How Psychiatric Comorbidity and Mood States Influence Craving and Substance Use in Daily Life?

An Ecological Momentary Assessment Study in Patients with Alcohol, Tobacco, Cannabis and Heroin Use Disorders

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Background

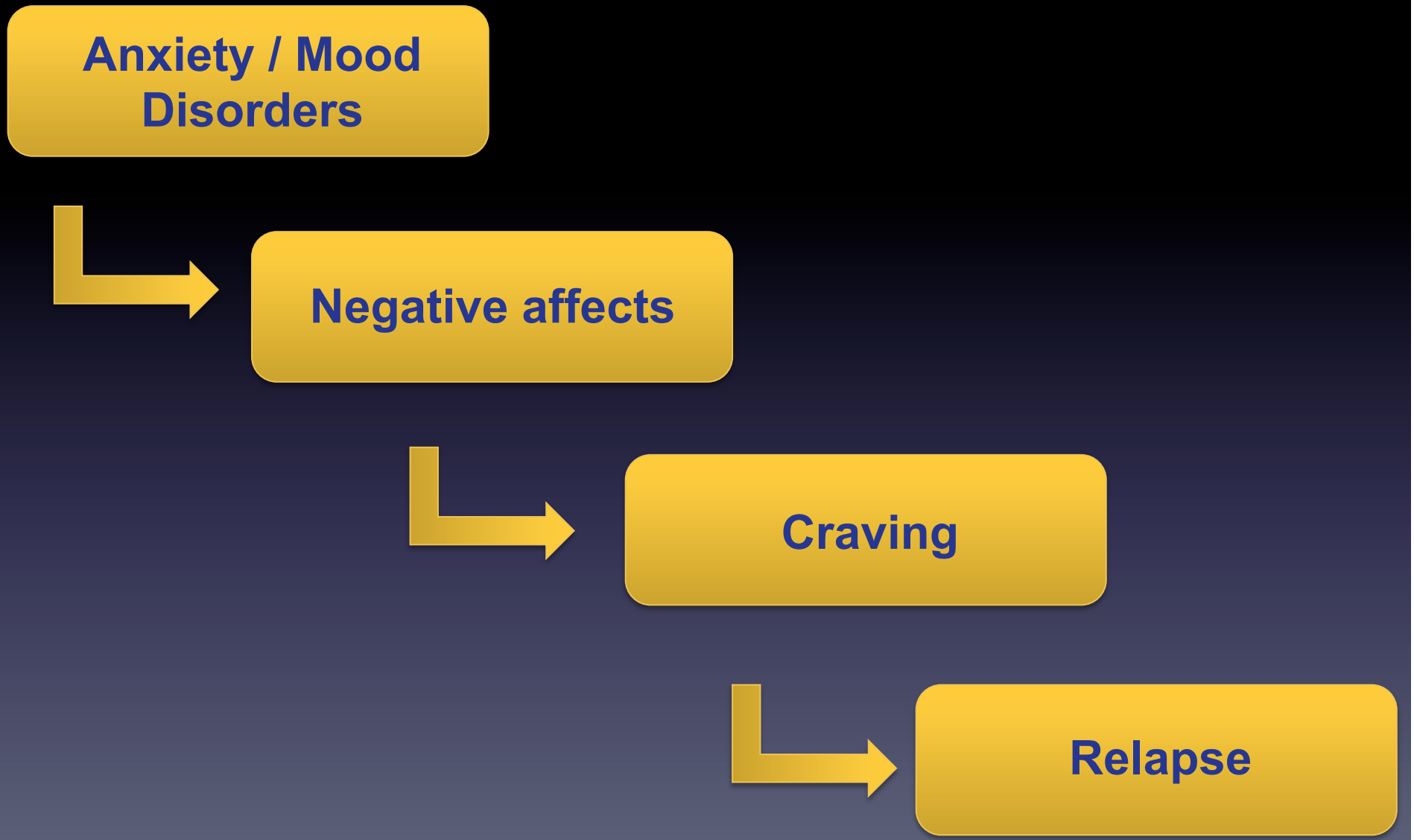
Strong association between psychiatric and addictive disorders

Negative impact of psychiatric comorbidity on addictive disorders

- Poorer substance use outcomes
- Poorer quality of life
- Higher rate of relapse

Mechanisms underlying this association remain poorly understood

Hypothesis



Objective

To examine the effect of

- comorbid mood or anxiety disorders
- negative emotional states

On craving intensity and substance use

Among patients treated for addiction

In real-time and within the natural conditions of daily life using mobile technologies

