

# **Decreasing Stress and Burnout in Veterinary Medicine: An Evidence-Based Approach**

**Mary Beth Spitznagel, PhD  
Professor, Psychological Sciences  
Kent State University**

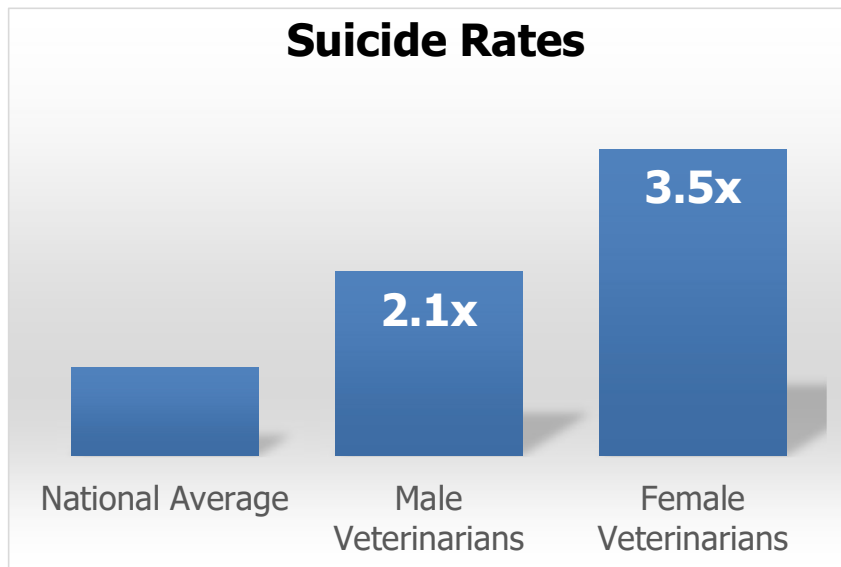


# Mary Beth Spitznagel, PhD

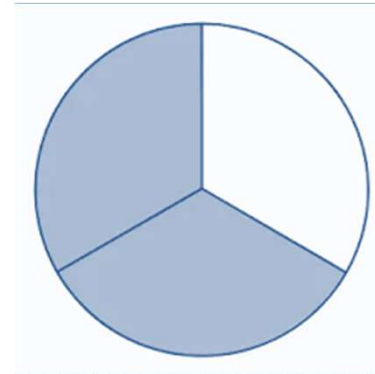
- Clinical neuropsychologist and caregiving researcher
- PhD (Clinical Psychology)--Ohio University
- Postdoctoral Fellow (Neuropsychology)--Brown University
- Clinical Scholars Fellow (Change Leadership)--Robert Wood Johnson Foundation
- Professor, Psychological Sciences--Kent State University
- >175 peer-reviewed scientific publications
- Blogs at: [petcaregiverburden.com](http://petcaregiverburden.com)



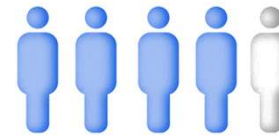
# Psychological Outcomes in VHCT



(Tomasi et al, 2019)

