

# Predicting self-harm and suicide: Have we progressed in the state-trait debate?

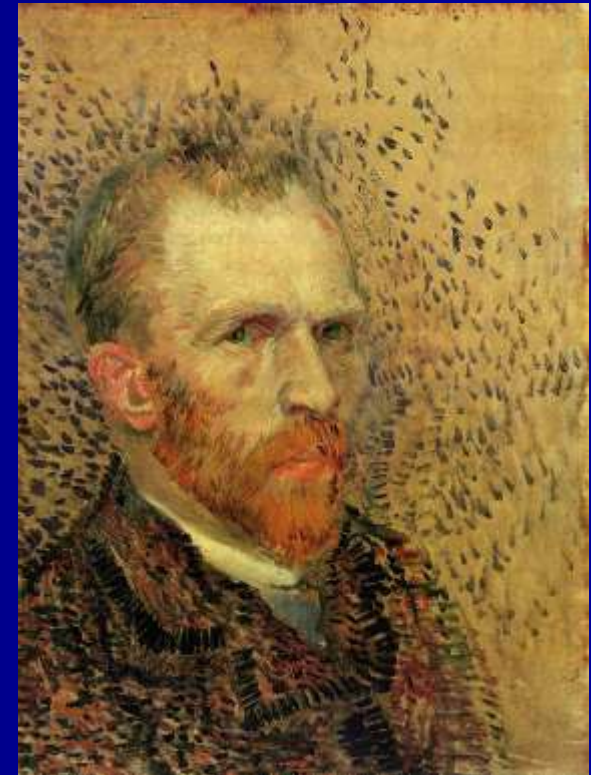
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# Early discussions about state-trait and the relation with suicide

Vincent van Gogh (1853–1890) had an eccentric personality and unstable moods, suffered from recurrent psychotic episodes during the last 2 years of his extraordinary life, and died by suicide at the age of 37. Despite limited evidence, well over 150 physicians have ventured a perplexing variety of diagnoses of his illness.



# Overview

- Background
- Review: State – Trait factors associated with self-harm and suicide
- Outcomes prospective study among self-harm patients in Ireland: stability of psychological outcomes over time
- Evidence based recommendations & actions

# State or Trait?

## An old debate with on-going relevance

- Enhance treatment interventions geared to subgroups of self-harm patients
- Challenges in reducing repeated self-harm and suicide risk among self-harm patients with very frequent repetition
- Challenges in understanding the occurrence of multiple cases of non-fatal and fatal suicidal behaviour within families

