

Understanding Suicide to Prevent Suicide

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Agenda

- I. Why we must get the science right
- II. The Ideation-to-Action Framework
- III. The Three-Step Theory of Suicide



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- I. **Why we must get the science right**
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Suicide is Common

Top 10 leading cause of death worldwide

#9 in North America

#2 in teens and young adults

- ahead of heart attacks, cancer, car accidents, and homicide



Survivors of Early-Life Attempts

Martin Luther King Jr.





Survivors of Early-Life Attempts

Billy Joel





Survivors of Early-Life Attempts

Santa Ono PhD





Survivors of Early-Life Attempts

- Nobel Prize Winners
- Top Scholars
- Renowned Artists and Musicians
- Olympic Gold Medalists, Celebrities, Philanthropists, our Friends, our Colleagues



Beyond Suicide Mortality

For every death, 20 attempts

For every attempter, 2.5 individuals with ideation

A large minority of people have felt suicidal



We Must Get the Science Right

Suicide rates not decreasing



We Must Get the Science Right

We have made mistakes:

1. All prediction methods perform poorly (Carter et al., 2017; Chan et al., 2016 Franklin et al., 2017; Large et al., 2016; Wang et al., 2016)
2. Early group treatments were harmful
3. Some high school memorials may be harmful
4. Myths
 - Cowardly
 - For Attention
 - Impulsivity



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A critical and specific knowledge gap



Of-Cited Risk Factors for Suicide

- Psychiatric Disorders
 - Major Depression
 - Anxiety Disorders
 - Substance Disorders
 - Multiple Diagnoses
- Hopelessness
- Impulsivity/Aggression



What Do These Predictors Predict?

<u>Clinical Disorder</u>	<u>Non-Suicidal vs. Suicide Attempter</u>
Major Depression	11.0
Any Mood Disorder	12.9
Any Anxiety Disorder	3.2
Any Substance Disorder	5.8
Any Clinical Disorder	6.7
3+ Clinical Disorders	19.7

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)



What Do These Predictors Predict?

<u>Clinical Disorder</u>	<u>Non-Suicidal vs. Suicide Ideator</u>
Major Depression	9.6
Any Mood Disorder	10.7
Any Anxiety Disorder	2.9
Any Substance Disorder	3.9
Any Clinical Disorder	5.7
3+ Clinical Disorders	14.3

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)



What Do These Predictors Predict?

<u>Clinical Disorder</u>	<u>Suicide Ideator vs. Attempter</u>
Major Depression	2.0
Any Mood Disorder	1.8
Any Anxiety Disorder	1.2
Any Substance Disorder	1.6
Any Clinical Disorder	1.0
3+ Clinical Disorders	1.1

Kessler et al. (1999) – Data from the National Comorbidity Survey (n=5,877, 795 ideators, 272 attempters)



What Do These Predictors Predict?

Kessler et al. (1999)

“all significant risk factors ... were more strongly related to ideation than to progression from ideation to a plan or an attempt” [p. 617].”

Replicated in WHO data (Nock et al., 2012; 2013)

Meta-Analytic Data

(May & Klonsky, 2016)



Variable

Ideator vs. Nonsuicidal

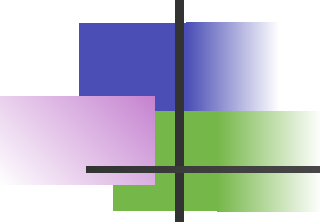
Depression Severity

Depressive
Disorders

Hopelessness

Meta-Analytic Data

(May & Klonsky, 2016)



<u>Variable</u>	<u>Ideator vs. Nonsuicidal</u>
Depression Severity	.90
Depressive Disorders	.85
Hopelessness	.55

Meta-Analytic Data

(May & Klonsky, 2016)



Variable

Ideator vs. Attempter

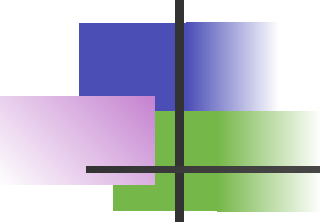
Depression Severity

Depressive
Disorders

Hopelessness

Meta-Analytic Data

(May & Klonsky, 2016)



<u>Variable</u>	<u>Ideator vs. Attempter</u>
Depression Severity	.23
Depressive Disorders	.24
Hopelessness	-.05



Impulsivity

(Klonsky & May, 2010)

Comparison

Cohen's d

Never Suicidal vs. Suicidal Ideator 0.58

Suicidal Ideator vs. Suicide Attempter 0.11

Klonsky & May (2010; *Suicide and Life-Threatening Behavior*)



What do our predictors tell us?

