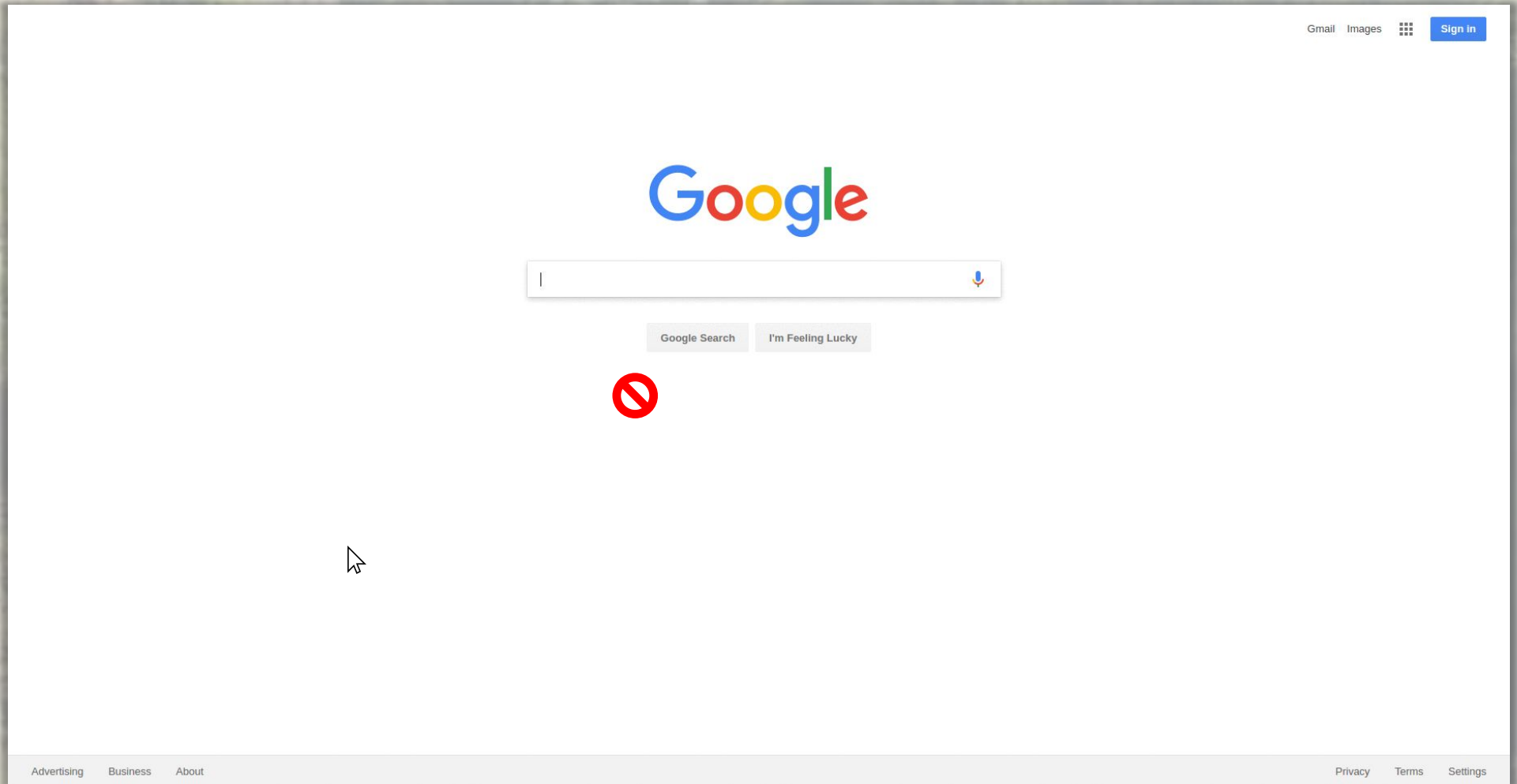# Predictive Validity of Awareness, Courage, and Responsiveness (ACR) in a General Psychiatric Sample and Non-psychiatric Dyads

Adam M. Kuczynski, M.S.

Jonathan W. Kanter, Ph.D.

CENTER FOR THE SCIENCE OF SOCIAL CONNECTION
UNIVERSITY of WASHINGTON

ACBS
ASSOCIATION FOR
CONTEXTUAL BEHAVIORAL SCIENCE

What is FAP?

What is FAP?