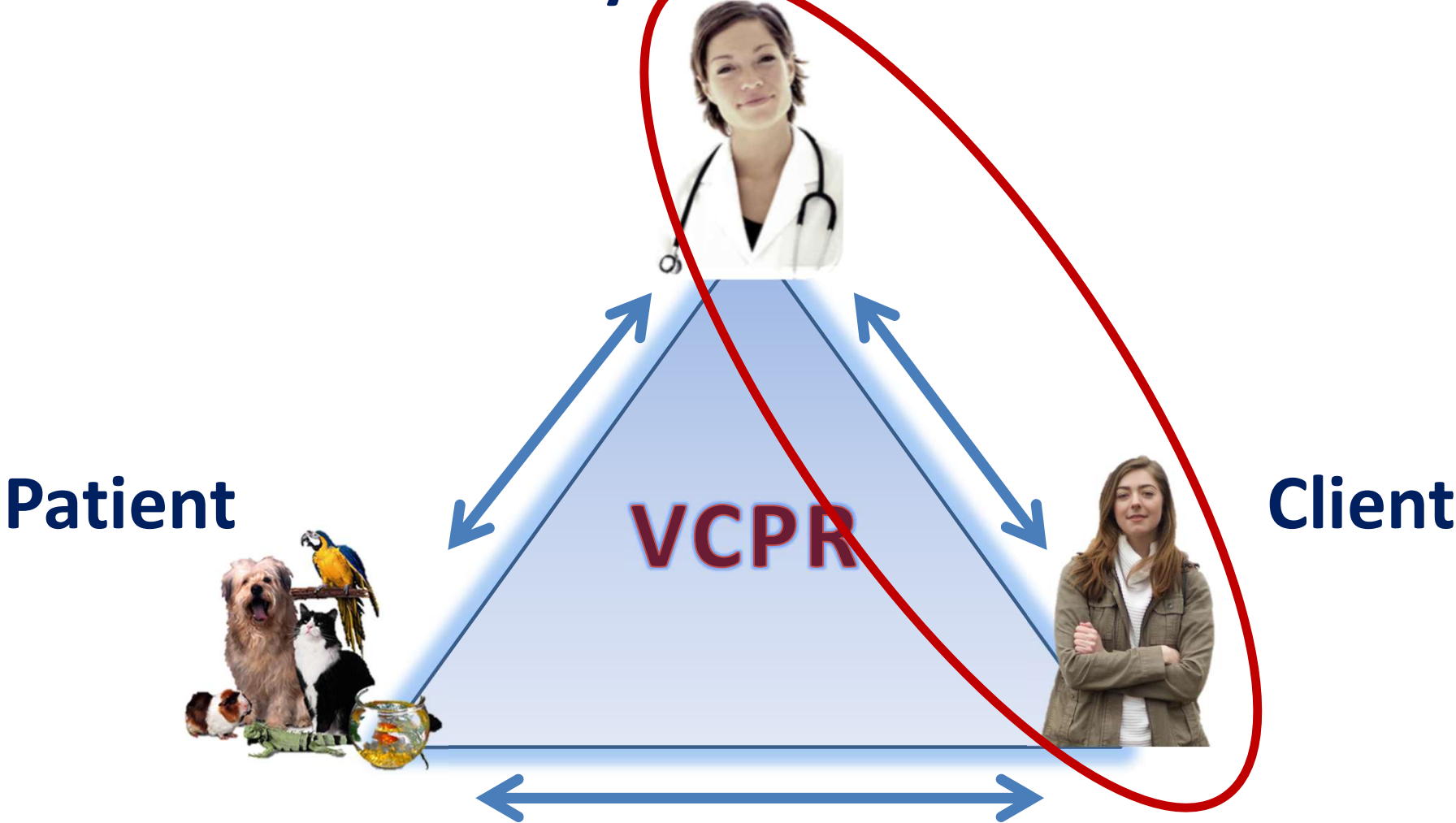


**Depression** (Skipper et al, 2012, 2015)



**Job is stressful** (Nett et al, 2015)

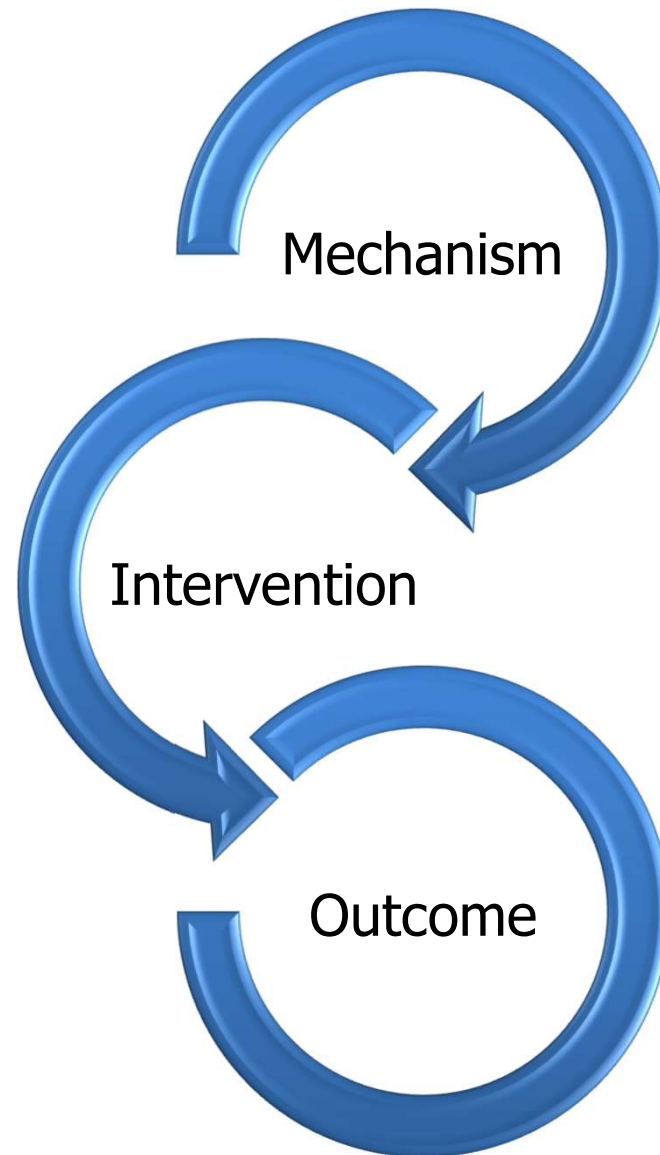
# Veterinary Healthcare Teams



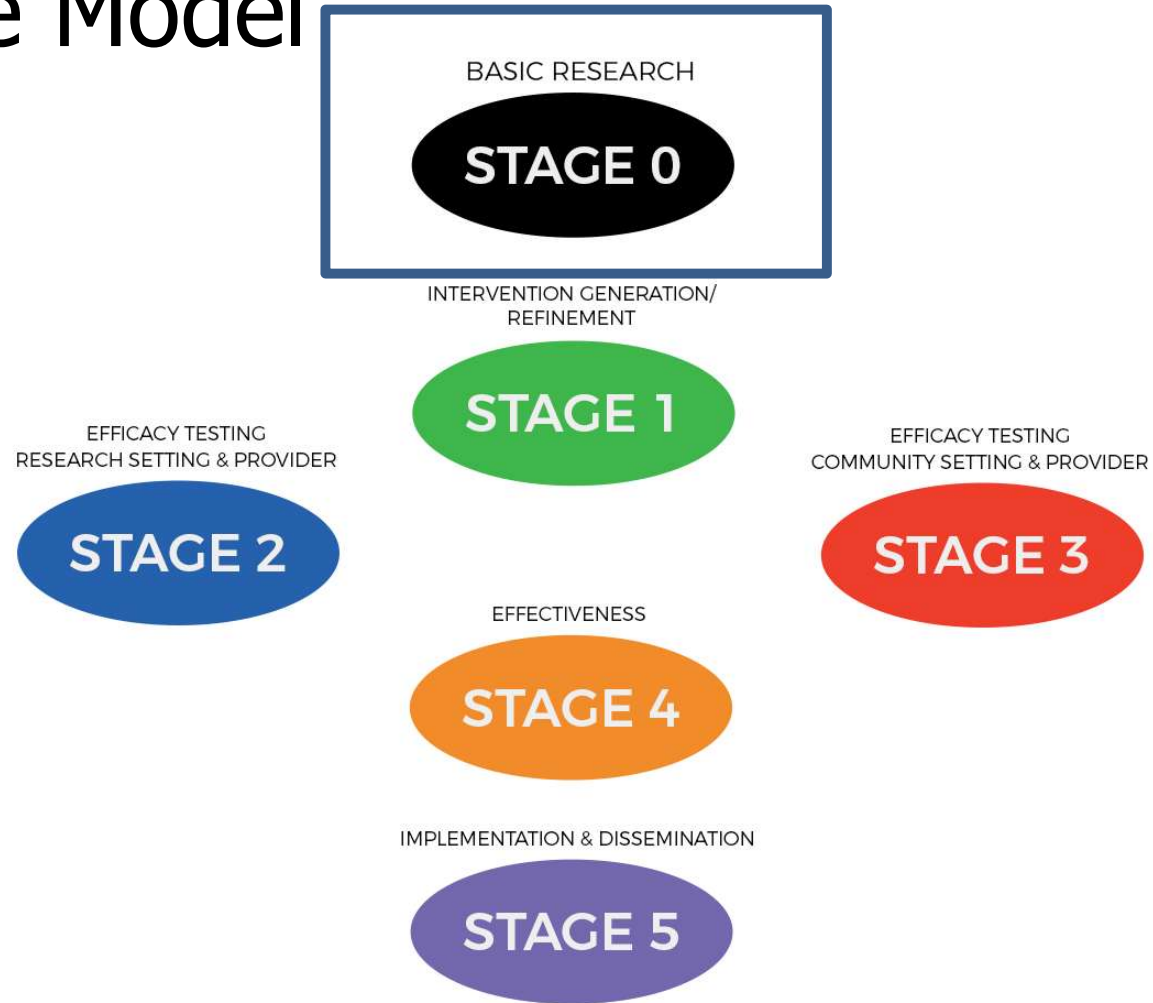
**Patient**

**Client**

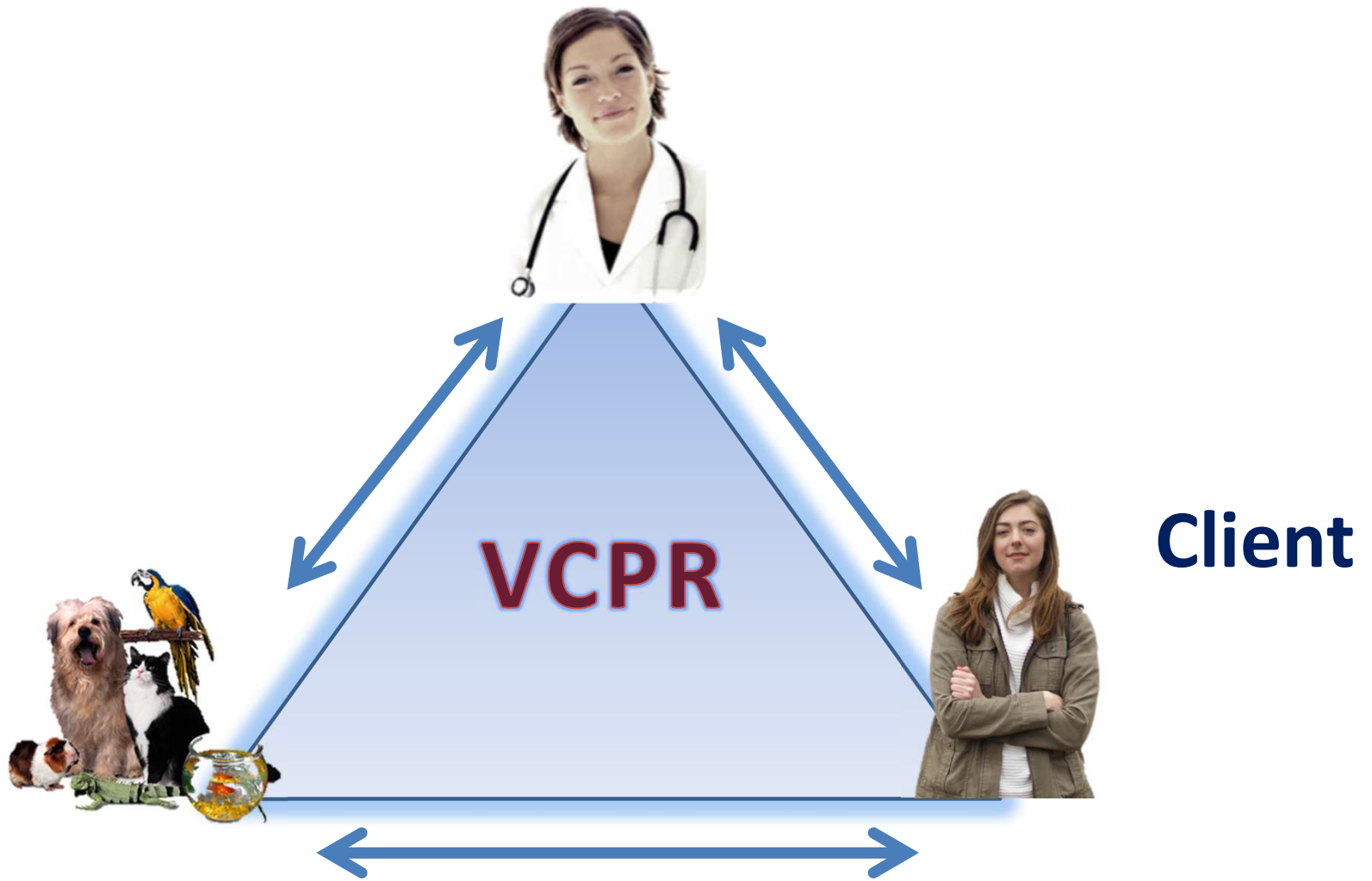
**VCPR**



# NIH Stage Model

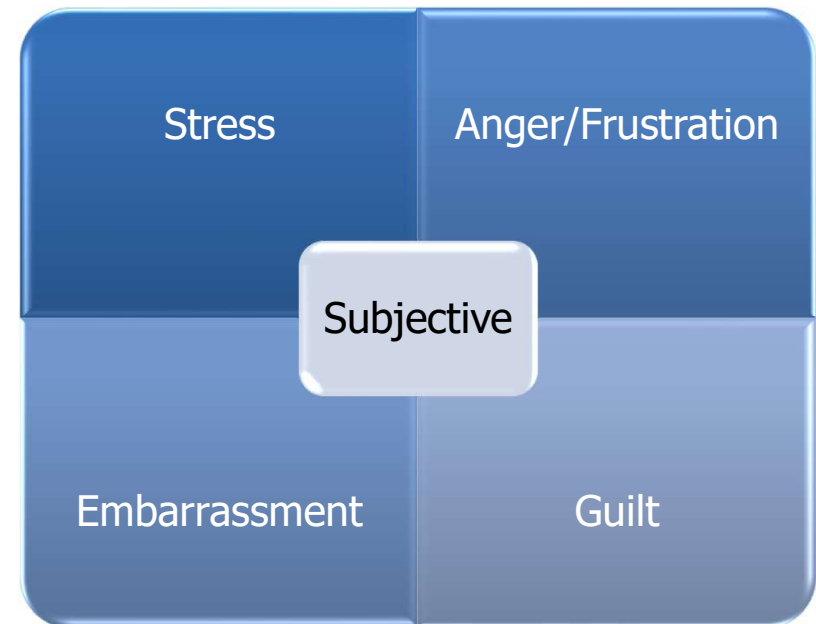
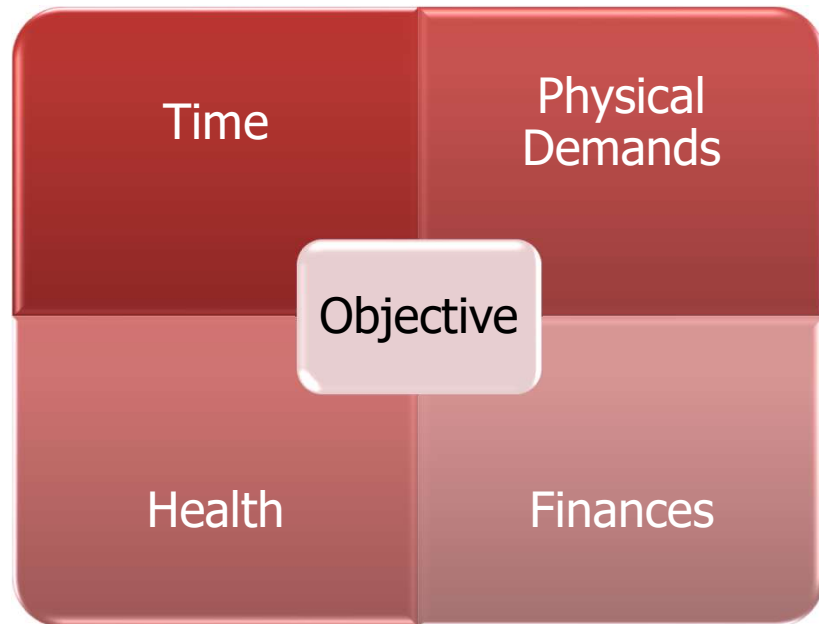


From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>



# What is Caregiver Burden?

- Strain while providing care for an individual with illness (Zarit, Reever, & Bach-Peterson, 1980)



# What is Caregiver Burden?

## Sample Questions (Zarit Burden Interview – Adapted)

**Do you feel that because of the time you spend caring for your pet that you don't have enough time for yourself?**

**Do you feel stressed between caring for your pet and trying to meet other responsibilities for your family or work?**

**Do you feel embarrassed over your pet's behavior?**

**Do you feel angry when you are around your pet?**

**Do you feel that your pet affects your relationship with other family members or friends in a negative way?**

**Do you feel uncertain about what to do about your pet?**

**Do you feel you should be doing more for your pet?**

**Do you feel your health has suffered because of your involvement with your pet?**

**Do you feel that you don't have enough money to care for your pet in addition to the rest of your expenses?**

**Do you feel that you will be unable to take care of your pet much longer?**

**Do you feel that you have lost control of your life since your pet's illness?**

**Do you wish you could leave the care of your pet to someone else?**

**Do you feel you could do a better job in caring for your pet?**

Zarit, Reever, & Bach-Peterson (1980)

# Caregiver Burden: Impact on the Client

$p < .001$  for all

Downloaded from <http://vetrecord.bmj.com/> on September 5, 2017 - Published by group.bmj.com

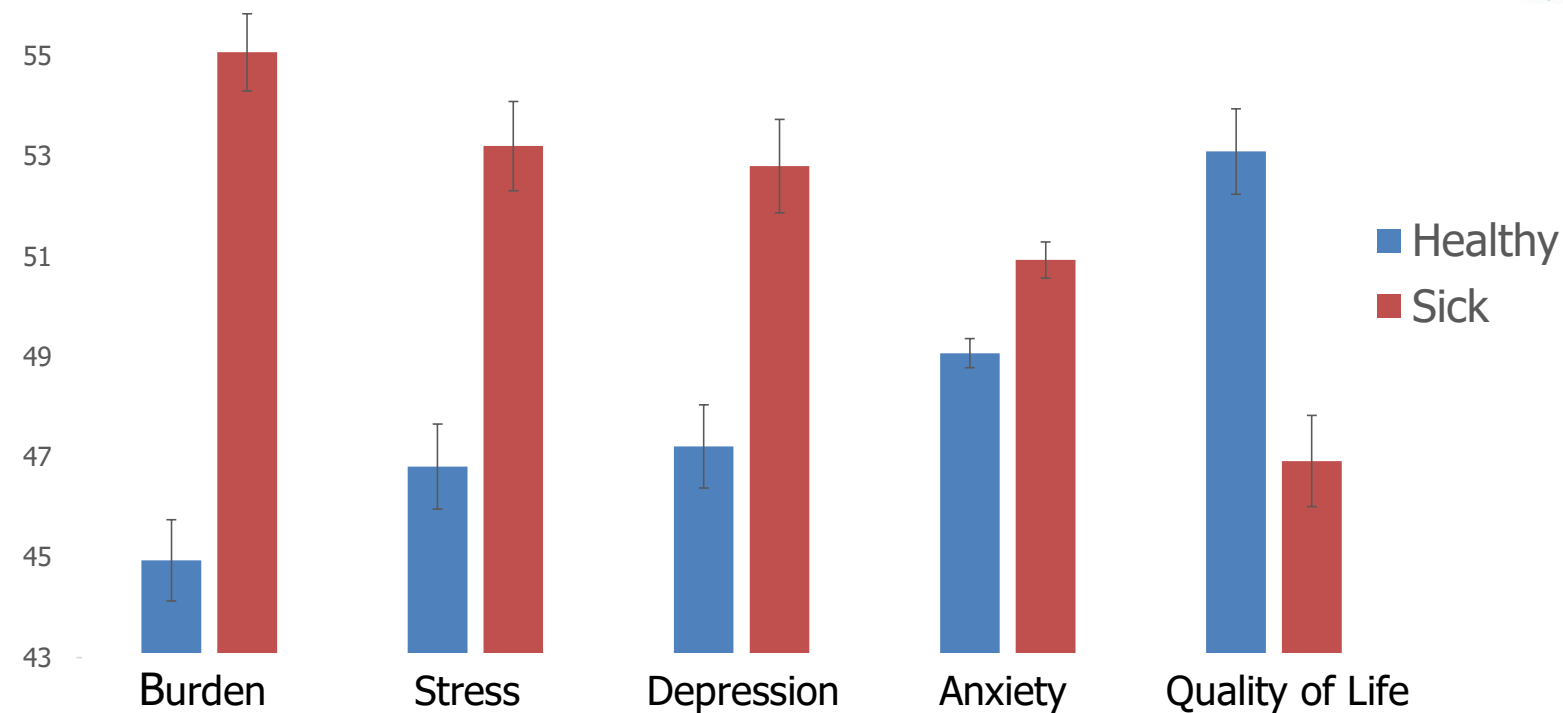
Paper

Paper

Veterinary Record (2017)

Caregiver burden in owners of a sick companion animal: a cross-sectional observational study

Mary Beth Spitznagel, Dana M Jacobson, Melanie D Cox, Mark D Carlson



**Sample:**  
n=228,  
Social Media

**Design:**  
Cross-Sectional,  
Healthy v Sick  
(*demographically  
matched*)

Spitznagel et al (2017) *Vet Record*

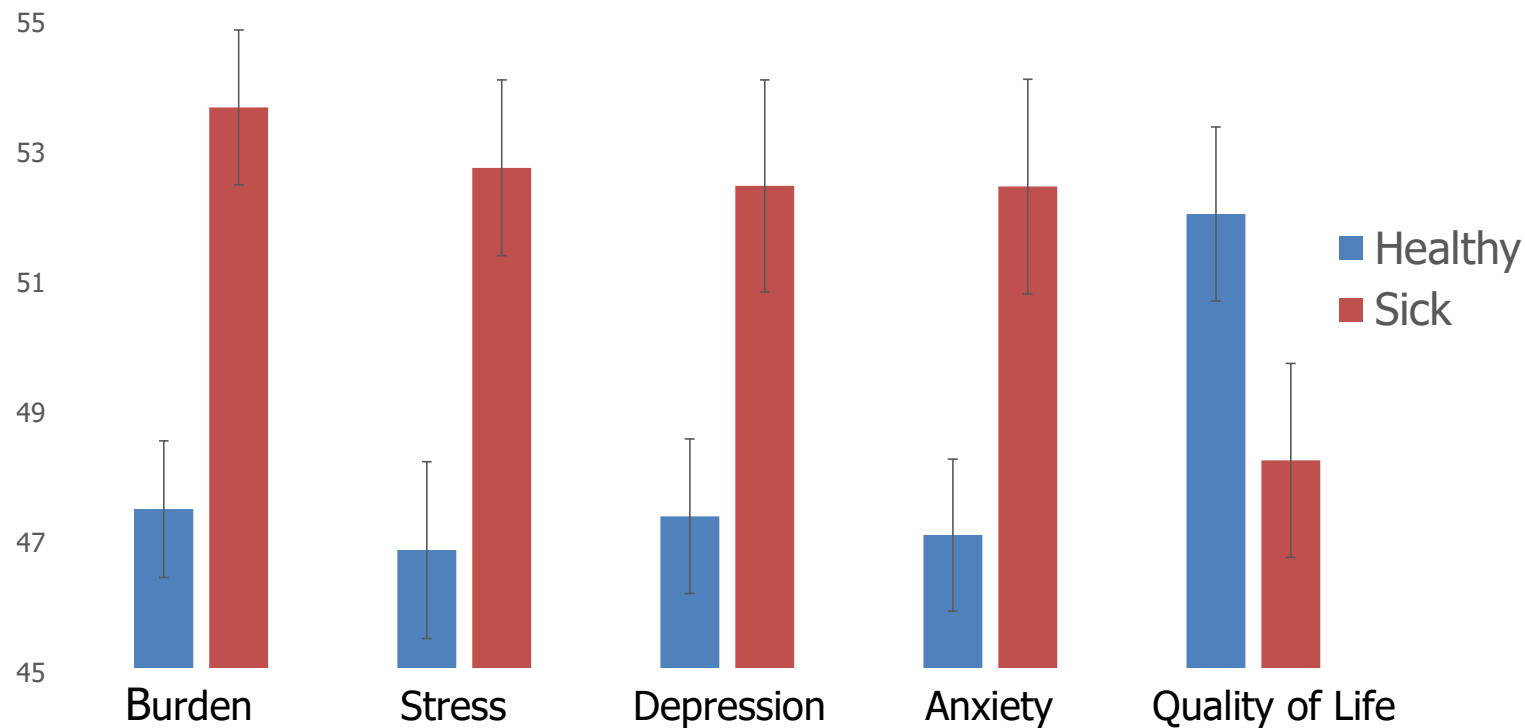
# Caregiver Burden: Impact on the Client