✓ Who develops suicidal ideation

✗ Who acts on suicidal thoughts

Klonsky & May (2014), *Suicide & Life-Threatening Behavior*

Klonsky et al. (2016), *Annual Review of Clinical Psychology*

May & Klonsky (2016), *Clinical Psychology: Science & Practice*



Take Home Message

There are separate explanations for:

a) Who develops suicidal ideation

vs.

b) Who transitions from ideation to attempts

“Ideation-to-Action” Framework

(Klonsky & May, 2014)



Historically, just a single explanation...

- Social Isolation (Durkheim)
- Psychache (Shneidman)
- Escape (Baumeister)
- Hopelessness (Beck; Abramson)



The Pioneering Exception

Thomas Joiner's Interpersonal Theory (2005)

Desire + Capability \square Suicide Attempt

Desire = Burdensomeness + Low Belongingness

Capability = Acquired Capability



Not Just a Specific Theory

A Framework for all
Suicide Knowledge and Prevention

“Ideation-to-Action” Framework



Field-Wide Implications

Research Design

Intervention/Prevention

Risk Assessment and Conceptualization



Old Way

Risk Factors for Suicide

Mental Disorders

Depression

Hopelessness

Impulsivity

Access to Lethal Means

Expertise in Lethal Means

Social Contagion

...

...



Ideation-to-Action Framework

Suicidal Ideation

Suicidal Actions



Ideation-to-Action Framework

Suicidal Ideation

Suicidal Actions

Mental Disorders

Depression

Hopelessness

Impulsivity

...

...

...

...



Ideation-to-Action Framework

Suicidal Ideation

Mental Disorders

Depression

Hopelessness

Impulsivity

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...

...

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Suicidal Actions

Acquired Capability

Access to Lethal Means

Expertise in Lethal Means

Social Contagion

...

...

...

...



Ideation-to-Action Framework

Suicidal Ideation

Mental Disorders

Depression

Hopelessness

Impulsivity

Non-Suicidal Self-Injury

...

...

...

Suicidal Actions

Acquired Capability

Access to Lethal Means

Expertise in Lethal Means

Social Contagion

Non-Suicidal Self-Injury

...

...

...



Ideation-to-Action Framework

Suicidal Ideation

Suicidal Actions

Mental Disorders

Acquired Capability

Depression

Access to Lethal Means

Hopelessness

Expertise in Lethal Means

Impulsivity

Social Contagion

Non-Suicidal Self-Injury

Non-Suicidal Self-Injury

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“Ideation to Action” Theories of Suicide

- Joiner’s Interpersonal Theory (2005)
- O’Connor’s Integrated Motivational-Volitional Model (2011)
- Three Step Theory (2015)



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Criteria for a Good Theory

- Positioned within the Ideation-to-Action Framework
- Consistent with basic behavioral and cognitive principles
- Consistent with known predictors
- Use predictors as clues to a cohesive explanation
- Testable and accurate



A Good Theory

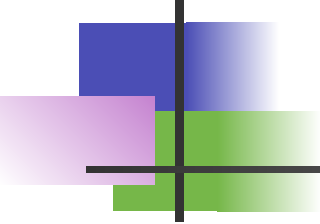
Must achieve a balance:

- Broad enough to account for tremendous individual variation
- Specific enough to be useful



A Good Theory

Must explain in practical terms why some people choose death



Three-Step Theory of Suicide (3ST)

Klonsky and May (2015; International Journal of Cognitive Therapy)
Klonsky, May, & Saffer (2016; Annual Review of Clinical Psychology)
Klonsky et al. (in press; Preventive Medicine)



Step 1: When does suicidal ideation develop?

When two necessary conditions combine:

1. **Pain** (Shneidman's psychache, Linehan's emotional misery)
2. **Hopelessness** (that things will get better) (Beck)

Not additive, the combination is what matters



Step 2: When does ideation becomes strong?

