

Longitudinal
Associations
between
Psychological
Flexibility and
Suicidal Ideation

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Acknowledgments



A Global Burden (WHO, 2017)

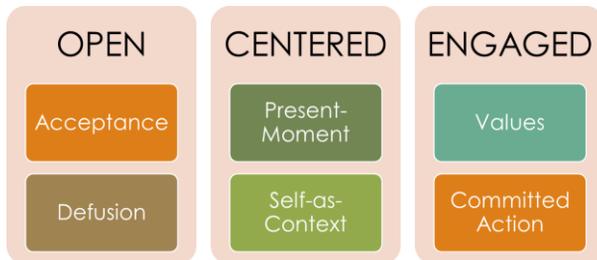
- Approximately 800,000 people worldwide die each year by suicide (WHO, 2017)
 - Indicators suggest approximately 25x as many attempts (Goldsmith et al., 2002)
- 17th leading cause of worldwide death in 2015
- 2nd leading cause of death among individuals aged 15-29
- Approximately half of all people who die by suicide have never seen a mental health practitioner



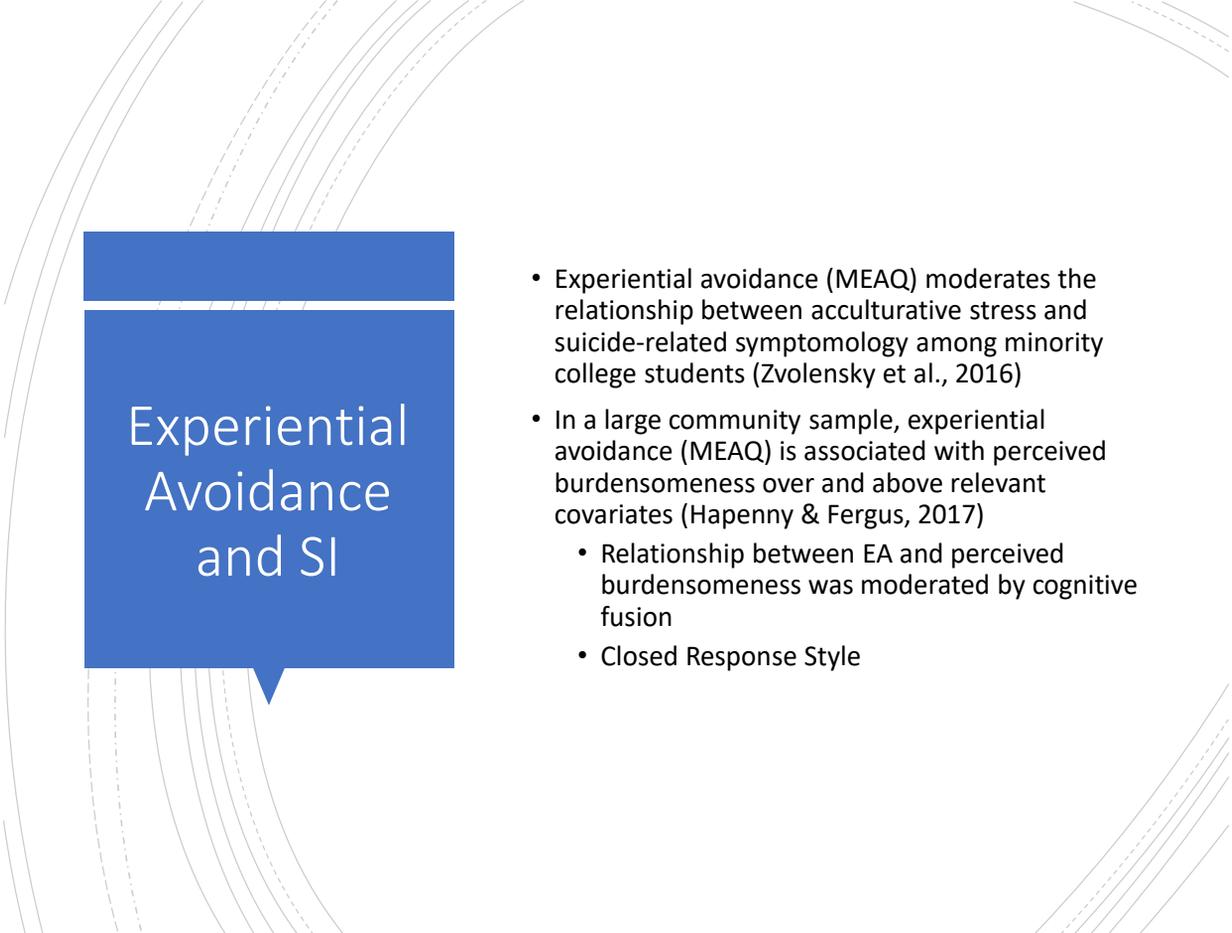
Suicidal Ideation

- Suicidal ideation is an immediate precursor to suicide attempts
- Cross-national lifetime prevalence of suicidal ideation (SI) is 9.2% (Nock et al., 2008)
 - Occurs transdiagnostically, as well as among individuals without mental health diagnoses (Chiles & Strosahl, 2005; Nock et al., 2008)
- It is important to identify transdiagnostic processes that contribute to the onset and maintenance of SI

Psychological Flexibility and SI