Special Report

JAVMA  
JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION

Assessment of caregiver burden and associations with psychosocial function, veterinary service use, and factors related to treatment plan adherence among owners of dogs and cats

$p < .01$  for all



Sample:  
n=124,  
General Vet Clinic

Design:  
Cross-Sectional,  
Healthy v Sick  
(*demographically  
matched*)

Spitznagel et al (2019a) JAVMA

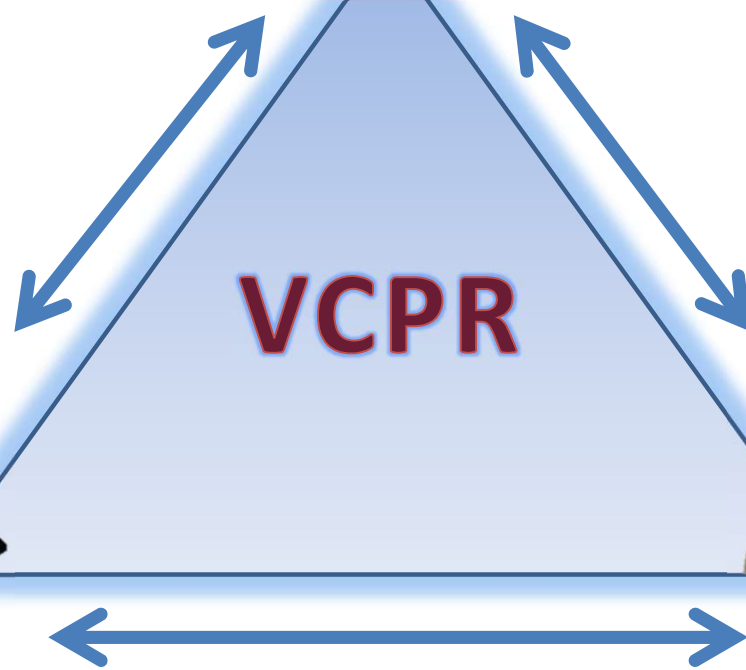
**Patient**



**Client**



**VCPR**



# Caregiver Burden: Impact on the Patient



## Consideration of Euthanasia Scale

	Yes	No
I have considered euthanasia for this pet	1	0
I have sometimes felt this pet's quality of life would make euthanasia the best choice	1	0
I have discussed euthanasia of this pet with family or friends	1	0
I have discussed euthanasia of this pet with a veterinarian	1	0
I will likely have this pet euthanized in the near future	1	0
I have taken steps toward euthanizing this pet (e.g., scheduled an appointment)	1	0

COE correlation with actual euthanasia within 30 days,  $r=.70$

## Samples:

n=30, Palliative Care;  
n=345, Social Media

## Design:

30-day prospective;  
Cross-Sectional  
observation

Spitznagel et al (2020) *VCNA:SAP*

# Caregiver Burden: Impact on the Patient



	Owners of a Seriously Ill or Elderly Dog or Cat (N=345)		
	M/SD or n(%)	Consideration of Euthanasia	
		<i>r</i>	P
Companion Animal Quality of Life	50.07/9.96	-0.42	<0.001
<b>Owner Caregiver Burden</b>	22.61/9.98	0.32	<0.001
Owner Anticipatory Grief	32.21/7.71	0.22	<0.001
Owner Income	58.38/8.87	0.19	<0.001
Owner Quality of Life	48.24/11.37	0.15	0.03
Owner Attachment to Pet	42.33/11.53	-0.03	0.61

Spitznagel et al (2020) *VCNA:SAP*

# Caregiver Burden: Impact on the Patient

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Assessment of caregiver burden and associations with psychosocial function, veterinary service use, and factors related to treatment plan adherence among owners of dogs and cats

$p < .001$  for all

<b>Pet Owner Adherence Scale</b>	<b>ZBI <i>r</i></b>
Total POAS	0.69
**Daily routine has changed due to pet's illness	0.43
**Challenging to follow new routines for management of pet's illness	0.43

Sample:

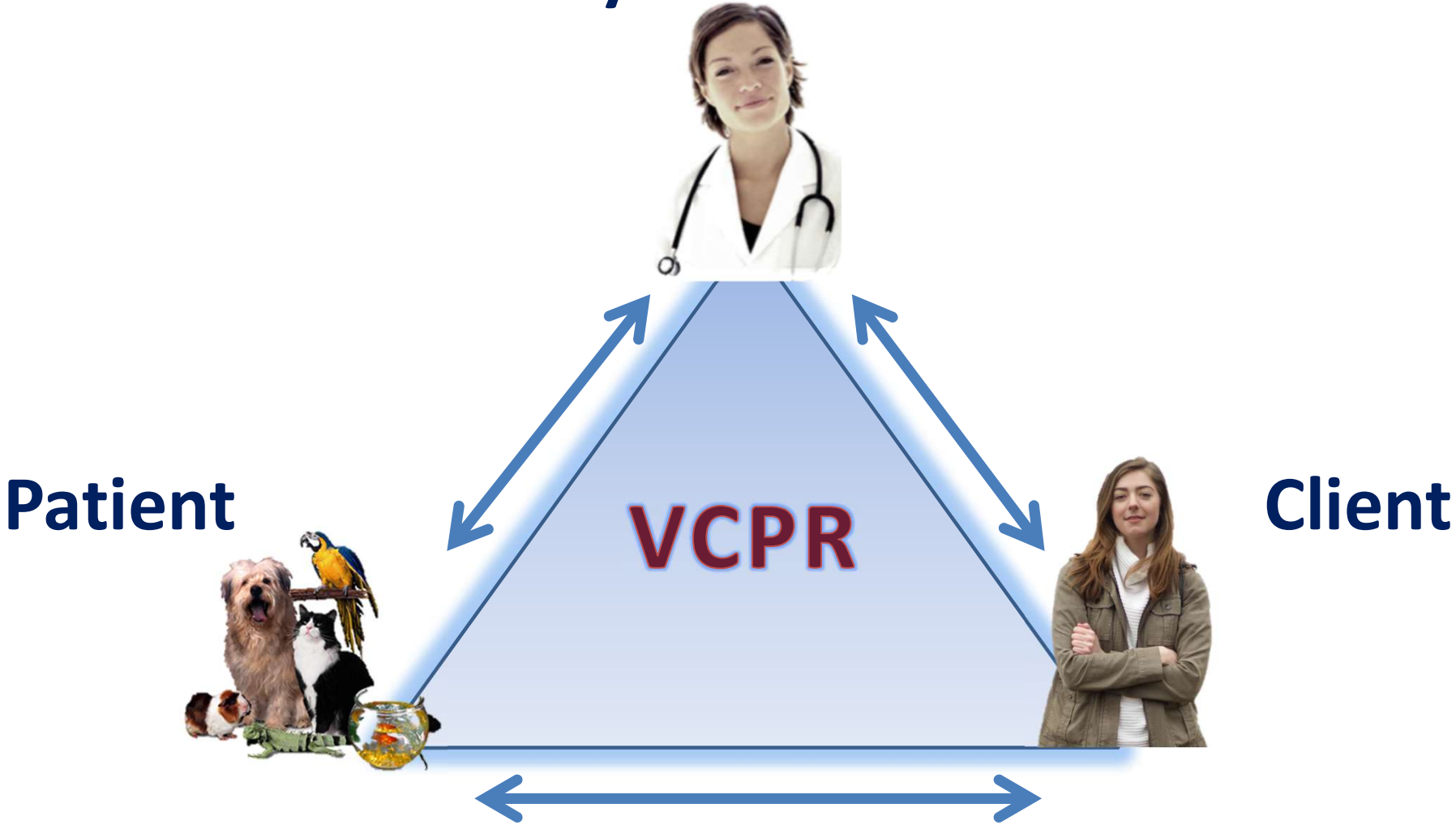
n=124,  
General Vet Clinic

Design:

Cross-Sectional,  
Healthy v Sick  
(*demographically  
matched*)

Spitznagel et al (2019) *JAVMA*

# Veterinary Healthcare Teams



# Caregiver Burden: Impact on VHCT

JAVMA  
JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION

Special Report ■

Development and validation of a Burden Transfer Inventory for predicting veterinarian stress related to client behavior

## Stage 1:

Veterinarian Input (n=19):  
Stressful Client Behaviors and Interactions

## Stage 2:

Veterinarian Validation (n=1,151)  
Frequency of/Reaction to Behaviors, Link to  
Stress/Burnout

## Stage 3:

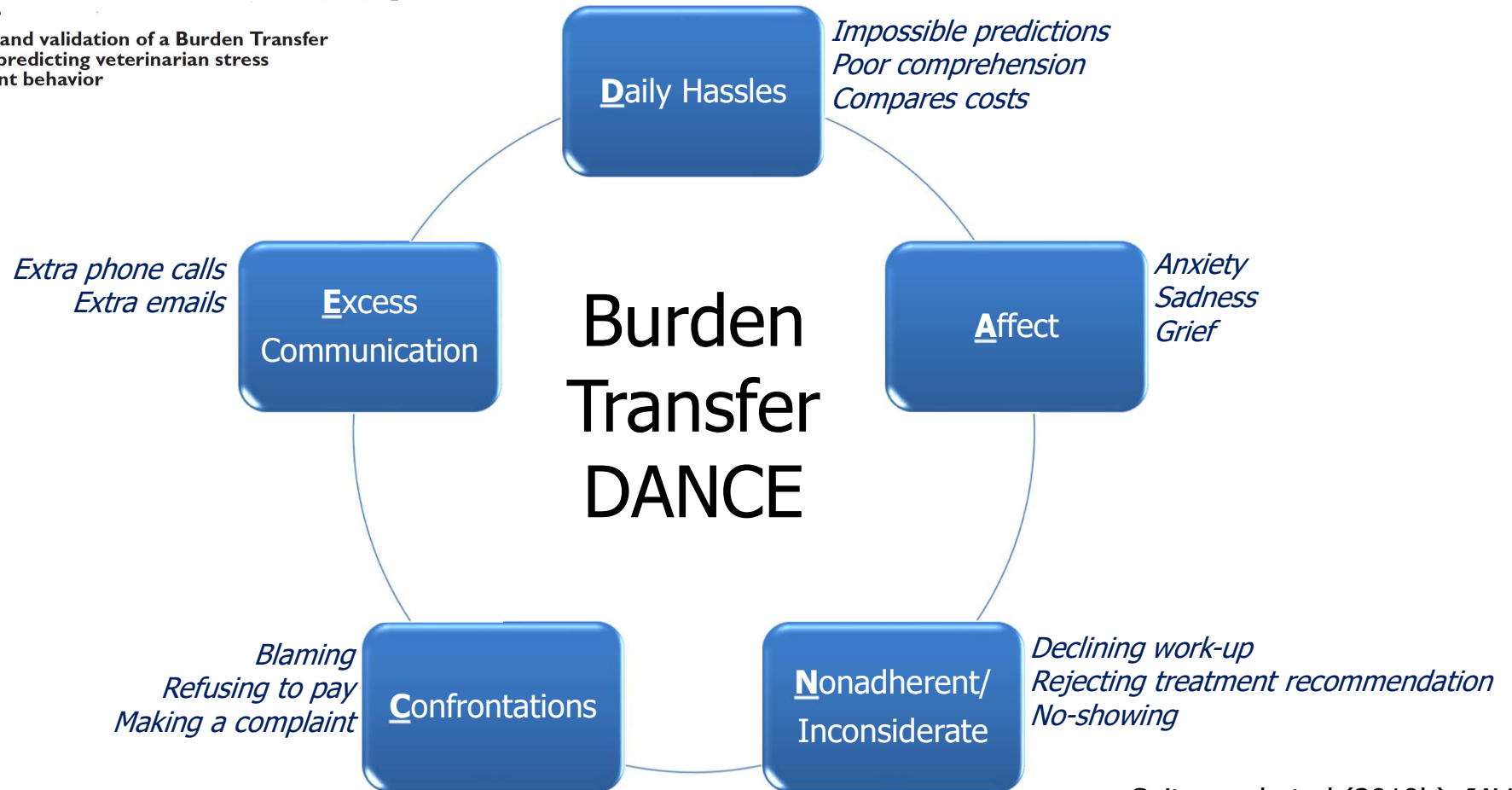
Sick Companion Animal Owner Validation (n=372)  
Frequency of Behaviors, Link to Client Caregiver Burden