Ideation intensifies when **pain > connectedness**

(Durkheim; Joiner)

Connection can be to:

- people, role, interest, job, project, purpose, or sense of meaning

Is your connection to life greater than your pain?

OR

Does your pain overwhelm your connectedness?



Audrie

- 15 year-old girl
- Died by suicide September 2012

Final Facebook Post:

"I am in hell." (Pain)

"I can't do anything to fix it." (Hopelessness)

"The whole school knows ... I have a reputation I can never get rid of." (Disconnection)



Step 3: When does ideation lead to action?

Strong ideation progresses to action when there is the **capability** to make an attempt:

1. Acquired (Joiner's IPT)
2. Dispositional
3. Practical
 1. Access to lethal means
 2. Knowledge and comfort with lethal means

Does total capability make an attempt possible?

1) Is there pain and hopelessness?

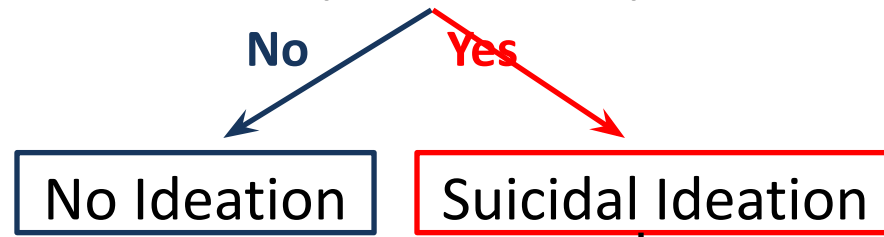
No

Yes

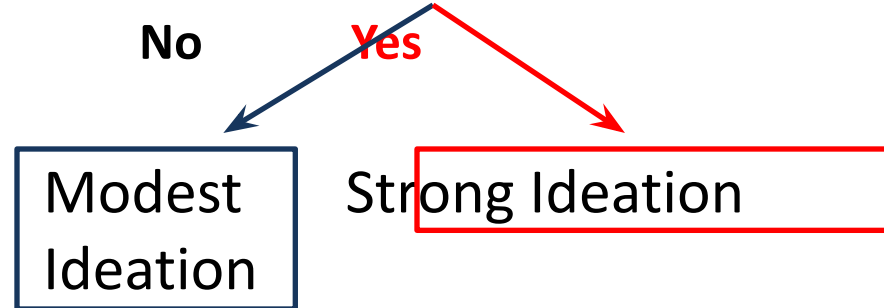
No Ideation

Suicidal Ideation

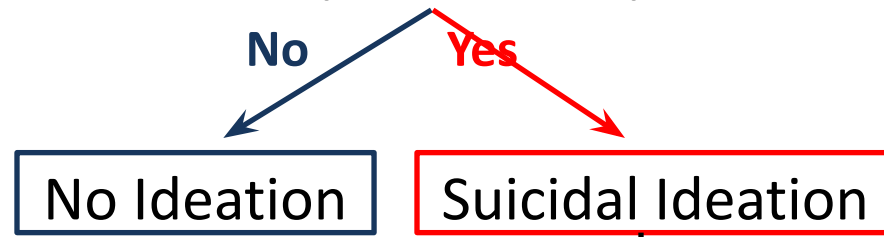
1) Is there pain and hopelessness?



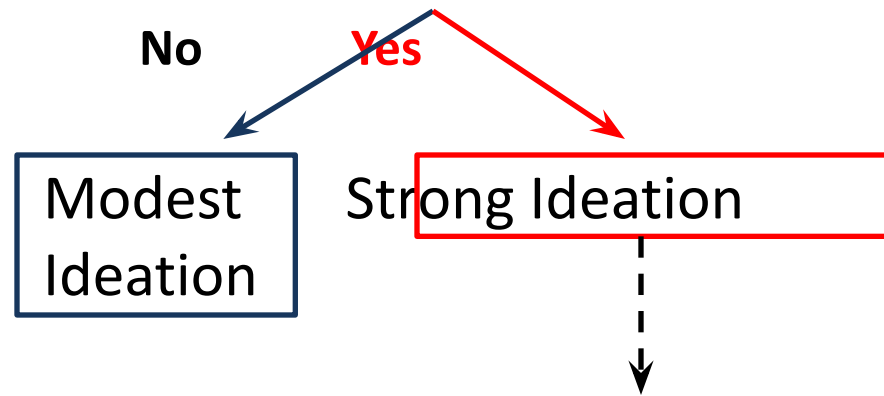
2) Does pain exceed/overwhelm connectedness?