Methods - Participants

Current substance use disorder for

- Alcohol
- Tobacco
- Cannabis
- or Opiates

Recruited through an outpatient addiction clinic

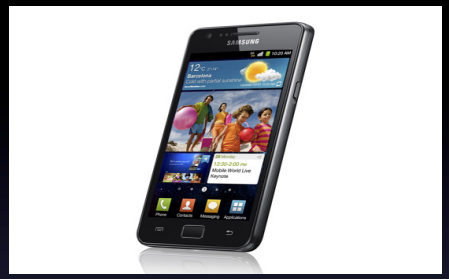
Bordeaux, South West, FRANCE

Enrolled at treatment entry

Methods - EMA

Ecological Momentary Assessment (EMA)

Stone and Shiffman, 1994



Real-time data collection

- Reduce recall bias

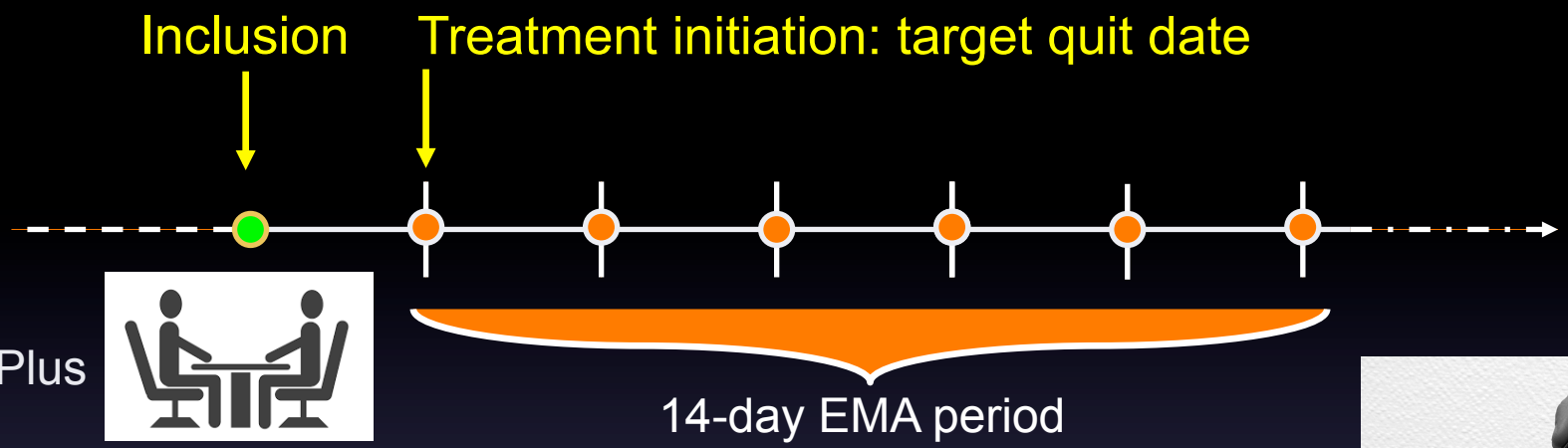
Evaluation in the natural environment of the subject (daily life)

- Ecological validity
- Influence of environmental factors

Repeated assessments across the day

- Time course
- Prospective relationship between variables

Methods - Procedure



Substance use
- Substance that initiated treatment

Craving intensity (Seven-point scale)
- Maximum level since the last assessment

Negative mood states (Seven-point scales)
- Sad mood
- Anxious mood

Perceived stress (Seven-point scale)
- Negativity of event

Electronic interviews
- 4 per day
- Beep call

Methods – Statistical analysis

Hierarchical linear and non-linear models

- Multi-level structure of the data
  - EMA: within-person
  - Diagnosis :between-person

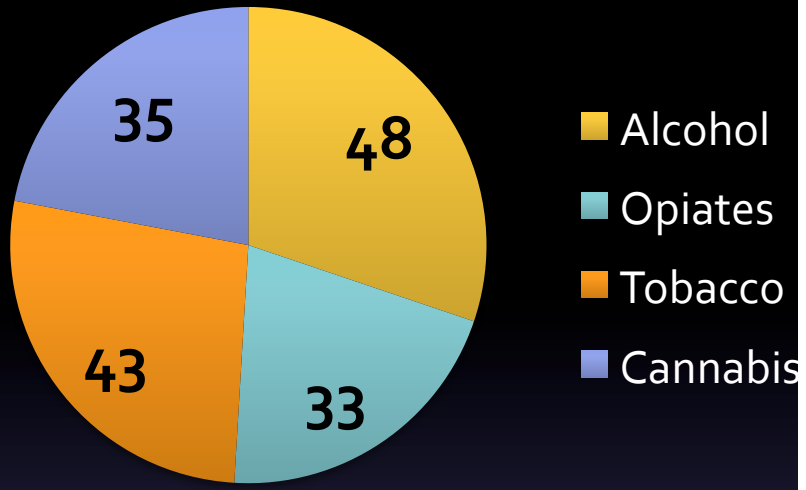
Models

Psychiatric comorbidity → EMA variables

EMA variables T0 → EMA variables T1

Results – Sample characteristics

- 159 participants included



- Socio-demographic characteristics
  - 36.7 y.o. (SD=10.8)
  - Males 67 %
  - Employed 57%
  - Living with family ± children 70 %