# Caregiver Burden: Impact on VHCT

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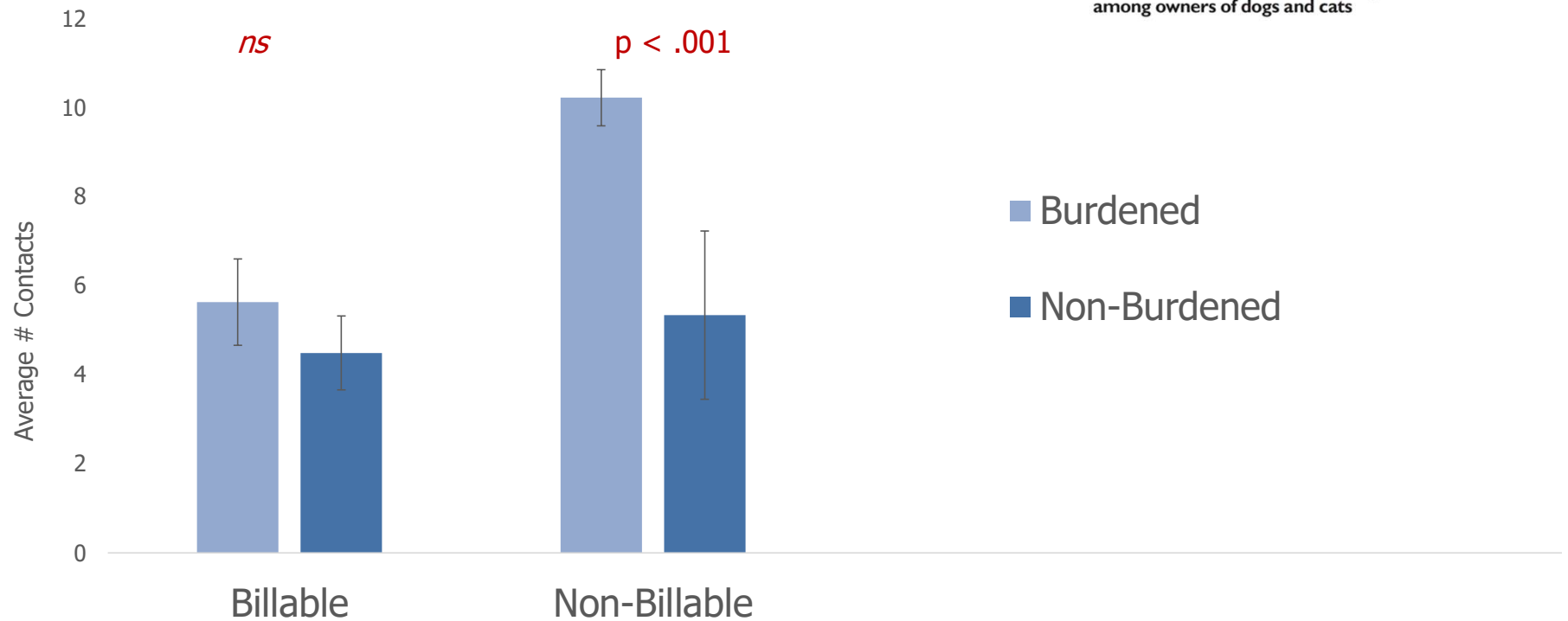
Spitznagel et al (2019b) JAVMA

# Caregiver Burden: Impact on VHCT

■ Special Report

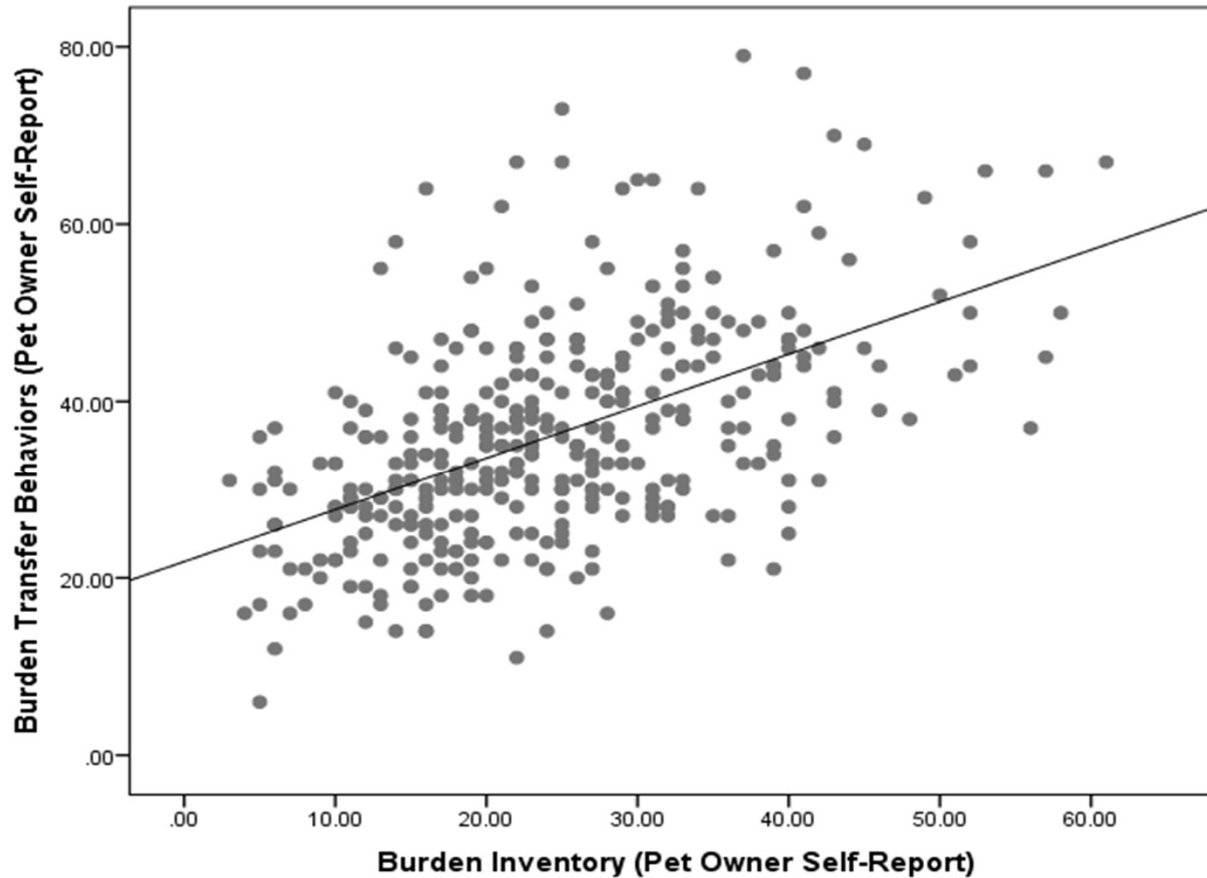
JAVMA  
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Assessment of caregiver burden and associations with psychosocial function, veterinary service use, and factors related to treatment plan adherence among owners of dogs and cats



Spitznagel et al (2019a) *JAVMA*

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$r=.53,$   
 $p<.001$

Spitznagel et al (2019b) *JAVMA*

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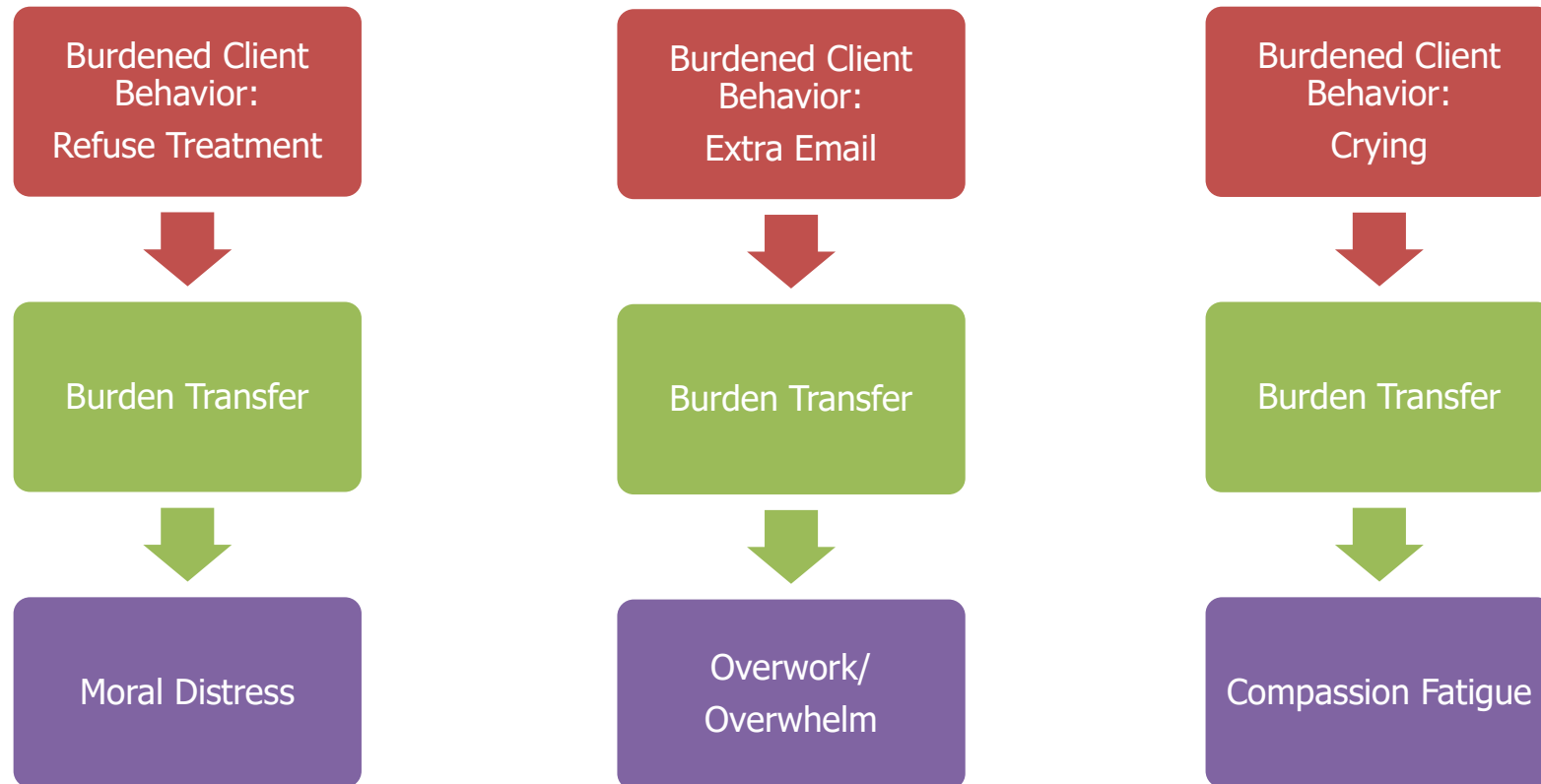
	Veterinarian Outcomes			
	<i>Stress</i>	<i>Personal Burnout</i>	<i>Work Burnout</i>	<i>Client Burnout</i>
<b>Burden Transfer DANCE</b>	<u><i>r</i></u>	<u><i>r</i></u>	<u><i>r</i></u>	<u><i>r</i></u>
<i>DANCE Frequency</i>	<b>0.25</b>	<b>0.26</b>	<b>0.33</b>	<b>0.35</b>
<i>DANCE Reaction</i>	<b>0.46</b>	<b>0.45</b>	<b>0.50</b>	<b>0.70</b>

# Burden Transfer as Mechanism

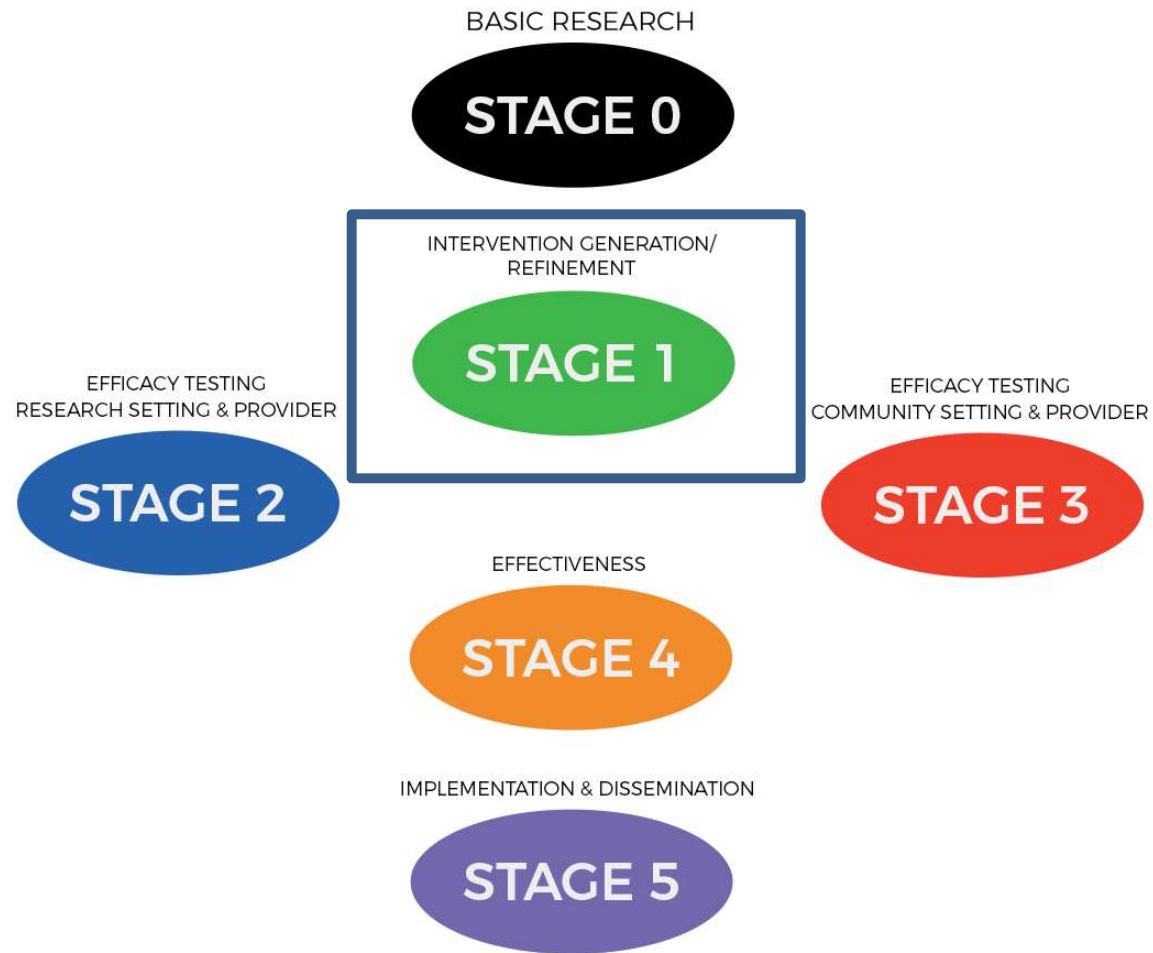


New Zealand Veterinary Journal  
Reducing occupational distress in veterinary  
medicine personnel with acceptance and  
commitment training: a pilot study