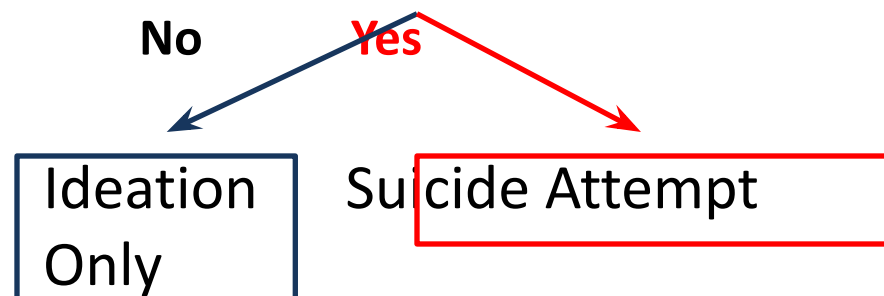
1) Is there pain and hopelessness?



2) Does pain exceed/overwhelm connectedness?



3) Is capability for suicide sufficient?





Evidence?



Types of Evidence

- Motivations
- Correlates
- Predictors
- Warning Signs
- Experiments/Treatment Outcome (not yet)



Step 1

The combination of pain and hopelessness
leads to suicidal ideation



Correlates of Suicide Risk

- Mood disorders
- Schizophrenia
- Anxiety disorders
- Some personality disorders
- Alcohol and substance use
- Impulsivity
- Aggressive tendencies
- History of trauma
- Physical and sexual abuse
- Major physical illness
- Chronic pain
- Family history of suicide
- Suicidal friend
- Job/financial loss



Evidence?

Do pain and hopelessness stand out among hundreds of suicide correlates and risk factors?



Adult Community Outpatients

May & Klonsky (2013; *Suicide & Life-Threatening Behavior*)

Motivation

Mean

SD

Hopelessness

Overwhelming Pain

Escape

Low Belongingness

Problem Solving

Burdensomeness

Fearlessness

Impulsivity

Help Seeking

Interpersonal Influence



Adult Community Outpatients

May & Klonsky (2013; *Suicide & Life-Threatening Behavior*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Hopelessness	15.4	4.0
Overwhelming Pain	15.2	4.6
Escape	13.0	5.1
Low Belongingness	9.0	5.3
Problem Solving	8.5	4.0
Burdensomeness	8.3	6.2
Fearlessness	8.3	5.3
Impulsivity	6.3	4.5
Help Seeking	5.5	4.8
Interpersonal Influence	3.6	4.3



Adult Community Outpatients

May & Klonsky (2013; *Suicide & Life-Threatening Behavior*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Hopelessness	15.4	4.0
Overwhelming Pain	15.2	4.6
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Low Belongingness	9.0	5.3
Problem Solving	8.5	4.0
Burdensomeness	8.3	6.2
Fearlessness	8.3	5.3
Impulsivity	6.3	4.5
Help Seeking	5.5	4.8
Interpersonal Influence	3.6	4.3



Undergraduates

May & Klonsky (2013; *Suicide & Life-Threatening Behavior*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Overwhelming Pain	15.9	4.4
Hopelessness	14.7	4.4
Escape	13.0	5.2
Low Belongingness	9.0	5.4
Problem Solving	8.5	4.0
Fearlessness	7.6	5.1
Burdensomeness	7.5	6.1
Help Seeking	6.1	5.7
Impulsivity	6.0	4.8
Interpersonal Influence	4.8	5.9



Adolescent Psychiatric Inpatients

May, O'Brien, Liu & Klonsky (2016; *Archives of Suicide Research*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Overwhelming Pain	15.6	4.5
Hopelessness	15.1	4.0
Escape	14.6	4.6
Burdensomeness	10.1	6.0
Low Belongingness	9.2	5.4
Fearlessness	8.0	6.0
Problem Solving	7.6	5.4
Impulsivity	5.9	4.6
Help Seeking	4.1	4.0
Interpersonal Influence	1.5	2.8