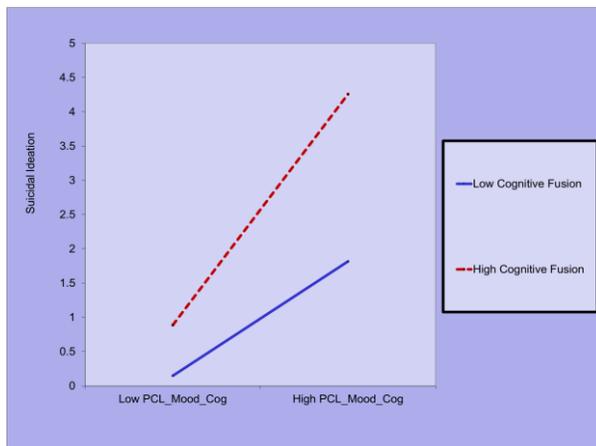
- The ability to contact the present moment fully, as a conscious human being, and to change or persist in behavior that is in line with identified values (Hayes et al., 1999; 2012)
 - Suicide may be the most extreme form of experiential avoidance (Chiles & Strosahl, 2005)
 - Processes that disrupt contact with the present-moment are associated with suicidal behaviors (Beck et al., 1985; Miranda & Nolen-Hoeksema, 2007)
- The Interpersonal Theory of Suicide (Van Orden et al., 2010) suggests suicidality is precipitated by a lack of meaning and connectedness in interpersonal domains



Experiential Avoidance and SI

- Experiential avoidance (MEAQ) moderates the relationship between acculturative stress and suicide-related symptomology among minority college students (Zvolensky et al., 2016)
- In a large community sample, experiential avoidance (MEAQ) is associated with perceived burdensomeness over and above relevant covariates (Hapenny & Fergus, 2017)
 - Relationship between EA and perceived burdensomeness was moderated by cognitive fusion
 - Closed Response Style