MB Spitznagel, ASG Updegraff, MP Twohig, MD Carlson & CM Fulkerson



# NIH Stage Model



From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>

# Creation of “Unburdened” Workshop

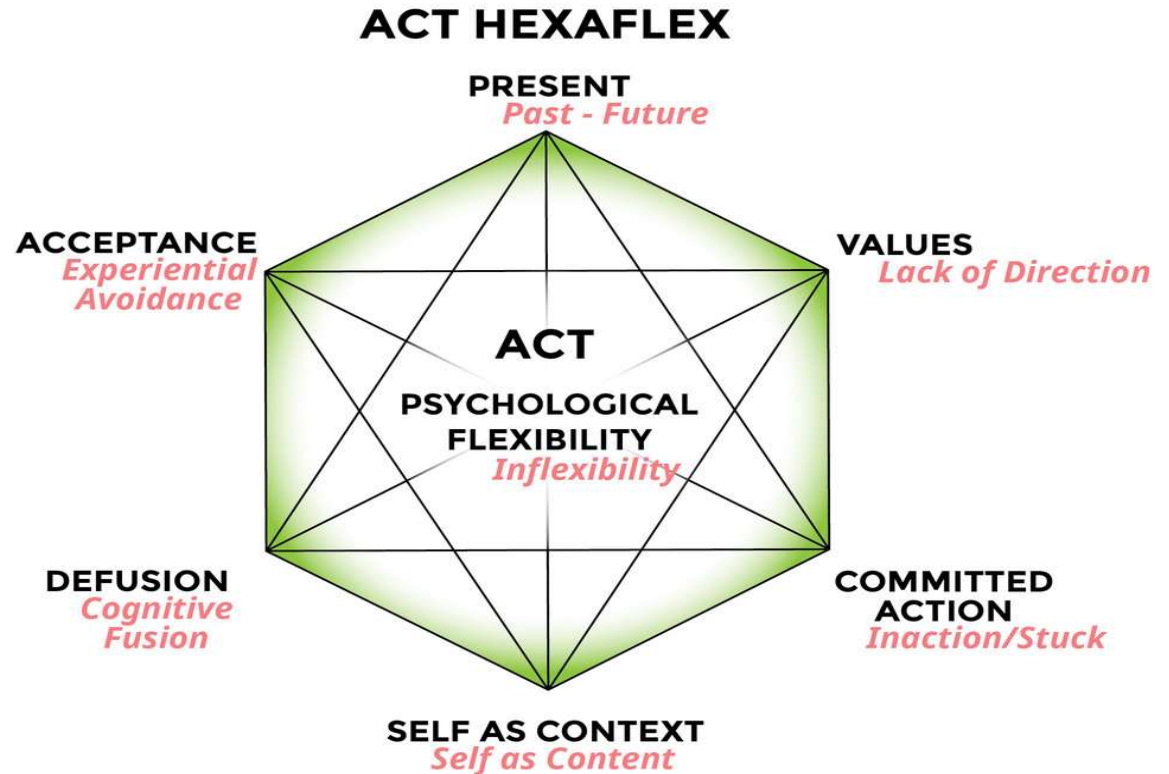
- 3-hour workshop
- Intervention -- not just information
- Interactive, hands-on, individualized approach
- Tailored to veterinary medicine
- Goal to **reduce reactivity** to DANCE interactions
- Evidence-based framework (Acceptance and Commitment Training)



# Acceptance and Commitment Training

- Evidence-based framework:

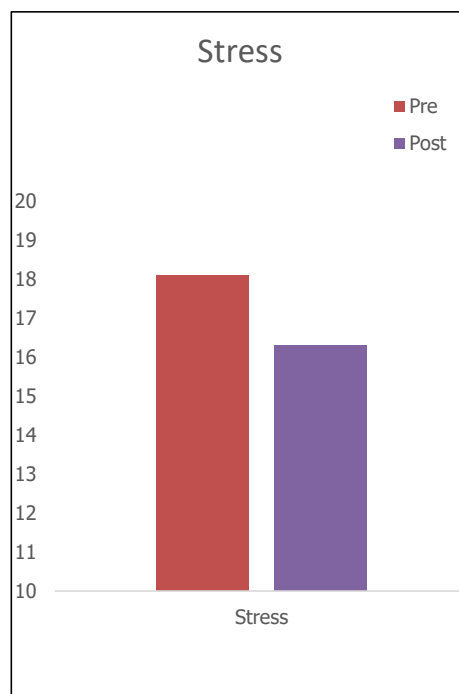
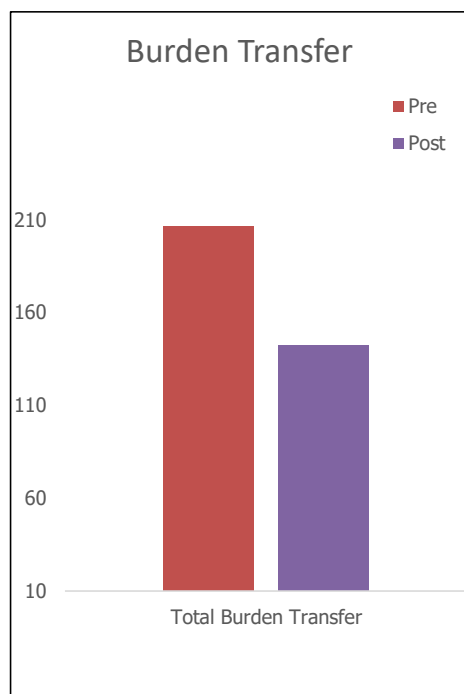
- Focus on relationship with difficult thoughts, feelings, urges
- Encourage emotional acceptance
- Re-focus on values
- Committed action



*Known for utility in reducing reactivity*

Hayes SC. Acceptance and Commitment Therapy and the new behavior therapies: Mindfulness, acceptance and relationship. 2004. New York: Guilford.

# Does it Work? – Feasibility/Acceptability Pilot



*Spontaneous feedback positive overall*  
*Suggested spreading content over multiple sessions*

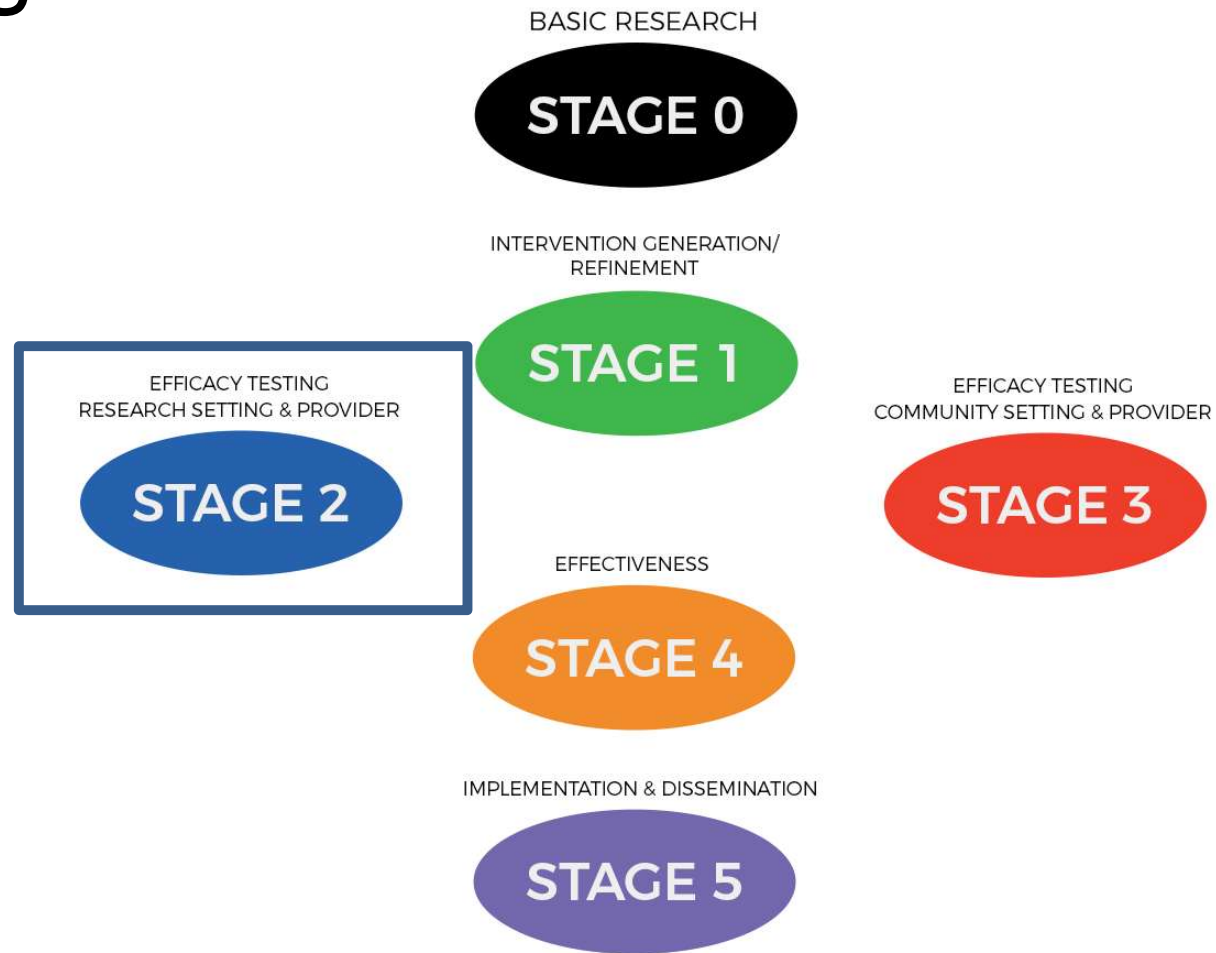
Spitznagel et al (pilot data; unpublished)

**Sample:**  
Primary Care Clinic  
7 Veterinary Professionals  
No control

**Design:**  
Single day, Pre/Post (1 wk)

**Measures:**  
Burden Transfer Inventory  
Perceived Stress Scale

# NIH Stage Model



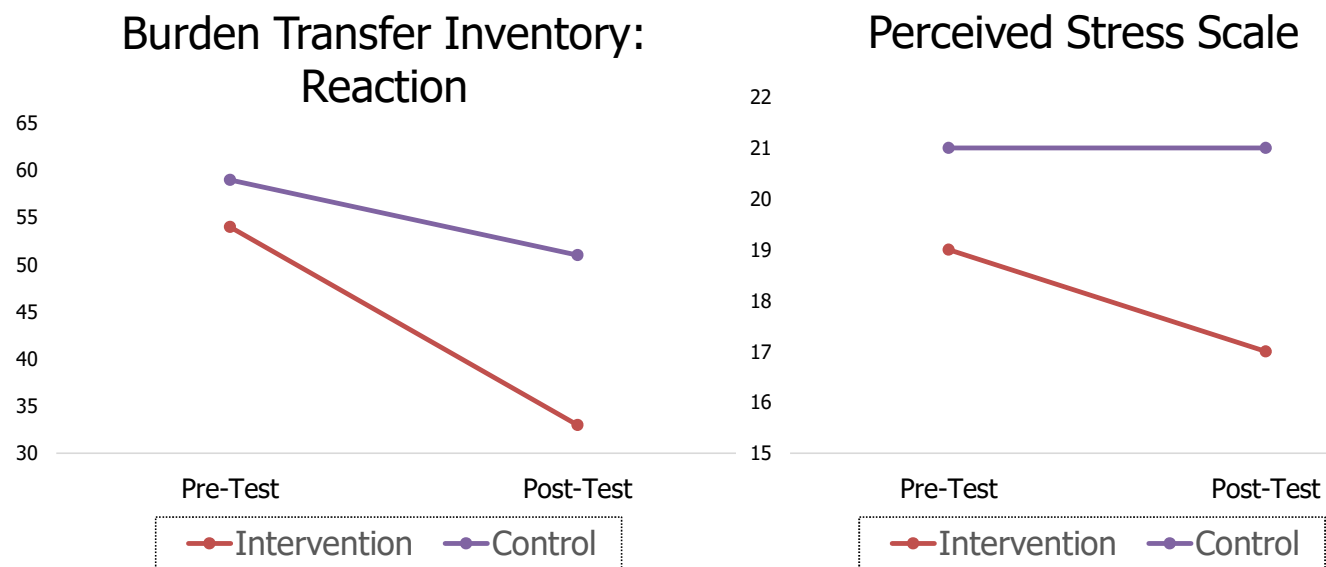
From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>

# Does it Work? – Pilot Study



New Zealand Veterinary Journal  
Reducing occupational distress in veterinary  
medicine personnel with acceptance and  
commitment training: a pilot study