Online US Sample

May et al. (2020; *Journal of Psychiatric Research*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Overwhelming Pain	15.3	4.9
Hopelessness	15.6	4.0
Escape	12.8	5.1
Low Belongingness	9.5	5.3
Problem Solving	9.0	4.9
Fearlessness	7.8	5.4
Burdensomeness	8.0	6.3
Help Seeking	5.2	5.4
Impulsivity	5.2	5.4
Interpersonal Influence	3.6	4.8



Adult Psychiatric Inpatients

May et al. (2020; *Journal of Psychiatric Research*)

<u>Motivation</u>	<u>Mean</u>	<u>SD</u>
Overwhelming Pain	16.1	4.2
Hopelessness	16.2	3.6
Escape	13.4	5.2
Low Belongingness	7.8	5.1
Problem Solving	10.4	4.7
Fearlessness	10.2	5.2
Burdensomeness	9.8	6.8
Help Seeking	6.8	5.6
Impulsivity	6.8	5.3
Interpersonal Influence	2.6	3.3



More Evidence for Step 1

- Wintersteen (2014)
- Examined:
 - Adolescents hospitalized for an attempt
 - Loved ones who lost adolescents to suicide



More Evidence for Step 1

- *What was different in the minutes/hours/days leading up to the suicide death or attempt?*
- Assessed 42 variables
 - Social withdrawal
 - Agitation
 - Sleep problems
 - Family conflict
 - Anger/hostility
 - Guilt/shame



More Evidence for Step 1

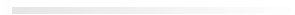
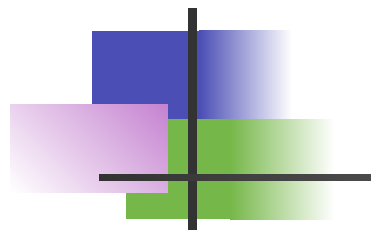
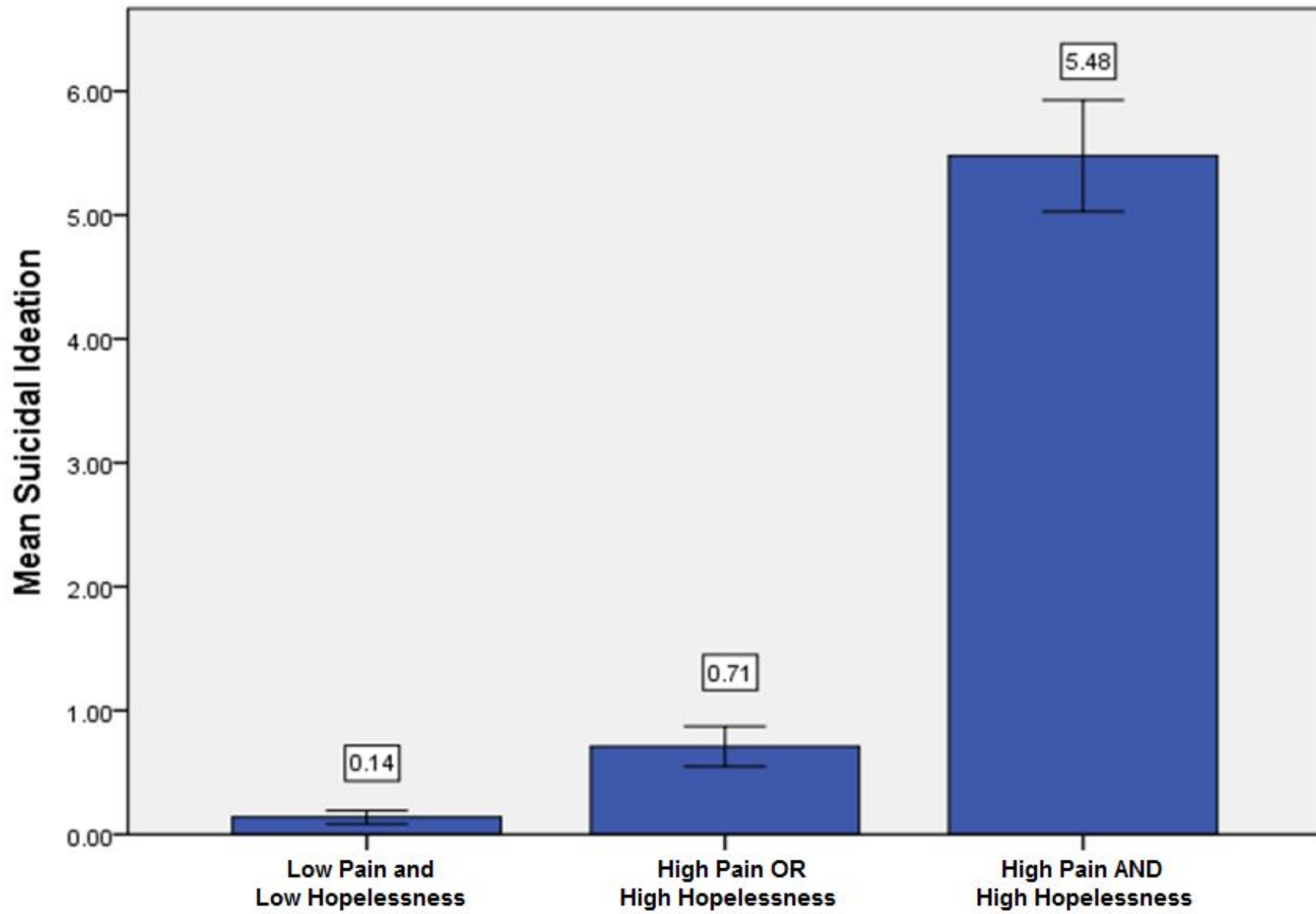
- Across the groups, the two most commonly endorsed answers were:
 1. “emotional misery or pain”
 2. “feelings of hopelessness about the future”



