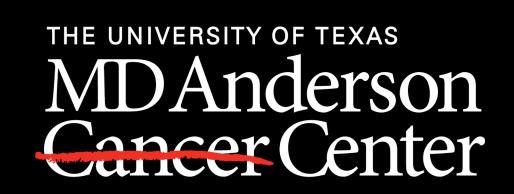
Development of Positive Language Coding System for Couples facing Cancer

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Background

- Patients with lung cancer (34.6%) and their romantic partners (38.8%) exhibit significant psychological distress^{1,2,3}
- Mindfulness-based interventions including Loving Kindness and Gratitude exercises are effective in reducing emotional distress at the level of the couple
- However, specific mechanisms of treatment remain unknown
- Positive language use might be one mechanism driving efficacy

Purpose

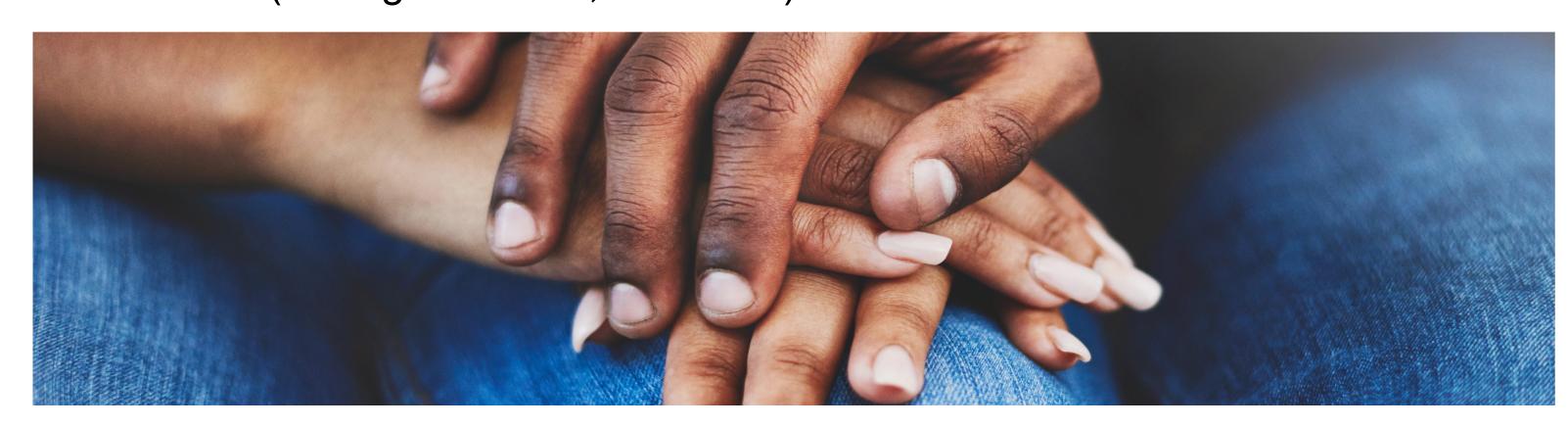
 Develop a positive language coding system to test potential mechanisms of treatment efficacy

Participants

- Patients diagnosed with Stage IV Non-Small Cell Lung Cancer (NSCLC) and their romantic partner (cohabitating >6 mo)
- Participants were ≥18 years old and able to read and speak English

Methods

- Couples participated in a 4 session "Heart 2 Heart" psychosocial mindfulness-based intervention
- Participants were not instructed to use language with any specific valence
- Audio was recorded from each session and professional transcribed
- Patient and caregiver language was extracted following two mindfulness exercises (Loving Kindness, Gratitude)



Categories of Positive Language

- **1. Use**: each phrase was coded in one of the three categories of use: self, the couple, others, and the world
- 2. Orientation: temporal context was coded as past, present or future
- **3. Intensity**: intensity of language was coded as either high (e.g. "absolutely thrilled"), moderate (e.g. "very grateful"), or low (e.g. "pleasant")
- **4. Valence**: language was coded as positive or resolution of negative (e.g. "less stressed)
- **5. Content**: if applicable, language was classified into any categories: Interpersonal (connected), Gratitude (thankful), Competence (accomplishment))
- 6. Shared Positive Language: if a patient and their spouse both use shared positive language or built upon each other's ideas, this category was coded

Positive Language Examples

Post Gratitude Meditation
"No, other than, like I said, bringing the attention to your different senses and the awareness—it makes you more aware of your surroundings. Blessings—like I said, the blessings you have for having that sense because there's so many people who don't have that." – Patient

Post Loving Kindness Mediation
"I'm probably <u>open enough</u> to <u>compassion</u>—it has been <u>worthwhile</u>—well, has been a <u>benefit</u> from the exercise." – Caregiver

Acknowledgements

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Positive Language Coding System

3. Raters met for 3 consensus group meetings to revise manual. Inner rater reliability was assessed to ensure consistent coding.

- 1. Positive language coding manual was developed to categorize each instance of positive language across 6 categories.
- 2. Extracted language was separately coded by four raters in batches.

References 1. Carmack Taylor CL, et al. Lung cancer patients and their spouses: Psychological and relationship functioning within 1 month of treatment initiation. Annals of Behavioral Medicine. 2008; 36(2):129–140. [PubMed: 18797978] 2. Kim Y, et al. Levels of depressive symptoms in spouses of people with lung cancer: Effects of personality, Social Support, and caregiving burden. Psychosomatics. 2005; 46:123–130. [PubMed: 15774950] 3. Steinberg T, et al. Prevalence of emotional distress in newly diagnosed lung cancer patients. Support Care Cancer. 2009