Therapist helps client through the discriminative, reinforcing, and eliciting functions of what the therapist does

These stimulus functions will have their strongest effects on client behavior occurring during the session

A review of FAP research indicates that issues related to intimacy are the most common treatment targets (Maitland et al., 2017)

Clinically Relevant Behavior (CRB)

Clinically Relevant Behavior (CRB)

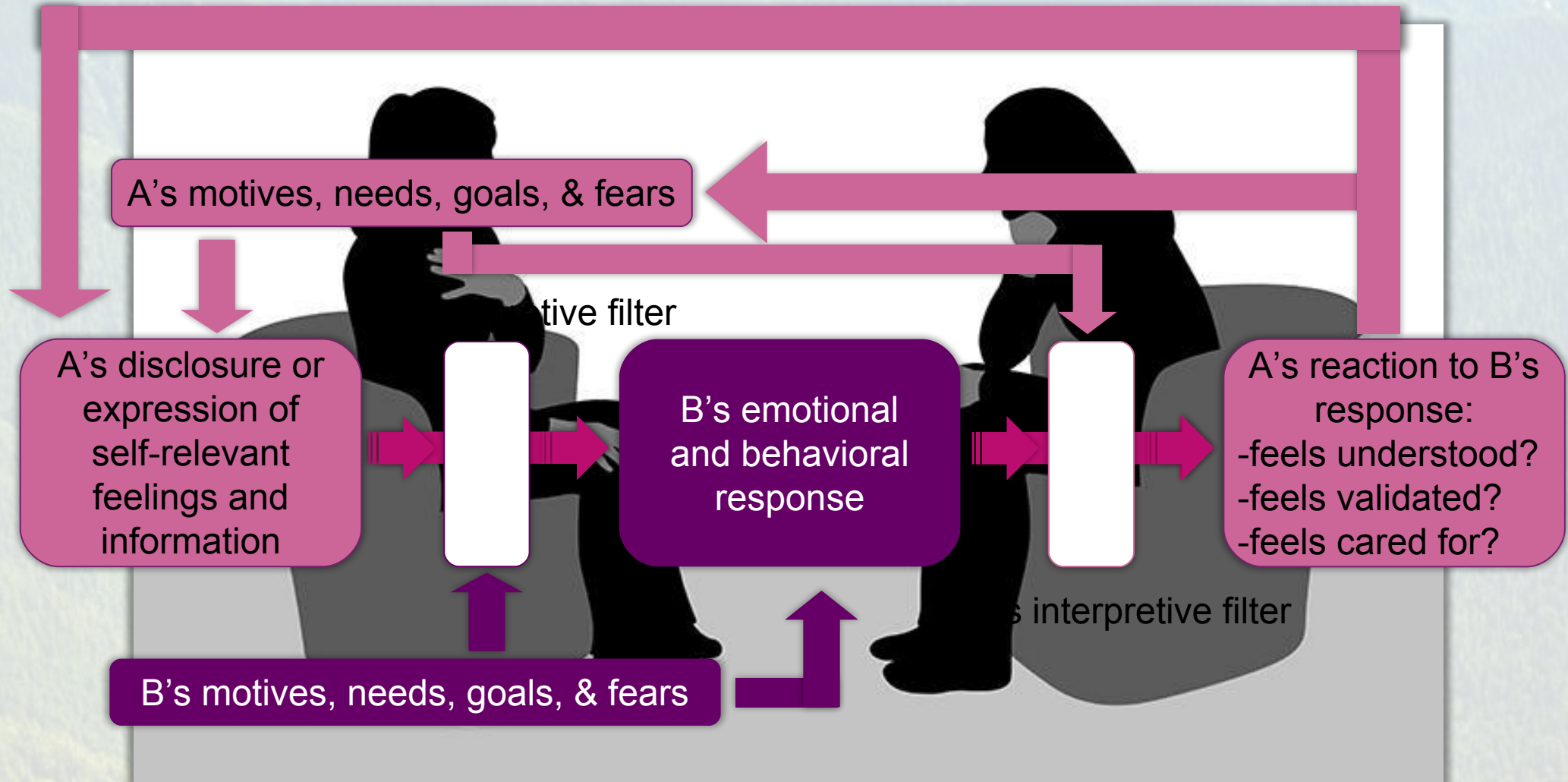CRB is defined *functionally*

- Client cries while telling therapist about her difficult week
- Client tolerates therapist pushing her hard in-session
- Client asks therapist to reschedule the session assertively