# State – Trait

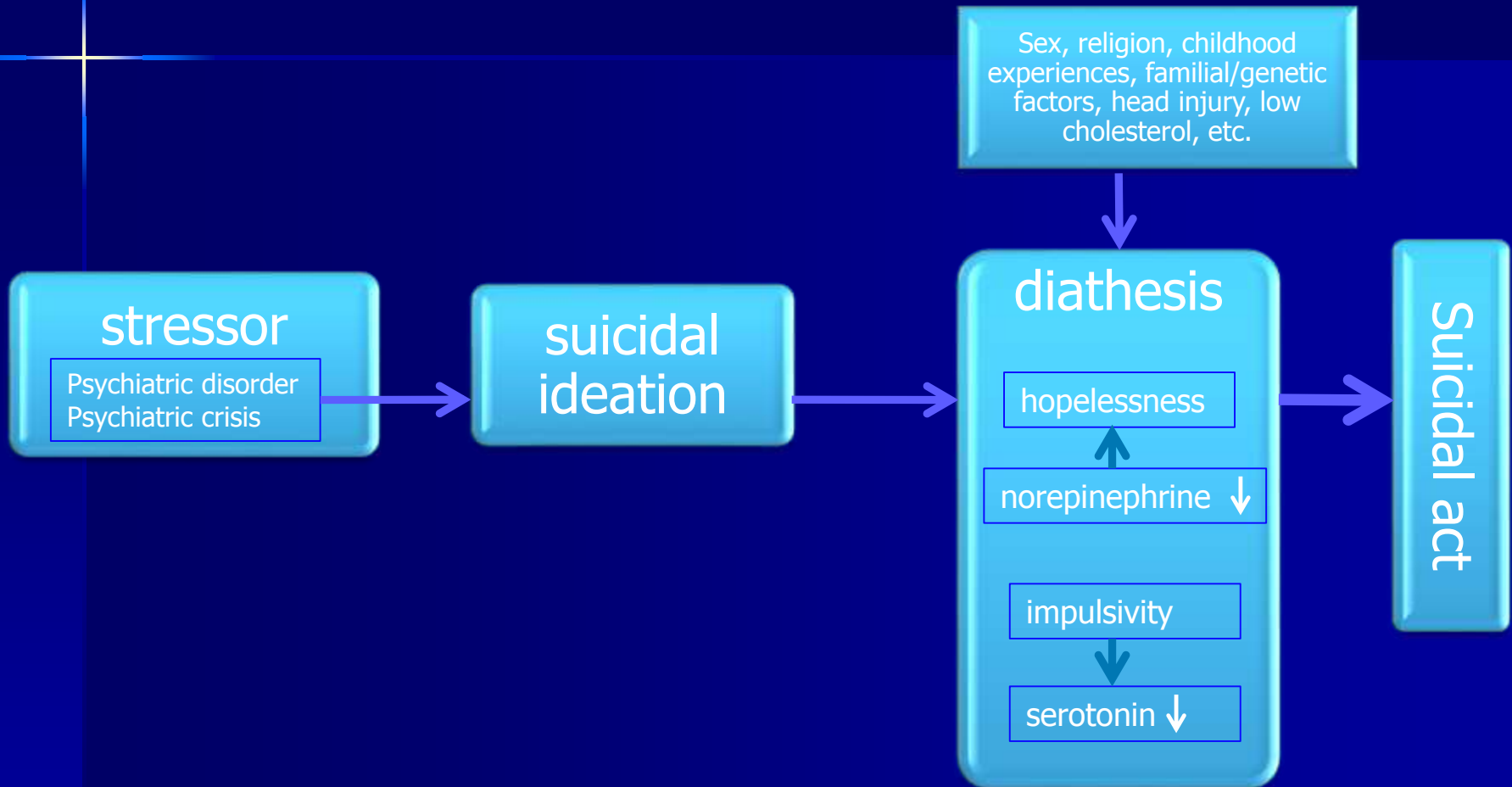
## Terminology and definition

- Trait (temperament dimension/character/personality): Enduring characteristic of a patient related to the threshold for acting on suicidal/self-harm thoughts (Mann et al, 1999).
- State (frame of mind/situation): transient experience of mood that can change across situations and contexts (e.g. depression) (Terracciano et al, 2006).

# 1990s – Insight into neurobiological and psychological determined traits and states independent of type of psychiatric disorder

- Reviews of clinical and post mortem studies among patients with depression and other types of psychiatric disorders – *Mann & Arango, 1992; Soares & Mann, 1997; Mann et al, 1999*
- Consolidation of identified traits: Lifetime aggression, lifetime impulsivity, comorbid borderline personality disorder, comorbid alcohol abuse, and comorbid substance abuse
- Decreased serotonin function (attempted suicide + suicide) – Fairly stable, variable time periods
- Similar patterns identified when comparing suicide attempters with non-attempters among patients diagnosed with other psychiatric diagnoses, such as schizophrenia and personality disorders

# Development of a stress-diathesis model of suicidal behaviour — *Mann et al, 1999*





# CRY of PAIN

Understanding suicide  
and the suicidal mind

PROFESSOR MARK WILLIAMS

Co-author of the international bestseller,

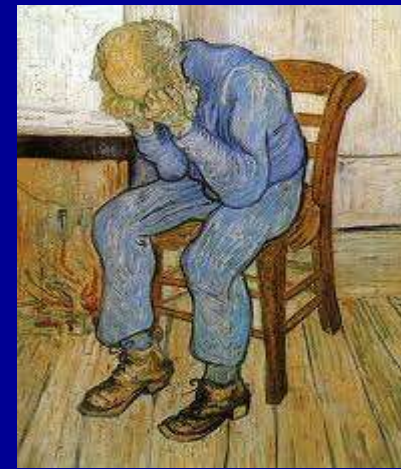
*Mindfulness: A practical guide to finding peace in a frantic world*