MB Spitznagel, ASG Updegraff, MP Twohig, MD Carlson & CM Fulkerson



*Spontaneous feedback positive overall  
Suggested moving sessions closer together*

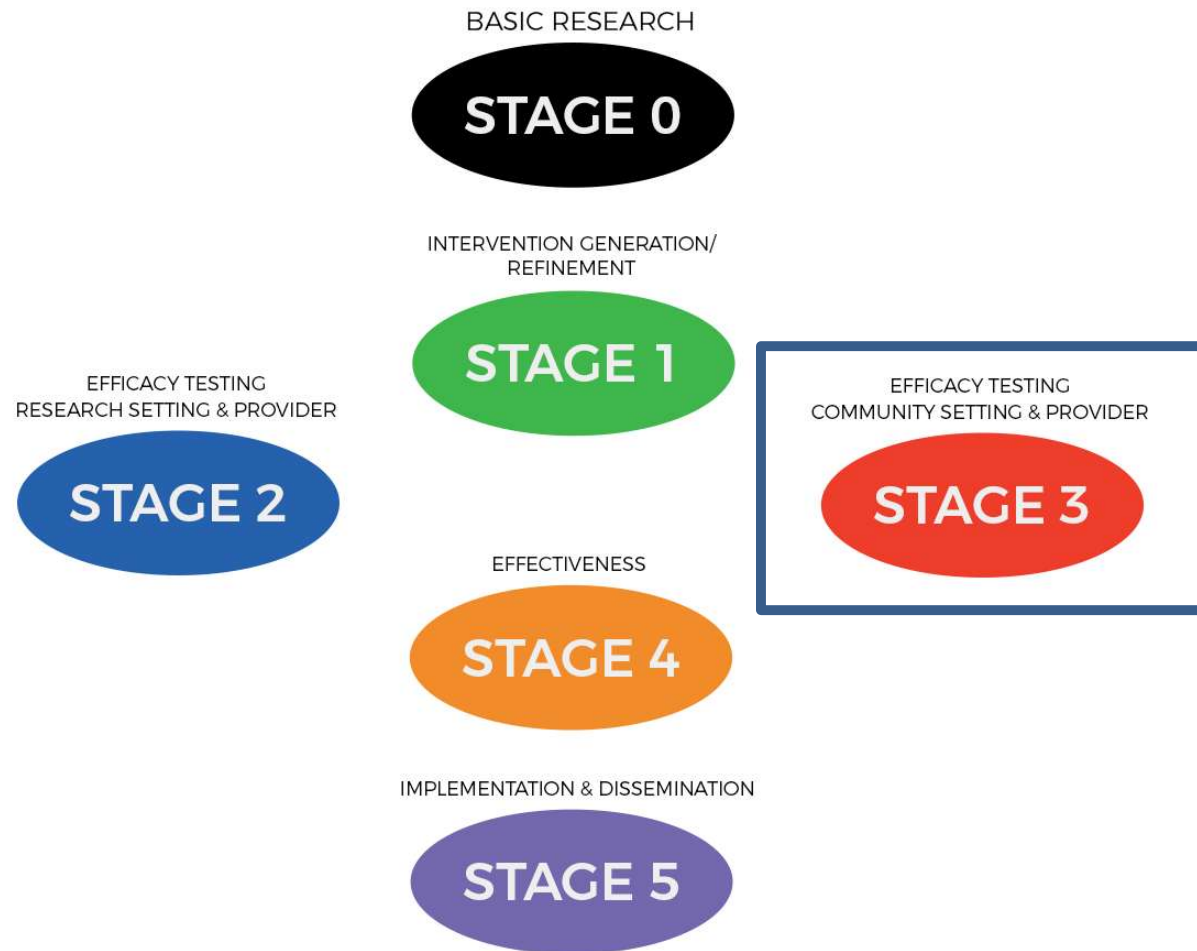
Spitznagel et al (NZVJ, 2021)

**Sample:**  
General/Specialty/ER Clinic  
38 Randomized, 34 Completed:  
Intervention (n=16)  
Control (n=18)

**Design:**  
1x per month, 4 months  
Pre/Post (1 wk)

**Measures:**  
Burden Transfer Inventory  
Perceived Stress Scale

# NIH Stage Model



From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>

# Does it Work? – Community Efficacy Trial

## *Sample:*

17 Clinics (General/Specialty/ER/Academic)  
216 Randomized, 143 Completed:  
Intervention (n=72)  
Control (n=71)

## *Design:*

3 sessions, 1x per week  
Time points: Pre/Post/Follow-up (1m)

## *Measures:*

Burden Transfer Inventory  
Perceived Stress Scale  
Copenhagen Burnout Inventory

Program Usefulness: ★★★★★

Daily Skill Use: ✓✓✓✓✓



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**CLINICAL  
SCHOLARS**

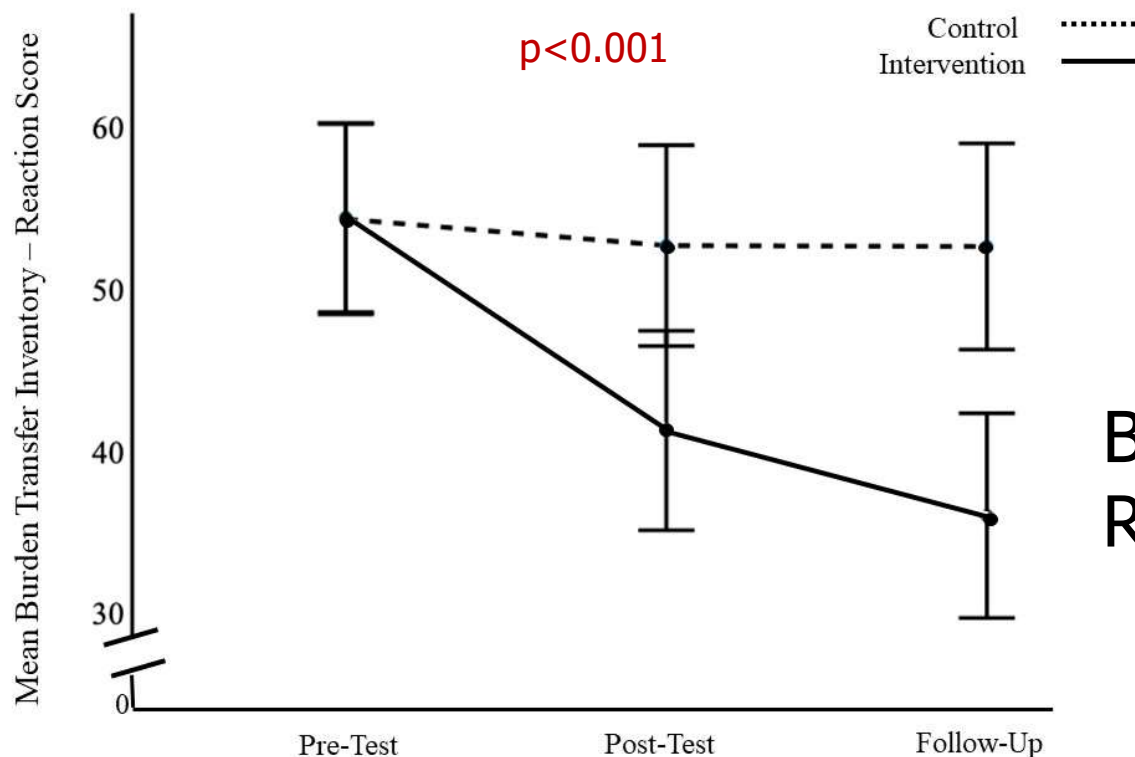
# Does it Work?

JAVMA



**An acceptance and commitment training program reduces burden transfer, stress, and burnout among veterinary healthcare teams**

Mary Beth Spitznagel, PhD<sup>1</sup>; Alanna S. G. Updegraff, PhD<sup>1</sup>; Christopher Was, PhD<sup>1</sup>; John T. Martin, MA<sup>1</sup>; Meg Sislak, DVM, DACVR<sup>2</sup>; Lisa Wiborg, LISW-S, VSW<sup>3</sup>; Michael P. Twohig, PhD<sup>4</sup>



## Burden Transfer Reaction

Spitznagel et al (2022), JAVMA

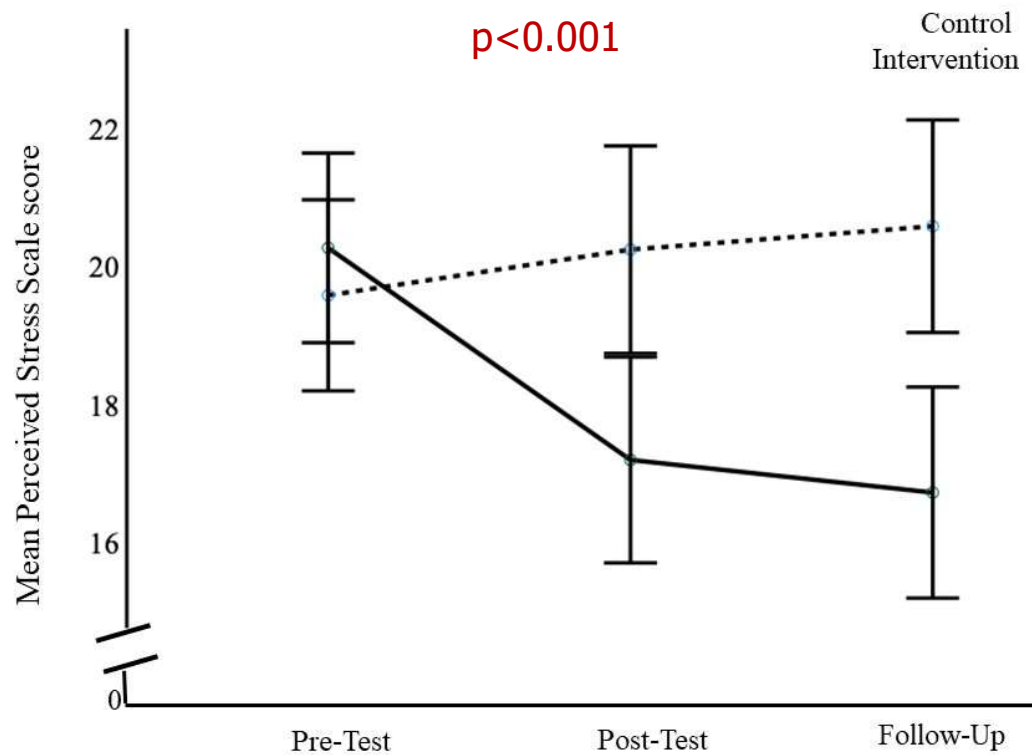
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## Stress

Spitznagel et al (2022), JAVMA

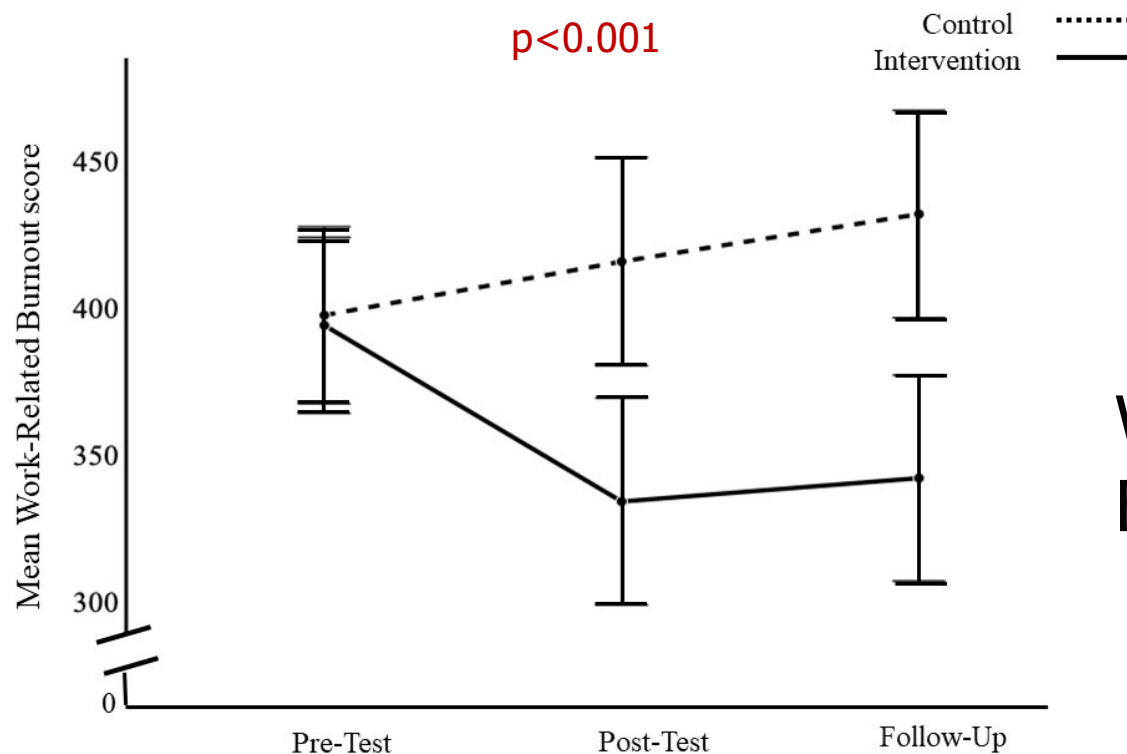
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## Work-Related Burnout

