Transitions from suicidal thoughts to suicide attempts

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• The ideation to action framework
• Psychological models of suicide
• My research with the ALSPAC birth cohort
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Suicidal ideation

Suicide attempts

Suicide
Risk factors for suicide attempts

Biological, psychological and environmental

- 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 self-harm/suicide
- Friend self-harm/suicide
- Job/financial loss
- Relationship loss
- Other stressful life event
- Lack of social support
- Female gender
- Poor problem solving skills
- History of non-suicidal self-injury
- Past attempt
Many studies compare suicide attempters to controls. These studies tell us little about which people with ideation will go on to attempt suicide. This is important because:

- Most people who think about suicide will never act on their thoughts
- Studies suggest that often-cited risk factors for suicide are actually risk factors for ideation
### National Comorbidity Survey (Kessler et al, 1999)

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Meta-analysis (May & Klonsky, 2016)

• 27 studies comparing suicide ideators and attempters

• Looked at 12 variables: All had negligible to moderate effects.
  • Depression, alcohol use disorders, hopelessness, gender, race, marital status, and education all were similar in attempters and ideators (d = -.05 to .31).
  • Anxiety disorders, PTSD, drug use disorders, and sexual abuse history were moderately elevated in attempters compared to ideators (d = .48–.52).

*Cohen’s d: The strength of effect sizes is estimated as negligible (.00–.19), small (.20–.49), medium (.50–.79), and large (.80 and greater; Cohen, 1988)*
Risk factors tell us

✔ Who develops suicidal ideation

❌ Who is most likely to act on their thoughts
‘Ideation to action’ framework

Development of suicidal thoughts and progression from thoughts to attempts are separate processes with separate risk factors and explanations.

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Ideation to action theories

- Interpersonal theory (Joiner)
- Integrated Motivational-Volitional Model (O’Connor)
- Three-step theory (Klonsky)
1) The Interpersonal Theory of suicide (IPT)

- Thwarted belongingness: I am alone
- Desire for suicide
- Perceived burdensomeness: I am a burden
- Capability for suicide
- Lethal (or near-lethal) suicide attempts

Joiner
Research summary of IPT

• Ma et al, Clinical Psychology review, 2016
  • Systematic review of 58 studies
  • Robust association between perceived burdensomeness and suicidal ideation
  • Modest association between thwarted belongingness and suicidal ideation
  • Modest relationship between acquired capability and suicide attempts
2) The Integrated Motivational Volitional (IMV) model

- Pre-Motivational Phase: Background Factors & Triggering Events
  - Diathesis
  - Environment
  - Life Events

- Motivational Phase: Ideation/Intention Formation
  - Defeat & Humiliation
  - Threat to Self Moderators (TSM): e.g., social problem-solving, coping, memory biases, ruminative processes
  - Entrapment
  - Motivational Moderators (MM): e.g., thwarted belongingness, burdensomeness, future thoughts, goals, norms, resilience, social support, attitudes
  - Suicidal Ideation & Intent

- Volition Phase: Behavioural Enaction
  - Suicidal Behaviour
  - Volitional Moderators (VM): e.g., access to means, planning, exposure to suicide, impulsivity, physical pain sensitivity, fearlessness about death, imagery, past behaviour

O’Connor

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Research summary of IMV

Dhingra et al, Journal of Affective Disorders, 2015

- Cross-sectional study of University students
- Those with suicide attempts differed from those with ideation on all volitional factors
- These two groups did not differ on motivational factors
- Similar pattern found in school students: O’Connor et al, BJP, 2012
3) The three-step theory (3ST)

1) Are you in pain and hopeless?
   - No: No ideation
   - Yes: Suicidal Ideation

2) Is your pain greater than your connectedness?
   - No: Moderate Ideation
   - Yes: Strong Ideation

3) Are you capable of attempting suicide?
   - No: Ideation Only
   - Yes: Suicide Attempt