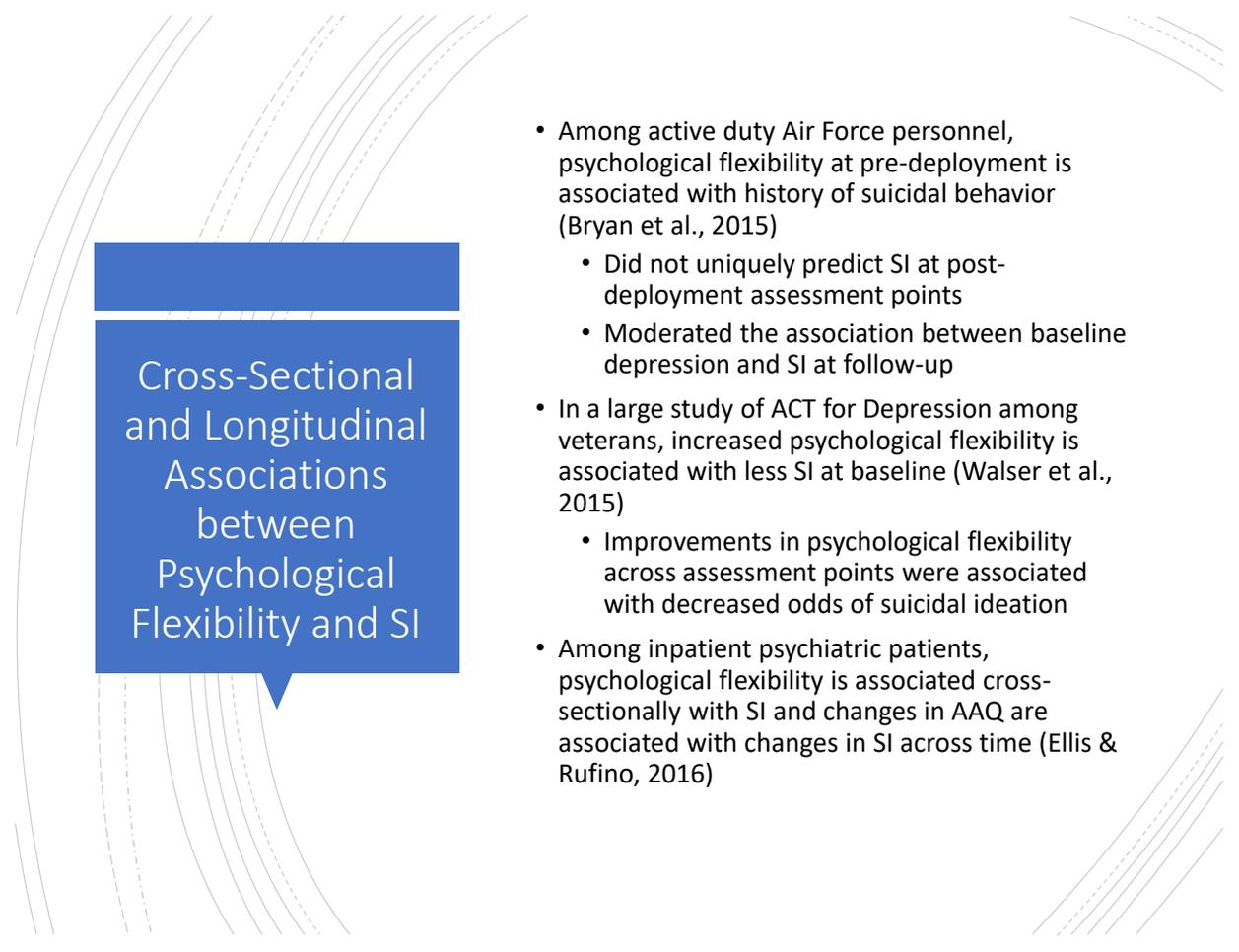
Cognitive Fusion & SI (Donahue & Humphreys, June 2017)



- Negative alterations in mood and cognition cluster of PTS symptoms are most strongly associated with suicidal ideation in highly fused contexts.

Valued Living and SI

- Valued living is cross-sectionally associated with suicidal ideation among psychiatric inpatients (Roush et al., 2018)
- Among treatment-seeking veterans, increased value success is associated with decreased odds of reporting SI (Bahraini et al., 2013)



Cross-Sectional and Longitudinal Associations between Psychological Flexibility and SI