or

A model of Intimacy

A's motives, needs, goals, & fears

...tive filter

A's disclosure or expression of self-relevant feelings and information

B's emotional and behavioral response

A's reaction to B's response:
-feels understood?
-feels validated?
-feels cared for?
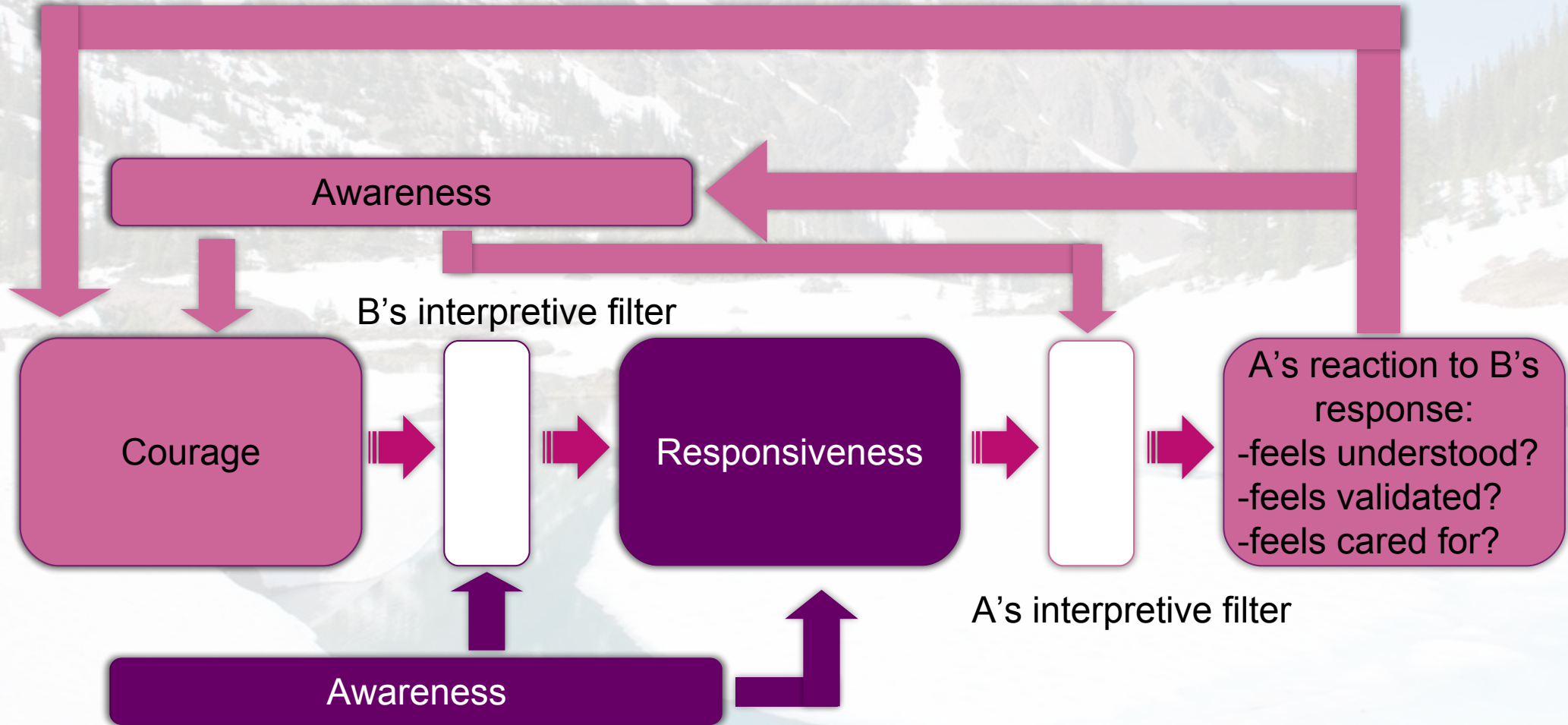
...s interpretive filter

B's motives, needs, goals, & fears

Awareness, Courage, and Responsiveness (ACR)

Method: Samples & Procedure

N = 1,897 for initial scale construction and validation

N = 70 for validation with sample of dyads

N = 50 for validation with clinical sample

Method: Data Analyses

- Item reduction with sequential CFAs
  - On all samples but Curtin University
  - Estimated with full information maximum likelihood

- Examine global and local fit

- Cross validation (measurement invariance) with Curtin University sample

- Examination of convergent validity measures (correlations)
  - Missing data imputed using amelia

Results: Factor Structure

I ask questions of others to understand exactly what is happening for them in that moment.

I am aware of what makes me feel vulnerable.

I am willing to be vulnerable in relationships.

I let other people know that I understand how they feel when they are struggling.