Spitznagel et al (2022), *JAVMA*

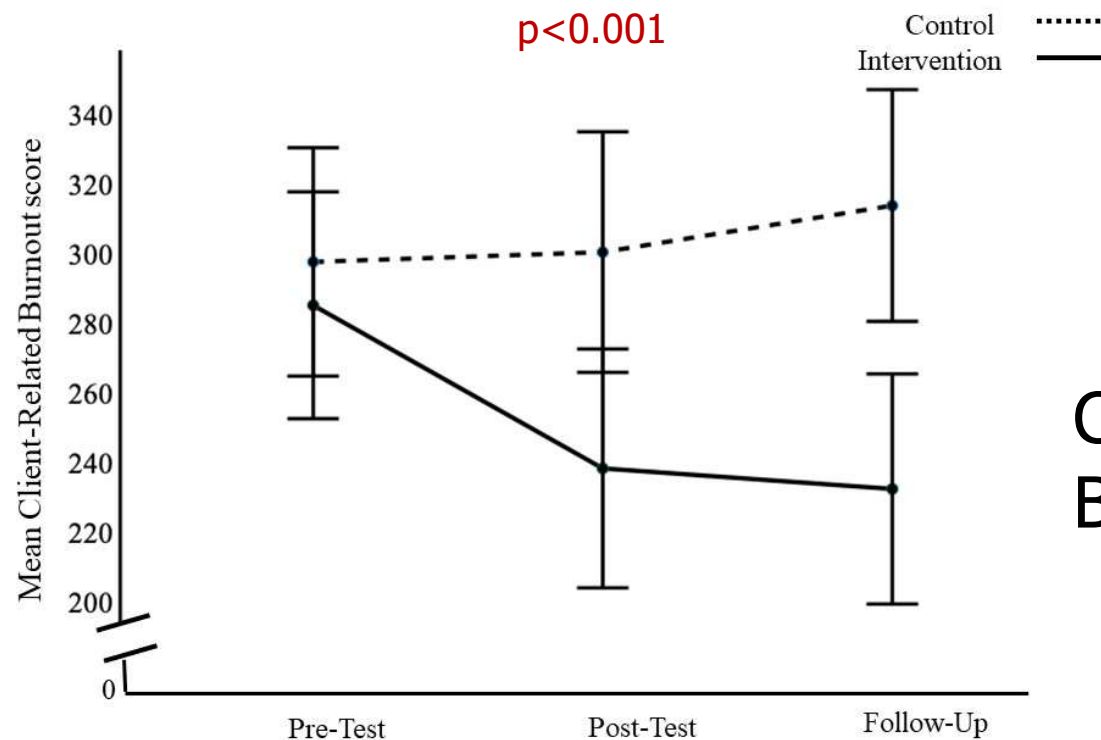
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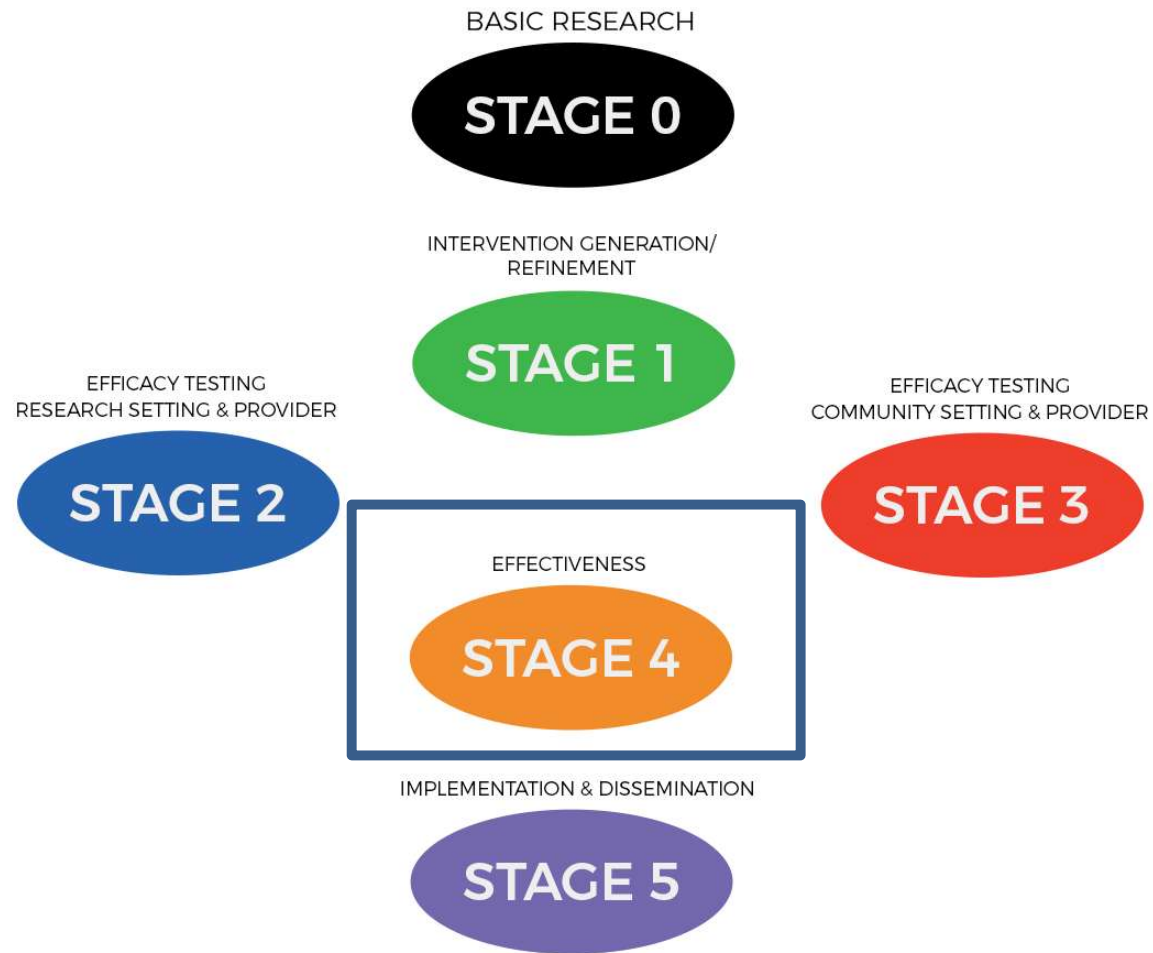
## Client- Related Burnout

*Intervention completion ~57% (attrition ~43%)*

*Spontaneous query re: barriers suggested live attendance to blame*

Spitznagel et al (2022), JAVMA

# NIH Stage Model



From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>

# Does it Work? – Effectiveness Trial

## ***Sample:***

2 Corporate Groups  
252 Randomized, 137 Completed:  
Live, Synchronous (n=55)  
Self-Paced, Asynchronous (n=82)

## ***Design:***

3 live sessions or 2-3 modules (~20-30 min) per week  
Time points: Pre/Post/1 month follow-up/9-12 month follow-up

## ***Measures:***

Burden Transfer Inventory  
Perceived Stress Scale  
Copenhagen Burnout Inventory

Program Usefulness: ★★★★★

Daily Skill Use: ✓✓✓✓✓ Post, 1M Follow-Up  
                  ✓✓✓✓✓ 9-12M Follow-Up



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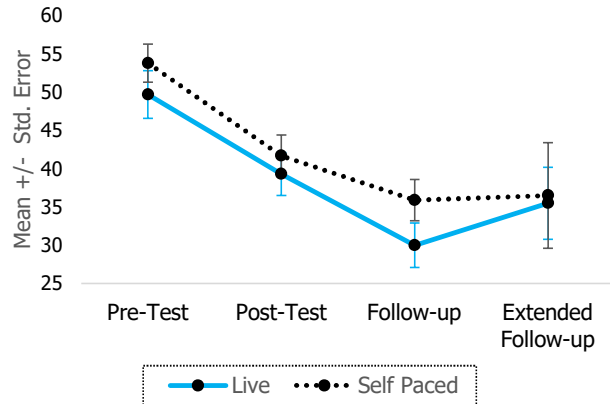
**CLINICAL  
SCHOLARS**

# Does it Work?

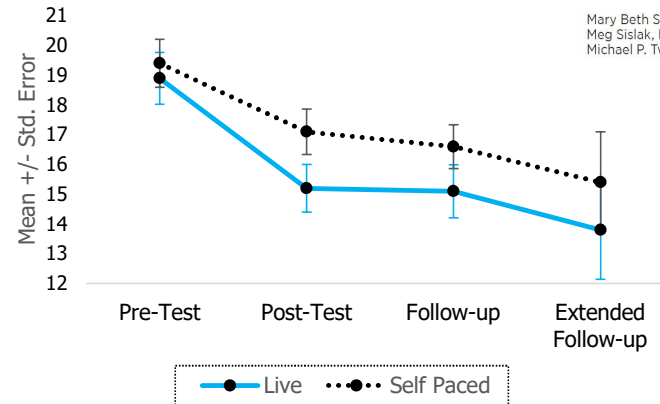
## Self-paced acceptance and commitment training reduces burden transfer, stress, and burnout in veterinary healthcare teams

Mary Beth Spitznagel, PhD<sup>1\*</sup>; John T. Martin, MA<sup>1</sup>; Christopher Was, PhD<sup>1</sup>; Alanna S. G. Updegraff, PhD<sup>1</sup>; Meg Sislak, DVM, DACVR<sup>2</sup>; Lisa Wiborg, LISW-S, VSW<sup>3</sup>; Christopher M. Fulkerson, MS, DVM, DACVIM<sup>4,5</sup>; Michael P. Twohig, PhD<sup>6</sup>

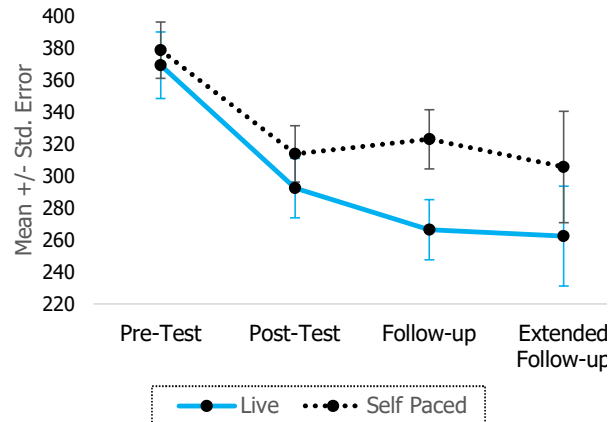
Burden Transfer Reaction



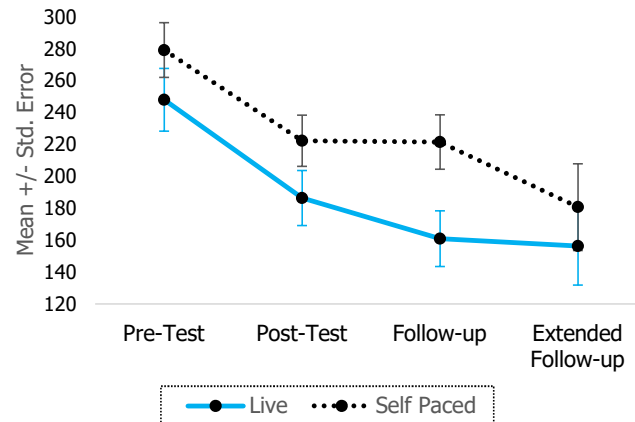
Perceived Stress Scale



Work-Related Burnout



Client-Related Burnout



*Both groups improved (p<0.001)*

*Durability shown at 9-12m*

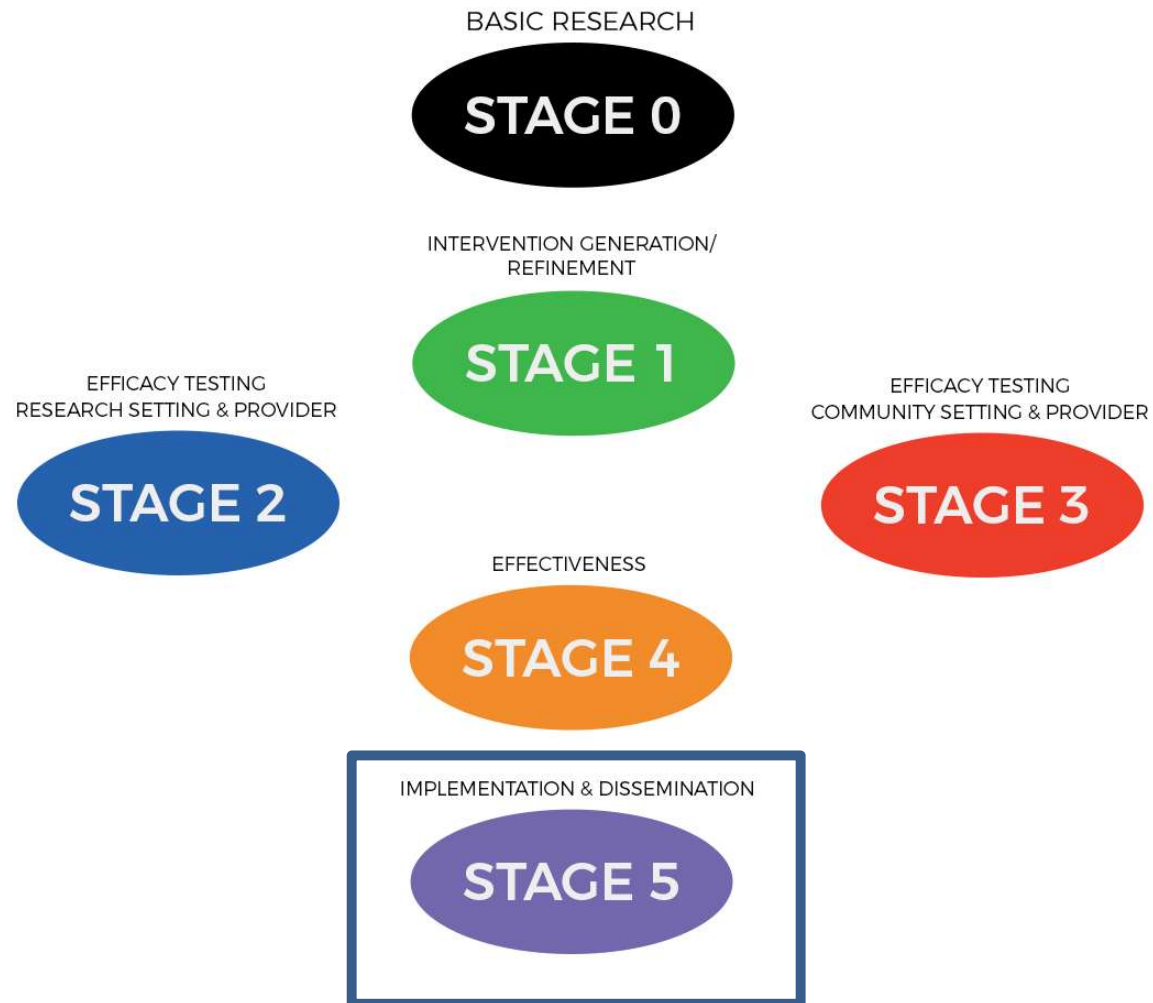
*Group differences ns*

*Program completion:*

~61% Live

~80% Self-Paced

# NIH Stage Model



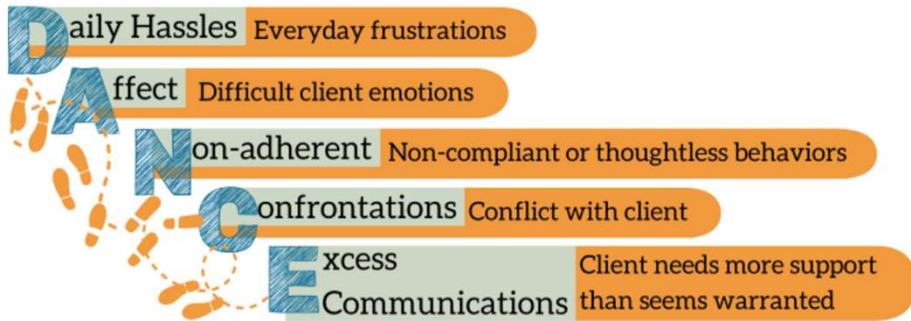
From: <https://www.nia.nih.gov/research/dbsr/nih-stage-model-behavioral-intervention-development>