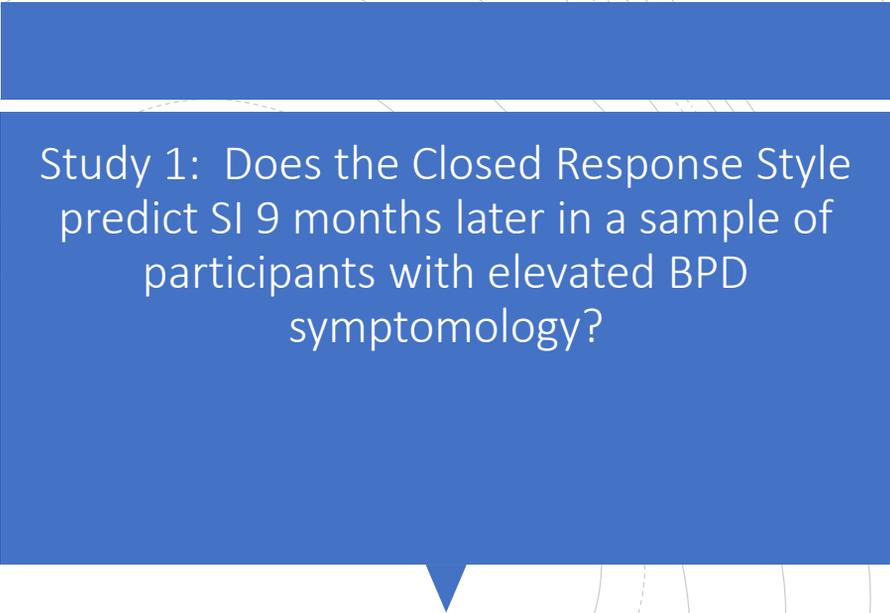
- Among active duty Air Force personnel, psychological flexibility at pre-deployment is associated with history of suicidal behavior (Bryan et al., 2015)
 - Did not uniquely predict SI at post-deployment assessment points
 - Moderated the association between baseline depression and SI at follow-up
- In a large study of ACT for Depression among veterans, increased psychological flexibility is associated with less SI at baseline (Walser et al., 2015)
 - Improvements in psychological flexibility across assessment points were associated with decreased odds of suicidal ideation
- Among inpatient psychiatric patients, psychological flexibility is associated cross-sectionally with SI and changes in AAQ are associated with changes in SI across time (Ellis & Rufino, 2016)

Gaps in the Literature

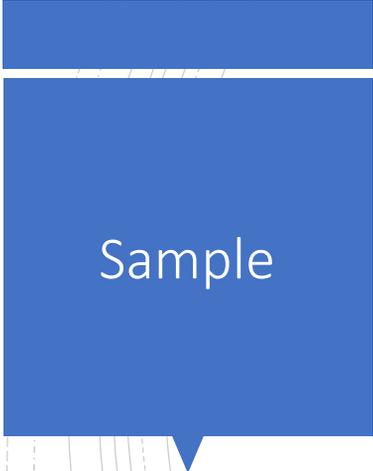
- Most research studies examining the association between specific processes of psychological flexibility and SI are cross-sectional in nature
- The majority of longitudinal research on the association between psychological flexibility and suicidality uses the AAQ
 - Recent psychometric research has raised questions about the discriminant validity of the AAQ, particularly with respect to neuroticism (Wolgast, 2014)
- Studies using longitudinal designs and alternate measures of psychological flexibility are needed

Research Aims

- The present studies sought to examine the role of psychological flexibility in the prediction of SI over and above other known risk factors in samples of participants at increased risk for SI



Study 1: Does the Closed Response Style predict SI 9 months later in a sample of participants with elevated BPD symptomology?



Sample

- Participants were recruited using Amazon's Mechanical Turk and screened to assess candidacy for a larger study
 - Inclusion criteria:
 - Employed (full or part-time)
 - Score of 6 or higher on the McLean Screening Instrument for BPD (MSI-BPD; Zanarini et al., 2003)
 - 700 individuals screened and 124 met inclusion criteria
 - 107 enrolled in study
- 74 participants completed BMEAQ and CFQ in Wave 2 (+3 mths)
 - 63 of these participants completed SI assessment 9 months later
- Age range: 18-57 ($M = 31.19$, $SD = 7.61$)
- 53% women; 42% men; 3% transgender; 1% non-binary
- 74% White, 8% Asian/Pacific Islander, 5% African-American, 5% Multiracial, 5% Hispanic, 1% Native American



Materials

- Measures
 - Personality Inventory for DSM-5 (PID-5; Krueger et al., 2013)
 - Depressivity Subscale
 - Suicidal Ideation items
 - Ruminative Responses Scale (RRS; Treynor et al., 2003)
 - *When down or depressed, do you... Think about how alone you feel*
 - Cognitive Fusion Questionnaire (CFQ; Gillanders et al., 2014)
 - *I tend to get very entangled with my thoughts*
 - Brief Experiential Avoidance Questionnaire (BEAQ; Gamez, et al., 2014)
 - *I work hard to keep out upsetting feelings*
 - Depression Anxiety Stress Scale – 23 (Lovibond & Lovibond, 1995)
 - Two Suicide items were outcome of interest
 - *I thought about death or suicide*
 - *I wanted to kill myself*

