.44 (11.7)	57.21 (12.15)	75.42 (11.39)	59.31 (13.03)		**	0.93
MAAS	61.92 (12.34)	67.09 (13.01)	56.86 (13.88)	68.4 (11.26)	*	**	0.01
RRQ	36.73 (9.95)	32.48 (8.49)	37.69 (11.71)	29.90 (10.06)		**	0.15
PHQ9	8.56 (5.14)	5.6 (4.29)	10.73 (6.6)	4.95 (3.66)	*	**	0.01
GAD	7.42 (5.12)	5.26 (4.51)	9.54 (5.58)	4.35 (2.72)	*	**	<0.01

Mindfulness Moderated the Anxiety Rumination Association



RESULTS



Path	PHQ	PSS	ZBI
Anxiety----- Rumination	B=-0.79	B=-0.61	B=-0.79
Anxiety x Group----- Rumination	B=1.12	B=0.96	B=1.12
Rumination----- outcome	B=0.09	B=0.13	B=0.25

DISCUSSION

- Rumination mediated the relationship between anxiety and both depressive symptoms and perceived stress..
- The interaction between anxiety and treatment group was significant.
- Anxiety was less strongly associated with rumination in PAAC group suggesting that mindfulness weakened the connection between anxiety and rumination.
- Incorporating mindfulness into caregiver support interventions will reduce stress and depressive symptoms

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