Klonsky

Three types
1) Acquired
2) Dispositional
3) Practical
Research summary of 3ST


Pain and hopelessness interacted to produce suicidal ideation
Research summary of 3ST


- Connectedness predicted increased ideation among those with pain and hopelessness
- Dispositional, acquired and practical contributors to suicide capacity each differentiated the ideation and attempt subgroups
Limitations of previous studies

• Most existing studies are cross-sectional
• Reliance on specialised populations
• Few focus on adolescents - when suicidal ideation and attempts are most common
• The ideation to action framework
• Psychological models of suicide
• My research with the ALSPAC birth cohort
Avon Longitudinal Study of Parents & Children (ALSPAC)

- UK Birth Cohort (South West England)
- ~14,000 children / parents
- Estimate date of delivery April 1st 1991 - Dec 31st 1992
Aim

Investigate factors that predict the transition between suicidal thoughts and attempts over time
Risk factors

Examined a wide range of risk factors for suicidal behaviour

1. Demographic variables
Child gender

2. Sociological/behavioural variables
IQ, executive function, impulsivity, sensation seeking, big-5 personality dimensions, self-harm in friends and family, life events, early adversity, body dissatisfaction

3. Psychiatric/mental health variables
Psychiatric disorder, heavy drinking, cannabis use, regular smoking, illicit drug use, non-suicidal self-harm, suicidal plans, sleeping problems
Measures of suicidal thoughts and behaviour

**Suicidal thoughts:** Have you ever thought of killing yourself, even if you would not really do it?

**Lifetime history of self-harm:** “Have you ever hurt yourself on purpose in any way (e.g. by taking an overdose of pills or by cutting yourself)?”

**Suicide attempts (2 questions)**

- **Most recent self-harm occasion**
  - “I wanted to die”

 OR

- **Any self-harm occasion**
  - “ever seriously wanted to kill yourself?”
Suicidal thoughts and attempts in ALSPAC

4772 adolescents with data on suicidal thoughts and attempts at age 16 years

3 groups:
- No suicidal thoughts or attempts
- Suicidal thoughts only
- Suicide attempts

83.6% No suicidal thoughts or attempts
6.8% Suicidal thoughts only
9.6% Suicide attempts
What distinguishes adolescents with suicidal thoughts from those who have attempted suicide? A population-based birth cohort study

Becky Mars,¹ Jon Heron,¹ E. David Klonsky,² Paul Moran,¹,³ Rory C. O’Connor,⁴ Kate Tilling,¹,³ Paul Wilkinson,⁵,⁶ and David Gunnell¹,³

¹Population Health Sciences, University of Bristol, Bristol, UK; ²University of British Columbia, Vancouver, BC, Canada; ³NIHR Bristol Biomedical Research Centre, University Hospitals Bristol NHS Foundation Trust and University of Bristol, Bristol; ⁴Suicidal Behaviour Research Laboratory, Institute of Health & Wellbeing, University of Glasgow, Glasgow; ⁵Department of Psychiatry, University of Cambridge, Cambridge; ⁶Cambridgeshire and Peterborough NHS Foundation Trust, Cambridge, UK

Background: Only one-third of young people who experience suicidal ideation attempt suicide. It is important to identify factors which differentiate those who attempt suicide from those who experience suicidal ideation but do not act on these thoughts. Methods: Participants were 4,772 members of the Avon Longitudinal Study of Parents and Children (ALSPAC), a UK population-based birth cohort. Suicide ideation and attempts were assessed at age 16 years via self-report questionnaire. Multinomial regression was used to examine associations between factors that differentiated adolescents in three groups: no suicidal ideation or attempts, suicidal ideation only and suicide attempts.
Future directions

• Theory informed research

• More longitudinal research
  • Ecological Momentary Assessment

• Suicide capability
  • How best to define and measure it?
  • How can it inform interventions?

• Novel risk and protective factors
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