Results

Measure	1	2	3	4	5
1. Closed Response Style	-				
2. RRS_Baseline	.66**	-			
3. Depressivity_Baseline	.68**	.61**	-		
4. Suicidal Ideation_Baseline	.29*	.18	.53**	-	
5. Suicidal Ideation_Follow-up	.39**	.18	.38**	.33**	-
* $p < .05$					
** $p < .01$					

Table 2

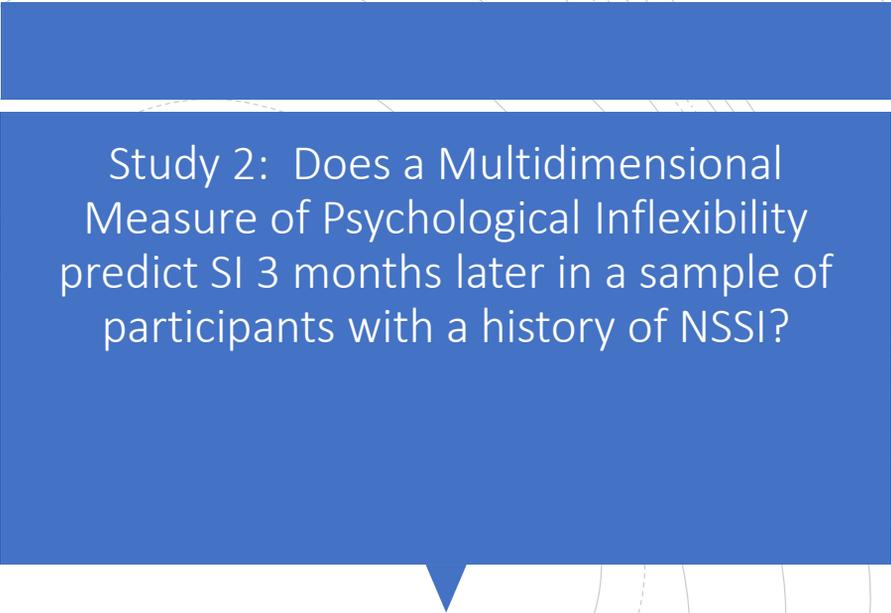
Hierarchical Linear Regression Results Demonstrating Incremental validity of the Closed Response Style in the Prediction of Suicidal Ideation 9 Months Later

	Suicidal Ideation - Follow-up		
	β	t	p
Step 1			
Age	-.11	-0.91	ns
Depressivity_Baseline	.26	1.46	ns
RRS_Baseline	.01	0.06	ns
SI_Baseline	.17	1.19	ns
Step 2			
Age	-.17	-1.43	ns
Depressivity_Baseline	.09	0.45	ns
RRS_Baseline	-.11	-0.69	ns
SI_Baseline	.18	1.24	ns
Closed RS	.36	2.22	.03

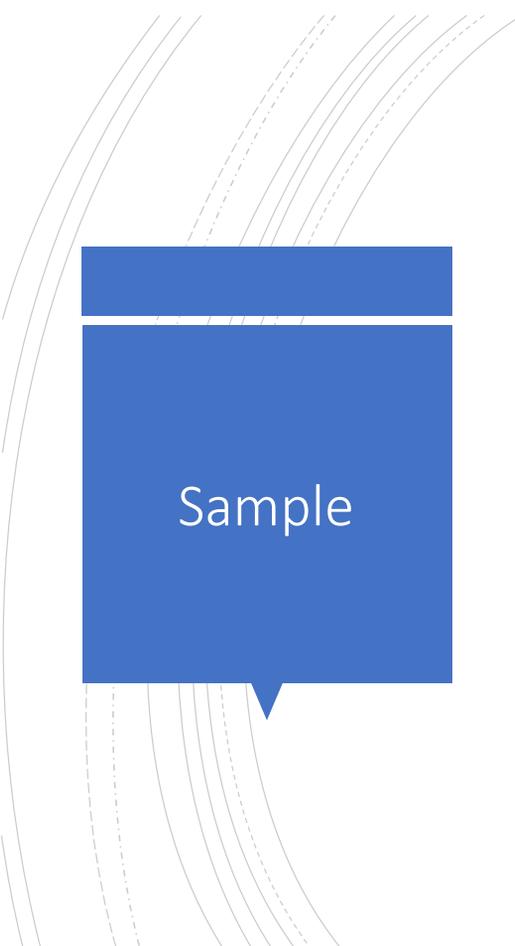
Total R² .24

Note. ΔR^2 associated with addition of Closed Response Style At Step 2 was .07

Results



Study 2: Does a Multidimensional Measure of Psychological Inflexibility predict SI 3 months later in a sample of participants with a history of NSSI?