## *Cry of Pain* – Entrapment model of suicidal behaviour

### Entrapment:

Suicidal behaviour is the response to a stressful situation which has three components which act together to increase suicidal risk: (1) the presence of defeat, (2) perception of no escape and (3) perception of no rescue

(Williams, 2001;2005; Rasmussen et al, 2010; O'Connor et al, 2013)





# Stability of trait characteristics over time?

# Prospective study among self-harm patients: Investigating stability and change of psychological outcomes

- Consecutive self-harm patients presenting to general hospitals in Cork and Limerick, who formed the **control group** (N=211) in a randomised controlled trial to test the effectiveness of a problem-solving intervention
- Exclusion criteria: Severe alcohol abuse, current psychosis, having a learning disability
- Prospective design: T1: Baseline interview after index self-harm act; T2: 6 weeks after T1; T3: 6 months after T2



# Patient characteristics and outcome measures

- Females: 65%; mean age total sample: 33.6 years (SD 12.1)
- History of previous self-harm: 63%
- Self-harm methods: Intentional drug overdose: 85%, self-cutting: 17%, attempted hanging: 4%, attempted drowning: 4%, other methods: 2%
- Response rate at 6 months follow-up: 71%
- Repetition rate during follow-up: 15.3%

# Outcome measures and analysis

## *Evidence for trait*

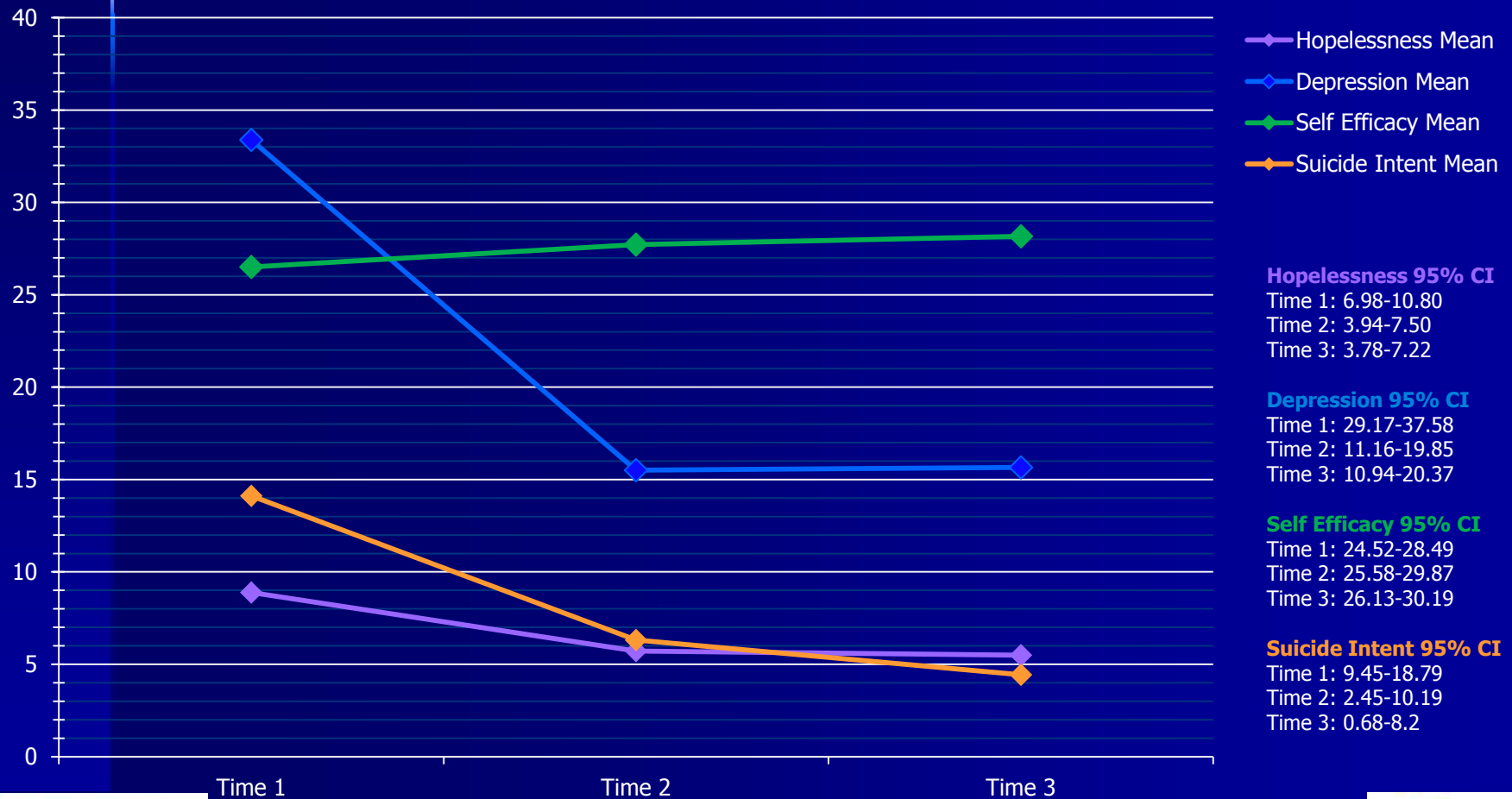
1. Impulsivity
2. Problem-Solving
3. Hopelessness
4. Self-Efficacy