Results: Model Fit

$X^2(246, N = 1457) = 863.393$

CFI = .94   TLI = .94 $X^2/df = 3.48$

RMSEA = .048 CI $_{.90}$ = .044, .051

Results: Convergent Validity

Construct	ACRS Component				
	ACRS Total	Other-awareness	Self-awareness	Courage	Responsiveness
Social connectedness[A]	**.33 [.29, .38]**	.29 [.24, .34]	.20 [.15, .25]	.27 [.22, .32]	.34 [.30, .39]
	.54 [.36, .72]	*.42 [.17, .68]*	*.40 [.19, .61]*	*.37 [.18, .56]*	*.55 [.38, .72]*
Loneliness[B]	**-.41 [-.46, -.37]**	-.36 [-.41, -.32]	-.25 [-.30, -.20]	-.37 [-.41, -.32]	-.39 [-.43, -.35]
Emotional intelligence[C]	**.74 [.72, .77]**	.65 [.62, .68]	.58 [.55, .62]	.58 [.54, .61]	.67 [.64, .70]
	.68 [.50, .86]	*.55 [.36, .74]*	*.56 [.40, .72]*	*.39 [.19, .59]*	*.69 [.49, .90]*
Social support[D]	**.55 [.51, .58]**	.46 [.42, .50]	.37 [.33, .42]	.43 [.38, .47]	.54 [.51, .58]
Intimacy-related behaviors[E]	**.39 [.35, .43]**	.33 [.28, .37]	.28 [.23, .32]	.28 [.23, .33]	.40 [.36, .44]
	.45 [.26, .64]	*.21 [.01, .42]*	*.30 [.12, .49]*	*.42 [.24, .59]*	*.48 [.31, .65]*
Intimacy[F]	**.46 [.39, .52]**	.38 [.31, .45]	.31 [.24, .38]	.38 [.31, .45]	.48 [.42, .54]
Perspective taking[G]	.46 [.41, .50]	**.42 [.38, .46]**	.36 [.31, .40]	.36 [.31, .40]	.39 [.35, .43]
FFMQ Observing[H]	.39 [.34, .43]	.34 [.29, .38]	**.35 [.31, .40]**	.31 [.26, .36]	.31 [.27, .36]
General Disclosiveness[I]	*.30 [.08, .52]*	*.19 [-.03, .42]*	*.27 [.09, .44]*	***.33 [.13, .53]***	*.16 [-.10, .43]*
Fear-of-intimacy[J]	-.51 [-.55, -.47]	-.40 [-.44, -.36]	-.31 [-.35, -.26]	**-.49 [-.53, -.45]**	-.49 [-.53, -.45]
	-.37 [-.57, -.18]	*-.20 [-.40, .00]*	*-.25 [-.41, -.10]*	***-.35 [-.55, -.14]***	*-.37 [-.59, -.16]*
Empathic concern[K]	.52 [.49, .56]	.44 [.39, .48]	.38 [.34, .43]	.33 [.28, .38]	**.56 [.53, .60]**

Validity with Sample of Dyads: Method

- *N* = 70 participants (35 dyads)
- Participants recruited to participate in intervention to improve their relationships
  - Partner of their own choosing

18-65 years (*M* = 31.22, *SD* = 12.26)

Majority white (63%)   Female (54%)

Single/Never Married (64%)

Majority of dyads were in a romantic relationship (66%)

Validity with Sample of Dyads: Method

- Subjects Randomized to ACL or Dyadic Behavioral Activation
  - **ACL:** Four one-hour interventions (1x/week) with study partner working on exercises to increase feelings of connection
  - **Dyadic BA:** Scheduled four one-hour time blocks (1x/week) to spend with their study partner
    - Used activity scheduling exercise from BA for depression

Baseline Assessment	Week 1	Week 2	Week 3	Week 4	Post-Tx Assessment				Follow-up Assessment

