Preliminary risk screening algorithms for suicidal thoughts and behaviors at college entrance

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Suicidal thoughts and behaviors

Suicidal ideation

↓

Suicide plan

↓

Suicide attempt

→
Why study suicidal thoughts & behaviors (STB) in college students?

- ± 800,000 people/year die by suicide
- adolescents/young adults = risk population
- 12-month service use | STB = 29.5%

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1. World Health Organization
tertiary education worldwide on the rise

College is a specific developmental period

- “Emerging Adulthood” = increasingly protracted and complex transition into adulthood \(^{1,2,3,4,5}\)

- Pivot point after adverse mental health onset during adolescence\(^6\)

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Current state of college STB literature

553 studies that quantified college student STB

14% representative sample

5 prospective studies

0 studies...

- Suicide plan
- Onset STB during college
- Prediction models

EMPIRICAL EVIDENCE ≈ 0

no effective STB prevention interventions

Interventions for primary prevention of suicide in university and other post-secondary educational settings (Review)

Harrod CS, Goss CW, Stallones L, DiGuiseppi C

EFFECTIVENESS ≈ 0

THE BIGGEST ROOM IN THE WORLD....

SELF-IMPROVEMENT
TELLING OTHER PEOPLE HOW TO IMPROVE THEMSELVES

...THE ROOM FOR IMPROVEMENT!!!
How to improve?

- Complex etiology
- Testing hypotheses >> explorative research

“One of the ambitions of psychiatric epidemiology is [...] to establish a common market for empirical facts – possibly even for ideas.”

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- Reliable prevalence estimates
- Incidence/course of STB

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- Focus on risk factors, not correlates
- Focus on risk, not risk factors

Leuven college surveys

• Collaboration with KU Leuven Student Services & KULeuven Student Health Centre
• Series of prospective cohort studies of first-year students
• Integration research in intervention & prevention strategies
Series of prospective cohort studies
Course of college student STB

### Risk Factors for College Suicidality

<table>
<thead>
<tr>
<th>First-Onset STB</th>
<th>Persistent STB</th>
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<tbody>
<tr>
<td>3≤ trauma</td>
<td>aOR</td>
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<tr>
<td>3≤ 12-m mental dx</td>
<td>x8</td>
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<tr>
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Risk profiles

• Risk = probability between 0 & 1 (0 & 100%)
• Can be calculated from risk factors

algorithm → \( \alpha + \beta^{(1-38)} \times X = \log(p/(1-p)) \)
What if we give top xx% intervention (that works)?

- Expected reduction in suicidality?
- How many false positives?
Risk profiles

Target top 10% of first-year students with highest risk for subsequent first-onset of STB

→ expected reduction of 45-57% of effective cases
→ 75-79% false-positives

Target top 30% of first-year students with highest risk for persistence of STB

→ expected reduction of 60% of effective cases
→ 46% false-positives

risk disorder

Optimal period for detection
  = risk-based
  = algorithms

current detection = disorder based

delay

help

= match risk with treatment
Risk disorder

Disorder

Delay

Help

Current detection = disorder based

Optimal period for detection = risk-based = algorithms

E-health interventions

= increase perceived need for care

= eliminate barriers
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Thank you very much for your attention