But ...
it's the combination that matter, right?

Right!

Data from: Klonsky and May (2015)





Step 2

Ideation escalates if **pain > connectedness**



Klonsky & May (2015; *International Journal of Cognitive Therapy*)

Connectedness-Pain difference score □ Suicidal Ideation

Pain + Hopelessness ($n=283$) $r=-.47$

Everyone Else ($n=627$) $r=-.22$



Step 3

Progression from ideation to action is facilitated by the capacity to attempt suicide

1. Dispositional
2. Acquired
3. Practical

Klonsky and May (2015)

Dispositional, acquired, and practical contributors each predicted suicide attempts above and beyond ideation



Replications of Klonsky and May (2015)

UK: Dhingra et al. (2018)

Canada: Tsai et al. (2021)

Canada: Pachkowski et al. (2021)

China: Yang et al. (2018)



Why Is The Theory Promising?

- Conceptually sensible explanation
- Fully consistent with existing research
 - Emotional pain, Hopelessness, Disconnection, Capacity
- Fully consistent with basic behavioral and cognitive principles
- Testable and (so far) Accurate



Three-Step Theory (3ST)

Clear implications for
research and prevention



Organizing Model for Suicide Risk



Organizing Model for Suicide Risk

Pain

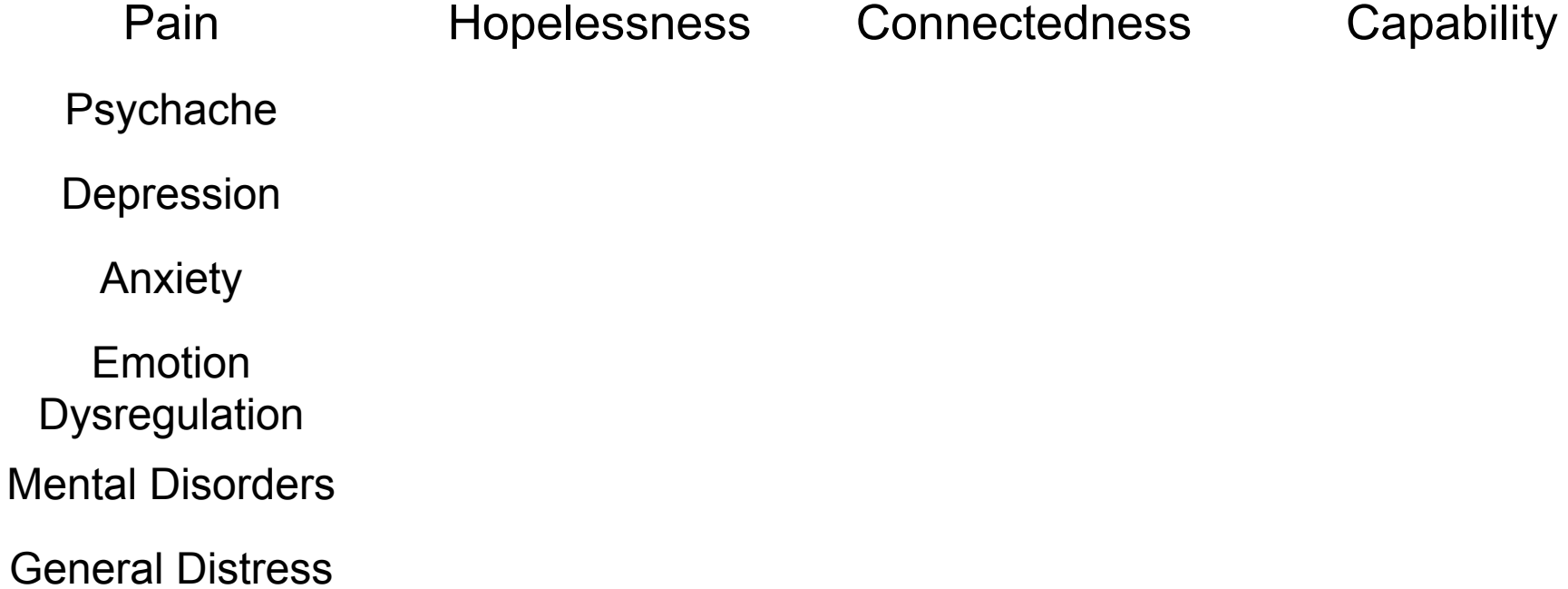
Hopelessness

Connectedness

Capability



Organizing Model for Suicide Risk





Organizing Model for Suicide Risk

Pain	Hopelessness	Connectedness	Capability
Psychache	Beck Hopelessness		
Depression	Pessimistic Outlooks		
Anxiety	External Locus		
Emotion Dysregulation	Learned Helplessness		