Results

- We computed an intraclass correlation coefficient for the total and subscale scores at baseline
  - Tells us how much variance in the score is shared within dyads

$$ICC_{Total} = 27\%$$

$$ICC_{OA} = 12\%$$

$$ICC_{SA} = 36\%$$

$$ICC_{C} = 6\%$$

$$ICC_{R} = 22\%$$

Results

Construct	ACRS Component				
	ACRS Total	Other-awareness	Self-awareness	Courage	Responsiveness
Social connectedness[A]	**.33 [.29, .38]**	.29 [.24, .34]	.20 [.15, .25]	.27 [.22, .32]	.34 [.30, .39]
	.54 [.36, .72]	*.42 [.17, .68]*	*.40 [.19, .61]*	*.37 [.18, .56]*	*.55 [.38, .72]*
Loneliness[B]	**-.41 [-.46, -.37]**	-.36 [-.41, -.32]	-.25 [-.30, -.20]	-.37 [-.41, -.32]	-.39 [-.43, -.35]
Emotional intelligence[C]	**.74 [.72, .77]**	.65 [.62, .68]	.58 [.55, .62]	.58 [.54, .61]	.67 [.64, .70]
	.68 [.50, .86]	*.55 [.36, .74]*	*.56 [.40, .72]*	*.39 [.19, .59]*	*.69 [.49, .90]*
Social support[D]	**.55 [.51, .58]**	.46 [.42, .50]	.37 [.33, .42]	.43 [.38, .47]	.54 [.51, .58]
Intimacy-related behaviors[E]	**.39 [.35, .43]**	.33 [.28, .37]	.28 [.23, .32]	.28 [.23, .33]	.40 [.36, .44]
	.45 [.26, .64]	*.21 [.01, .42]*	*.30 [.12, .49]*	*.42 [.24, .59]*	*.48 [.31, .65]*
Intimacy[F]	**.46 [.39, .52]**	.38 [.31, .45]	.31 [.24, .38]	.38 [.31, .45]	.48 [.42, .54]
Perspective taking[G]	.46 [.41, .50]	**.42 [.38, .46]**	.36 [.31, .40]	.36 [.31, .40]	.39 [.35, .43]
FFMQ Observing[H]	.39 [.34, .43]	.34 [.29, .38]	**.35 [.31, .40]**	.31 [.26, .36]	.31 [.27, .36]
General Disclosiveness[I]	*.30 [.08, .52]*	*.19 [-.03, .42]*	*.27 [.09, .44]*	*.33 [.13, .53]*	*.16 [-.10, .43]*
Fear-of-intimacy[J]	-.51 [-.55, -.47]	-.40 [-.44, -.36]	-.31 [-.35, -.26]	**-.49 [-.53, -.45]**	-.49 [-.53, -.45]
	-.37 [-.57, -.18]	*-.20 [-.40, .00]*	*-.25 [-.41, -.10]*	*-.35 [-.55, -.14]*	*-.37 [-.59, -.16]*
Empathic concern[K]	.52 [.49, .56]	.44 [.39, .48]	.38 [.34, .43]	.33 [.28, .38]	**.56 [.53, .60]**

Results

No condition × time interaction

Main effect at follow-up

Validity with a Clinical Sample: Method

- *N* = 50
- Participants recruited by their individual therapists (flyer in waiting room)
- Subjects from: North America (31), South America (7), Europe (10), and Australia (2)

Stress: 44%	Depression: 60%	Substance Abuse: 2%
Interpersonal Problems: 48%	Anxiety: 60%	Other: 26%
Work Problems: 28%	Total Sessions: 4 – 200 (*M* = 54, *SD* = 52)	

Validity with a Clinical Sample: Results

- We used generalized estimating equations (GEE) to predict (a) quality-of-life and (b) general psychiatric distress

- ACRS Total was a strong predictor of psychiatric distress
  - b = -4.53, CI $_{.95}$ = (-6.63, -2.43), SE = 1.07, p < .001

- ACRS Total was a strong predictor of quality-of-life
  - b = 9.25, CI $_{.95}$ = (4.23, 14.30), SE = 2.56, p < .001

- However, when loneliness is added into the model for both of these outcomes, ACRS total becomes non-significant

Discussion

- The scale has relatively strong psychometric properties

- We expected to find similarity within dyads, and we found it

- Convergent validity looks good

- Does loneliness mediate the association between ACRS total scores and quality-of-life, psychiatric distress?

Thank you

- Research participants

- Jonathan Kanter, Ph.D. (advisor)
- Brian P. Flaherty, Ph.D.
- Robert J. Kohlenberg, Ph.D.
- Mavis Tsai, Ph.D.

Lab mates:
- Katherine Manbeck
- Mariah Corey

- **Collaborators:**
  - Sonia Singh
  - Judy Mier-Chairez
  - Tara Stowe
  - Eric Lee
- **Item Developers:**
  - Jonathan W. Kanter, Ph.D.
  - Chad Wetterneck, Ph.D.
  - Mavis Tsai, Ph.D.
  - Gareth Holman, Ph.D.
  - Robert J. Kohlenberg, Ph.D.
  - Glenn M. Callaghan, Ph.D.