Sample

- Participants were recruited using Amazon's Mechanical Turk and screened to assess candidacy
 - Inclusion criteria:
 - At least two prior instances of NSSI
 - 500 individuals screened and 154 met inclusion criteria
 - 111 enrolled in study
 - 88 completed follow-up assessments
- Age range: 19-64 ($M = 34.83$, $SD = 9.64$)
- 68% women; 31% men; 2% non-binary
- 82% White, 8% African-American, 5 % Hispanic, 3% Multiracial, 2% Asian/Pacific Islander
- Median number of prior NSSI behaviors = 20



Materials

- Measures
 - Comprehensive Assessment of ACT Processes (CompACT; Francis et al., 2016)
 - 23-item self-report measure of psychological flexibility comprised of three factor analytically derived subscales
 - Openness to Experience – *I work hard to keep out upsetting feelings*
 - Behavioral Awareness – *I find it difficult to stay focused on what's happening in the present*
 - Valued Action – *I make choices based on what is important to me, even if it is stressful*
 - Depression Anxiety Stress Scale – 23 (Lovibond & Lovibond, 1995)
 - Depression Subscale
 - Two Suicide items
 - *I thought about death or suicide*
 - *I wanted to kill myself*

Table 1

Bivariate Correlations between Psychological Flexibility, Depression, and Suicidal Ideation 3 Months Later

	1	2	3	4	5	6	7
1. CompACT-Total	-						
2. CompACT-OE	.83**	-					
3. CompACT-BA	.76**	.46**	-				
4. CompACT-VA	.79**	.39**	.54**	-			
5. DASS-Depression_Baseline	.64**	.47**	.45**	.61**	-		
6. Suicidal Ideation_Baseline	.34**	.17	.24*	.40**	.63**	-	
7. Suicidal Ideation_Follow-up	.42**	.25*	.38**	.40**	.63**	.70**	-