Reducing stress in veterinary teams through

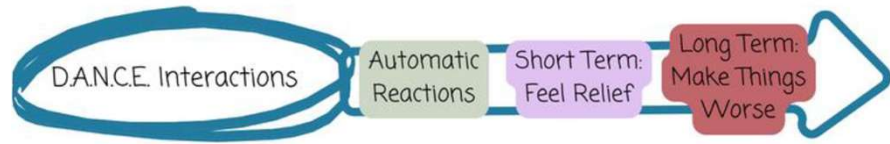
# Unburdened

Interactive digital program to improve burden transfer

# Digital Interactive Program



## Burden Transfer



## Leaves on a Stream



Welcome to Unburdened!

A program to help lift the weight of difficult clients interactions off your shoulders

## Exploring Your Values



## Unmet and Alternate Values



# Implementation and Dissemination (Informal)

## ***Sample:***

1 Nationwide (Canada) Corporate Group,  
2 Year Period, 217 Veterinary Professionals

## ***Design:***

3 Conditions: Pilot, Mandated, Encouraged  
6 modules (1 per week)

## ***Measures:***

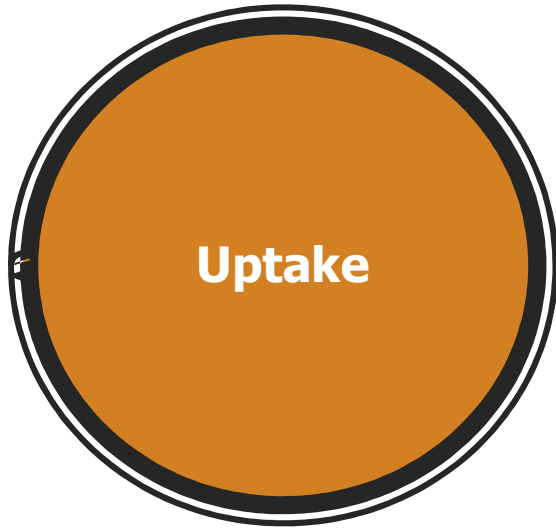
(Data extracted from program use)

Uptake

Adherence

Effectiveness

Interaction



$p < 0.001$

	Stage 1	Stage 2	Stage 3
Eligible [n]	189	51	2252
Enrolled [n, (%)]	45 (23.8%)	35 (63.6%)	137 (6.8%)

*Enrollment in Stage 2 was significantly greater than Stages 1 and 3.*

***Administrative Mandate maximizes program enrollment***

*Bennett et al (under review)*



Completion:  $p < 0.001$

	Stage 1 (n=45)	Stage 2 (n=35)	Stage 3 (n=137)
Program fully completed [n, (%)]	16 (35.6%)	20 (57.1%)	57 (41.6%)
% Program completion [M, (SD)]	53.80 (40.17)	77.4 (29.27)	55.41 (40.48)
% Homework completion [M, (SD)]	32.26 (31.27)	21.76 (22.76)	26.59 (27.24)

*Full program completion and percent of the program completed are greater in Stage 2 than Stages 1 and 3. Differences in homework completion were non-significant.*

***Administrative Mandate maximizes program completion***

*Bennett et al (under review)*

# Effectiveness

	Stage 1 (n=45)	Stage 2 (n=35)	Stage 3 (n=137)
<b>Baseline BTI-A Reaction [M, (SD)]</b>	16.19 (8.79)	15.79 (6.64)	17.34 (7.04)
<b>End BTI-A Reaction [M, (SD)]</b>	15.21 (7.94)	11.53 (6.00)	14.38 (7.39)
<b>Reduction from baseline to end</b>	0.98	4.26	2.96

*ns*

p<0.001;  
ηp2=0.12

*Burden transfer reaction was significantly reduced from the beginning to the end of the program. No significant differences by Stage; raw data suggests that with a larger sample, Administrative Mandate might be superior to other conditions.*

***Burden Transfer is reduced across stages***

Bennett et al (under review)



Theme	Stage 1 (n=45)	Stage 2 (n=35)	Stage 3 (n=137)
<b>Program Specific</b>	<b>29 (64.4)</b>	<b>23 (65.7)</b>	<b>107 (78.1)</b>
Burnout, Work Enjoyment	12 (26.7)	12 (34.3)	63 (46.0)
Exhaustion, Fatigue	11 (24.4)	7 (20.0)	33 (24.1)
Interactions	18 (40.0)	13 (37.1)	79 (57.7)
<i>Client Interactions</i>	14 (31.1)	8 (22.9)	59 (43.1)
<i>Staff Interactions</i>	3 (6.7)	0 (0.0)	14 (10.2)
<i>Non-specific Interactions</i>	5 (11.1)	5 (14.3)	23 (16.8)
Teach Others, Model Behavior	4 (8.9)	2 (5.7)	6 (4.4)
Work-Life Balance	4 (8.9)	3 (8.6)	21 (15.3)
<b>Non-Program Specific</b>	<b>1 (2.2)</b>	<b>8 (22.9)</b>	<b>1 (0.7)</b>
<b>Did Not Answer</b>	<b>14 (31.1)</b>	<b>5 (14.3)</b>	<b>29 (21.2)</b>

*Primary themes and Subthemes reported as absolute frequencies. Interaction subthemes reported as relative frequencies (some participants discussed multiple types of interactions).*

**Administrative Mandate elicited:**  
**Greater response to goal question**  
**Greater non-program specific goals**

Bennett et al (under review)



# Current Work...



**Welcome to  
Unburdened  
Student Edition!**

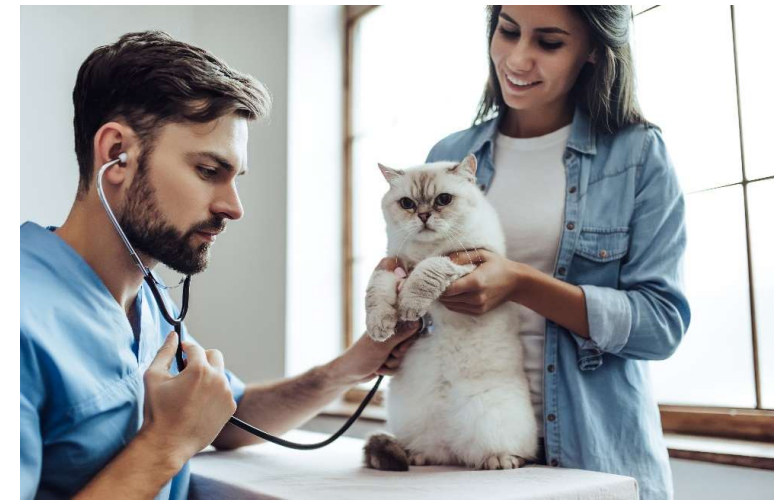
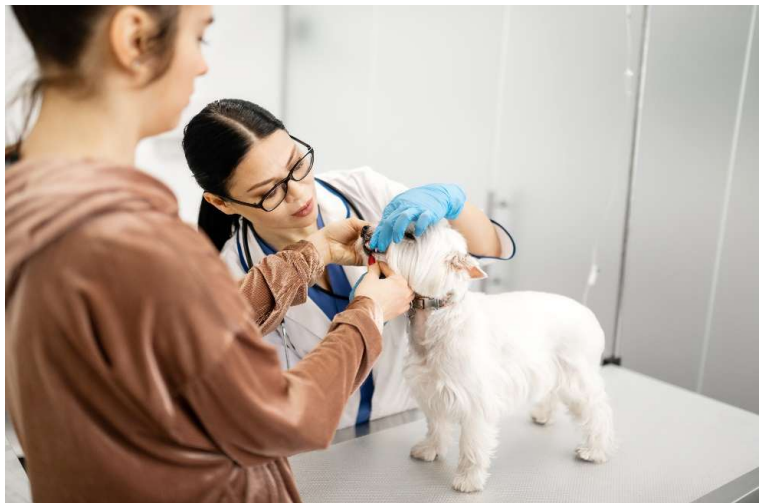
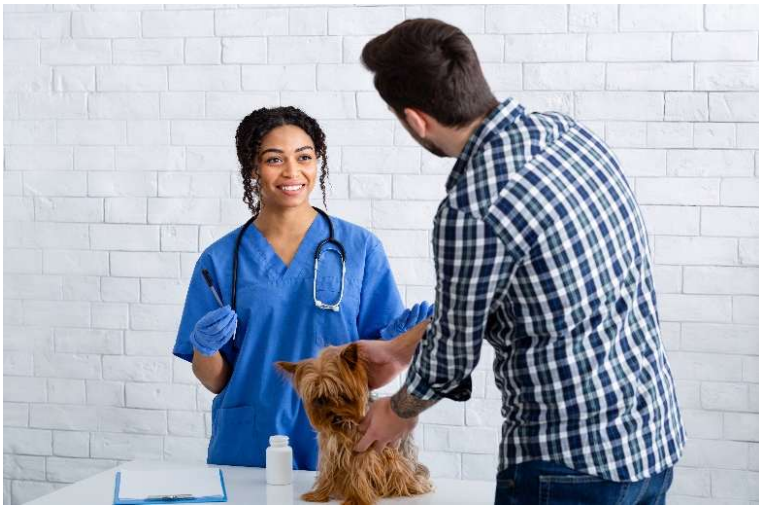
A program to help lift the weight of  
difficult client interactions off your  
shoulders

## Unburdened Student: DVM/RVT Training

- Unburdened adapted for student use
- Embedded in curriculum prior to graduation
- Follow during workforce transition (1 year)
- 3 cohorts; currently enrolling C2



# Impact on the Field



# Impact on the Field

- “Thank you so much! Doing the anchor technique numerous times throughout the week has helped tremendously. I would love to see this workshop implemented on a routine basis for my fellow staff members.”  
*~Customer Service Representative, 18 yrs in practice*
- “I loved that the information we learned could be applied to not only my work life, but also in my personal life. I really enjoyed taking the time out to have these sessions. I can't wait until this program is released to the public.”  
*~Veterinary Assistant, 8 yrs in practice*
- “Using the techniques you taught us helped give me breathing room during all this stress. This gave me some new ways to make my life less stressful!”  
*~Registered Veterinary Technician, 5 yrs in practice*
- “At the time of the workshop I was 100% burnt out. I'm so thankful to have attended to get ACTUAL tools that turned everything around. I've adopted what I learned into my work life and my everyday life. The difference has been enormous.”  
*~Small Animal Specialty Practitioner, 16 yrs in practice*

# Acknowledgments

## Collaborators:

Colorado State University

- Lori Kogan, PhD

Veterinary Information Network

- Mark Rishniw, BVSc, MS, PhD, DACVIM

Stow Kent Animal Hospital

- Mark Carlson, DVM

MedVet

- Meg Sislak, DACVR
- Mike Podell, MSc, DVM
- Betsy Knudsen, MPH

Mission Veterinary Partners

- Karlene Belyea, MBA
- Stephanie Resnick

1<sup>st</sup> Pet Veterinary Centers

- Angela Thorp, CVT, VTS

Ohio State University

- Joelle Nielsen, LISW-S

Utah State University

- Michael Twohig, PhD
- Mike Levin, PhD

VCA Canada

- Jason Coe, PhD
- Cathy Gaviller
- Lauren Smith

KSU Psychological Sciences

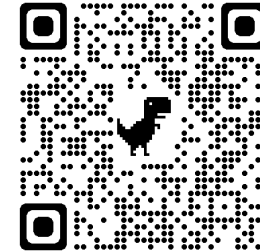
- Alanna Updegraff, PhD
- Chris Was, PhD

## Websites:

[www.unburdened.online](http://www.unburdened.online)



[www.petcaregiverburden.com](http://www.petcaregiverburden.com)



## Funding:

- KSU Research Council
- Robert Wood Johnson Foundation Clinical Scholars
- NIOSH/Centers for Disease Control and Prevention 1R01OH012580



# Questions?

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QR for Linq