Mental Disorders	Self-Efficacy		
General Distress	Future Orientation		



Organizing Model for Suicide Risk

Pain	Hopelessness	Connectedness	Capability
Psychache	Beck Hopelessness	Social Isolation	
Depression	Pessimistic Outlooks	Loneliness	
Anxiety	External Locus	Poor Social Support	
Emotion Dysregulation	Learned Helplessness	Low Belongingness	
Mental Disorders	Self-Efficacy	Burdensomeness	
General Distress	Future Orientation	Valued Job/Role	



Organizing Model for Suicide Risk

Pain	Hopelessness	Connectedness	Capability
Psychache	Beck Hopelessness	Social Isolation	Acquired Capability
Depression	Pessimistic Outlooks	Loneliness	Access to Means
Anxiety	External Locus	Poor Social Support	Knowledge of Means
Emotion Dysregulation	Learned Helplessness	Low Belongingness	Dispositional Capability
Mental Disorders	Self-Efficacy	Burdensomeness	
General Distress	Future Orientation	Valued Job/Role	



Applications For Different People/Populations

Pain

Hopelessness

Connectedness

Capability



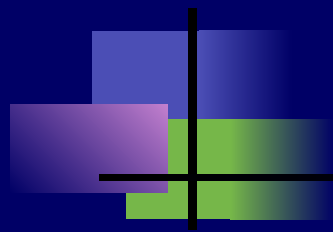
4 Clear Targets for Intervention

- 1) Reduce Current Pain
- 2) Increase Hope for Future
- 3) Improve Connection
- 4) Reduce Capability



Multiple Levels of Intervention

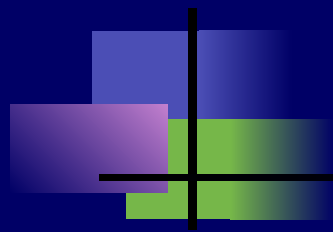
- 1) **Individual** (therapy, medication)
- 2) **Family**
- 3) **Emergency** (crisis, 911, ER)
- 4) **Schools and Communities**
- 5) **Population/Public Health**



Thank You

American Foundation for Suicide Prevention

Dr. Alexis May



Questions??