* $p < .05$

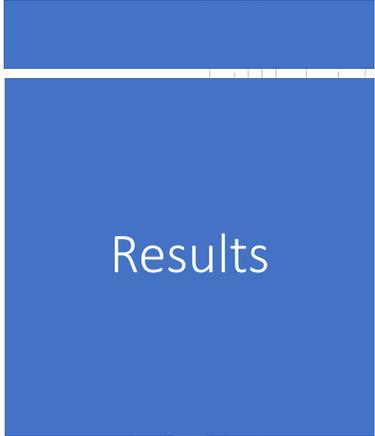
** $p < .01$

Results

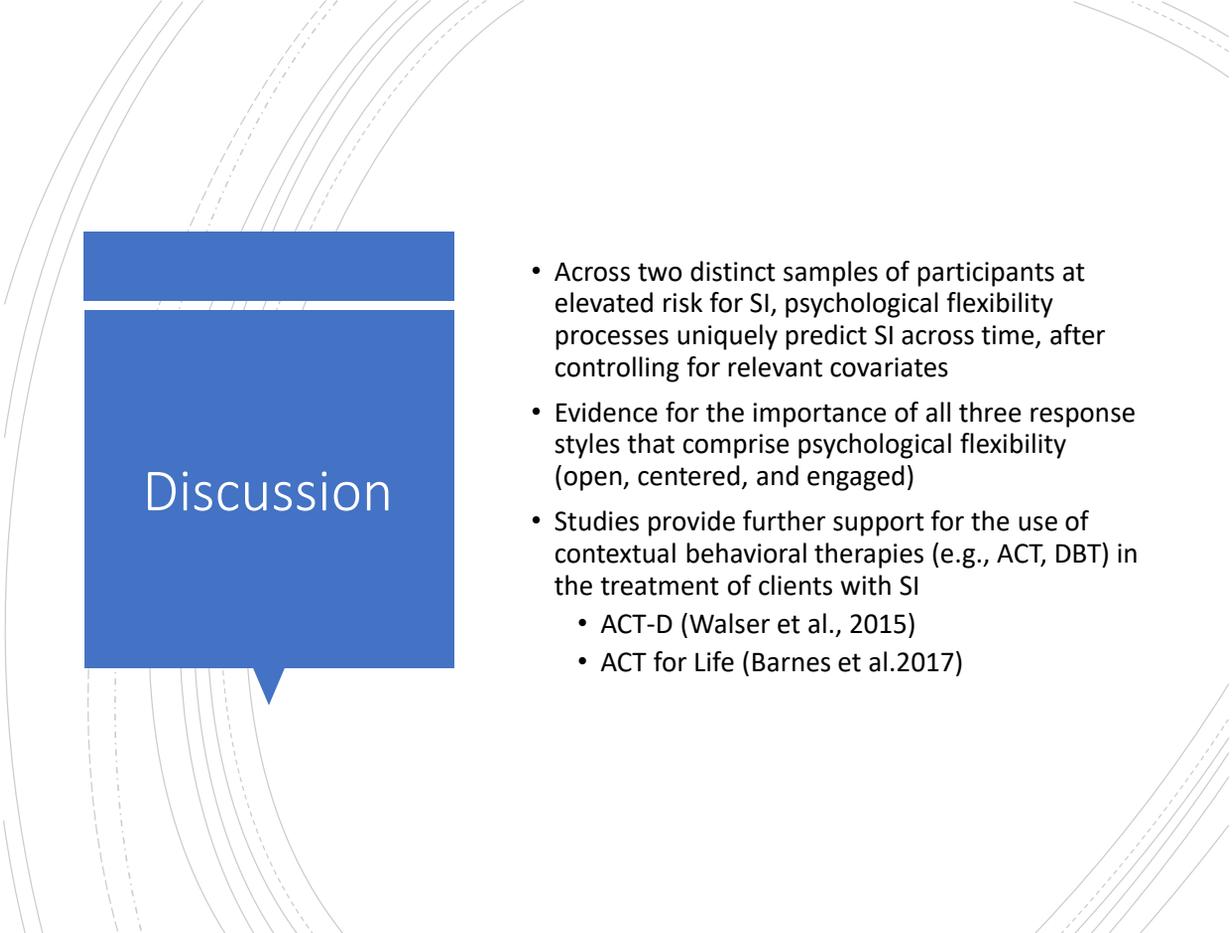
*Hierarchical Linear Regression Results Examining
Incremental validity of Psychological Inflexibility in
the Prediction of Suicidal Ideation 3 Months Later*

	Suicidal Ideation - Follow-up		
	β	t	p
Step 1			
Age	-.01	-0.19	<i>ns</i>
SI_Baseline	.70	8.94	< .001
Step 2			
Age	.02	0.21	<i>ns</i>
SI_Baseline	.64	7.74	< .001
CompACT_Total	.18	2.18	< .05
Step 3			
Age	-.01	-0.09	<i>ns</i>
SI_Baseline	.52	4.97	< .001
CompACT_Total	.09	0.88	<i>ns</i>
DASS-Depression_Baseline	.22	1.76	.082
Total R ²	.54		

Note. ΔR^2 associated with addition of CompACT-Total in Step 2 was .03.



Results

A decorative background consisting of several sets of curved lines in shades of gray, some solid and some dashed, sweeping across the page from the left and right sides towards the center.

Discussion

- Across two distinct samples of participants at elevated risk for SI, psychological flexibility processes uniquely predict SI across time, after controlling for relevant covariates
- Evidence for the importance of all three response styles that comprise psychological flexibility (open, centered, and engaged)
- Studies provide further support for the use of contextual behavioral therapies (e.g., ACT, DBT) in the treatment of clients with SI
 - ACT-D (Walser et al., 2015)
 - ACT for Life (Barnes et al.2017)

Limitations and future directions

- All constructs were assessed via self-report
 - Need for additional research using implicit measures (e.g., IRAP) and more objective indicators
- Outcome measure was a brief 2-item measure of suicidal ideation
- Content coverage of CompACT does not include Self-as-Context
- Only a small number of those with suicidal ideation will make an attempt, and many fewer will die by suicide (WHO, 2017)
 - Additional research examining the role of psychological flexibility in suicide attempts is needed

Thank You! Merci!