## *Evidence for state*

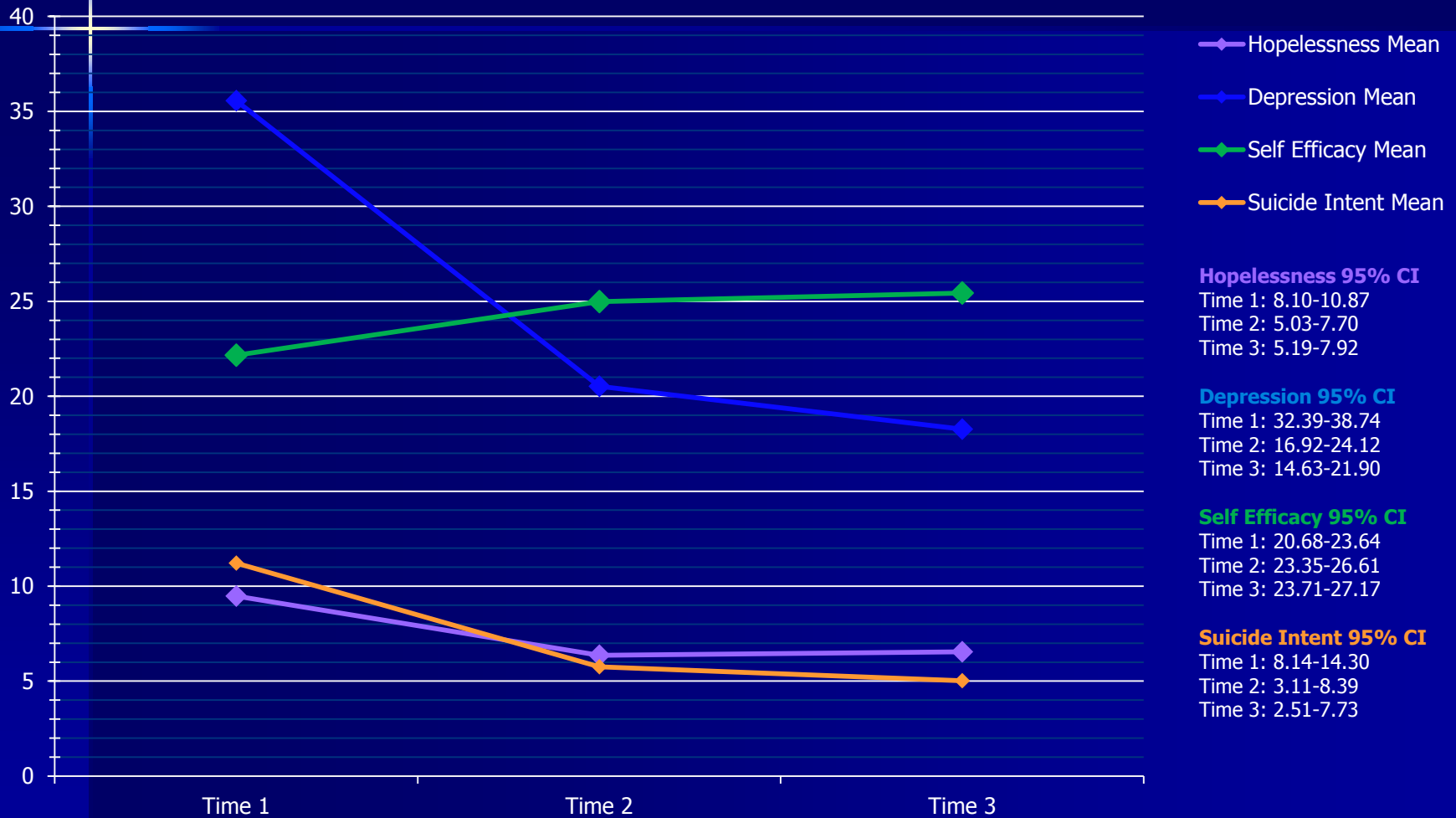
5. Suicidal intent
6. Depression

Within-person stability of the scores on the outcome measures over the 3 time points was calculated using the intraclass correlation coefficient.

# Male Self-Harm patients: Hopelessness, Depression, Self Efficacy, Suicide Intent, T1, T2, T3



# Female Self-Harm patients: Hopelessness, Depression, Self Efficacy, Suicide Intent, T1, T2, T3





# Stability of outcomes over time by risk of repetition (subgroup ongoing repetition): Intraclass Correlation Coefficients

| History of previous Self-harm | Repeated self-harm -prospectively |           |
|-------------------------------|-----------------------------------|-----------|
|                               | ICC                               | 95% CI    |
| Impulsivity                   | 0.58                              | 0.40-0.73 |
| Self Efficacy                 | 0.42                              | 0.17-0.67 |
| Hopelessness                  | 0.41                              | 0.16-0.66 |
| Suicide Intent                | 0.40                              | 0.08-0.71 |
| Depression                    | 0.39                              | 0.13-0.63 |
| Problem Solving               | 0.38                              | 0.10-0.65 |

# Stability of outcomes over time by risk of repetition (subgroup first repeat): Intraclass Correlation Coefficients

| No history of self-harm | Repeated self-harm prospectively |            |
|-------------------------|----------------------------------|------------|
|                         | ICC                              | 95% CI     |
| Self Efficacy           | 0.64                             | 0.19-0.92  |
| Depression              | 0.62                             | 0.16-0.91  |
| Hopelessness            | 0.61                             | 0.19-0.89  |
| Problem Solving         | 0.52                             | 0.05-0.88  |
| Impulsivity             | 0.52                             | 0.04-0.88  |
| Suicide Intent          | 0.20                             | -0.39-0.96 |

# Evidence based Recommendations and Actions

- There is a need for enhanced psychosocial and psychiatric assessment procedures taking into account the identified state and trait factors in order to identify people with high risk of frequent repetition at an early stage.
- Research outcomes underline the need to provide a 'menu' of treatment interventions' geared to different subgroups of self-harm patients, such as people with a pattern of multiple repeated self-harm acts and high levels of impulsivity and hopelessness (e.g. Dialectical Behaviour Therapy) and those with less frequent repetition and deficits in problem-solving (e.g. Cognitive Behaviour Therapy)
- On-going assessment and monitoring of levels of suicidal intent is crucial as this may fluctuate rapidly over time (fluid rather than stable concept).

***“People who attempt suicide never want to die, what they want is a different life”***

***(R. Wieg, 2003)***

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