Diabetes Self-Care Activities Mediate the Relationship Between Psychological Factors and Glycemic Control

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Research Questions

• To what extent are diabetic patients’ background and psychological attributes related to diabetes self-care behaviors?

• To what extent are diabetic patients’ background and psychological attributes related to diabetes control?

• Is there a relationship between diabetes self-care behavior and diabetes control?

• If yes, is the relationship between patients’ psychological attributes and diabetes control mediated by diabetes self-care behaviors?
Figure 1. Theoretical Model
The SHADE Study

• Stress, Health, and the Diabetes Experience
• Funded by NIH/NCCAM
• Syracuse (Upstate); Penn State; & Vanderbilt
• PI: Joshua Smyth
• Purpose: test effects of expressive writing on diabetes outcomes
• Data are from the baseline assessment
Participants

- All Ss (N = 184) had T2DM
- 65% Female
- 81% White
- Mean age: 55.4 ± 10 years
- Mean education: 14.3 ± 2.6 years
- Median income: $40K - $60K
- Mean BMI: 37.3 ± 8
- Mean HbA1c: 9.1 ± 1.7
Summary of Diabetes Self-Care Activities

• Diet (general and specific)
• Exercise
• Blood glucose testing
• Foot care
• Medication adherence
Psychosocial Attributes Assessed

“Positive”
• General Self-Efficacy
  – PC Scale
• Dispositional Optimism
  – LOT
• Life Satisfaction
  – SWLS
• Positive Affect
  – PANAS - PA

“Negative”
• Diabetes Distress
  – P.A.I.D.
• Depressive Symptoms
  – CES-D
• Impact of Events
  – IES
• Negative Affect
  – PANAS - NA
## Structure Matrix

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## Bi-variate Correlations

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Figure 2: Results for Positive Psychological Factors
Figure 3: Results for Negative Psychological Factors

Negative Psychological Factors → Diabetes Self Care Behaviors (−0.16*)
Diabetes Self Care Behaviors → Glycemic Control (HbA1c) (−0.23**)
Conclusions

• Glycemic control is a function of diabetes self-care behaviors and psychological factors.
• Diabetes self-care behaviors are a function of psychological attributes.
• Positive psychological attributes are more strongly associated with self-care behavior and glycemic control than are negative psychological attributes.
• Furthermore, the effect of the psychological attributes on glycemic control is mediated by the diabetes self-care behaviors, but only after controlling for age, education, and income.