- Psychiatric comorbidity (current)
  - Mood disorder 40%
  - Anxiety disorder 49%
  - Mood and/or Anxiety disorder 61%

Results – EMA reports

Average response rate: 83 % (6346 observations)

Main problematic substance use 38 %

Craving Intensity 3.6 (SD=2.1)

Sad mood intensity 3.7 (SD=1.3)

Anxious mood intensity 3.7 (SD=1.5)

Perceived stress 3.8 (SD=1.6)

Results – Craving / Use

Use T0

Craving T0

$\gamma = 0.136$

$p < 0.001$

Use T1

Fatseas, 2015, Serre 2015

Results – Craving / Use

Current Anxiety and/or Mood Disorders

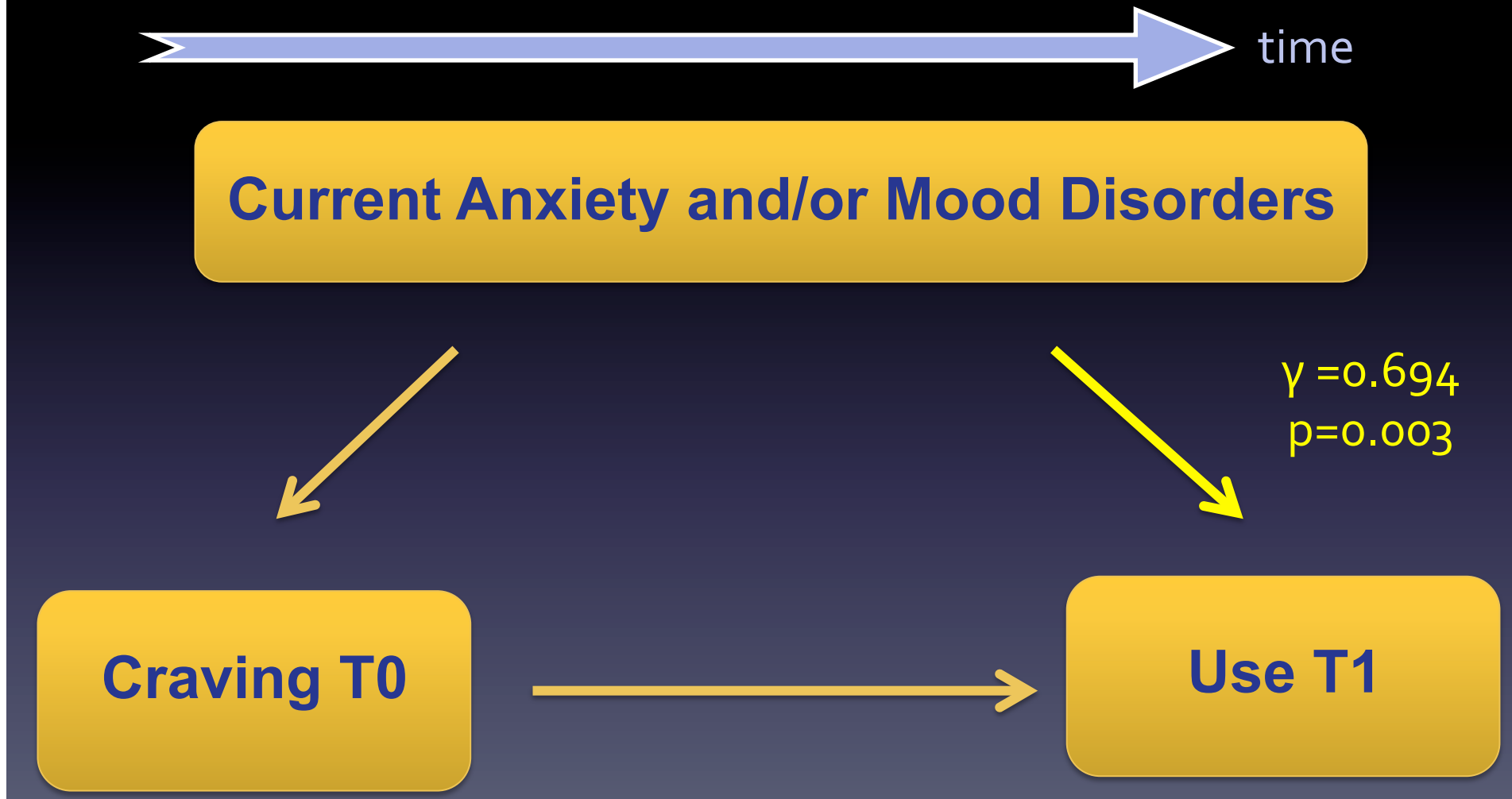
Craving T0

γ =0.188
p<0.001

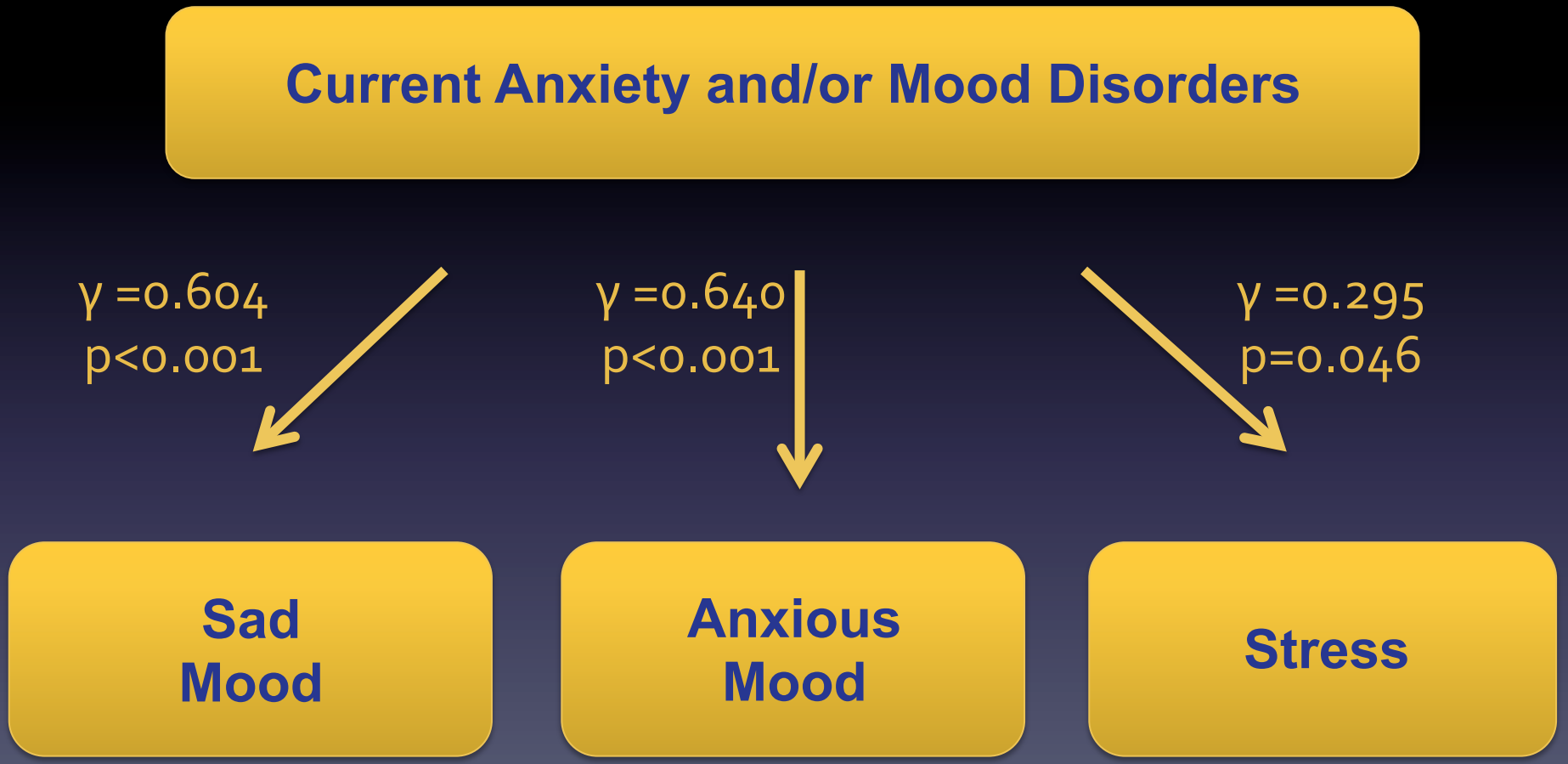
Use T1

Results – Psychiatric comorbidity / Craving and Use

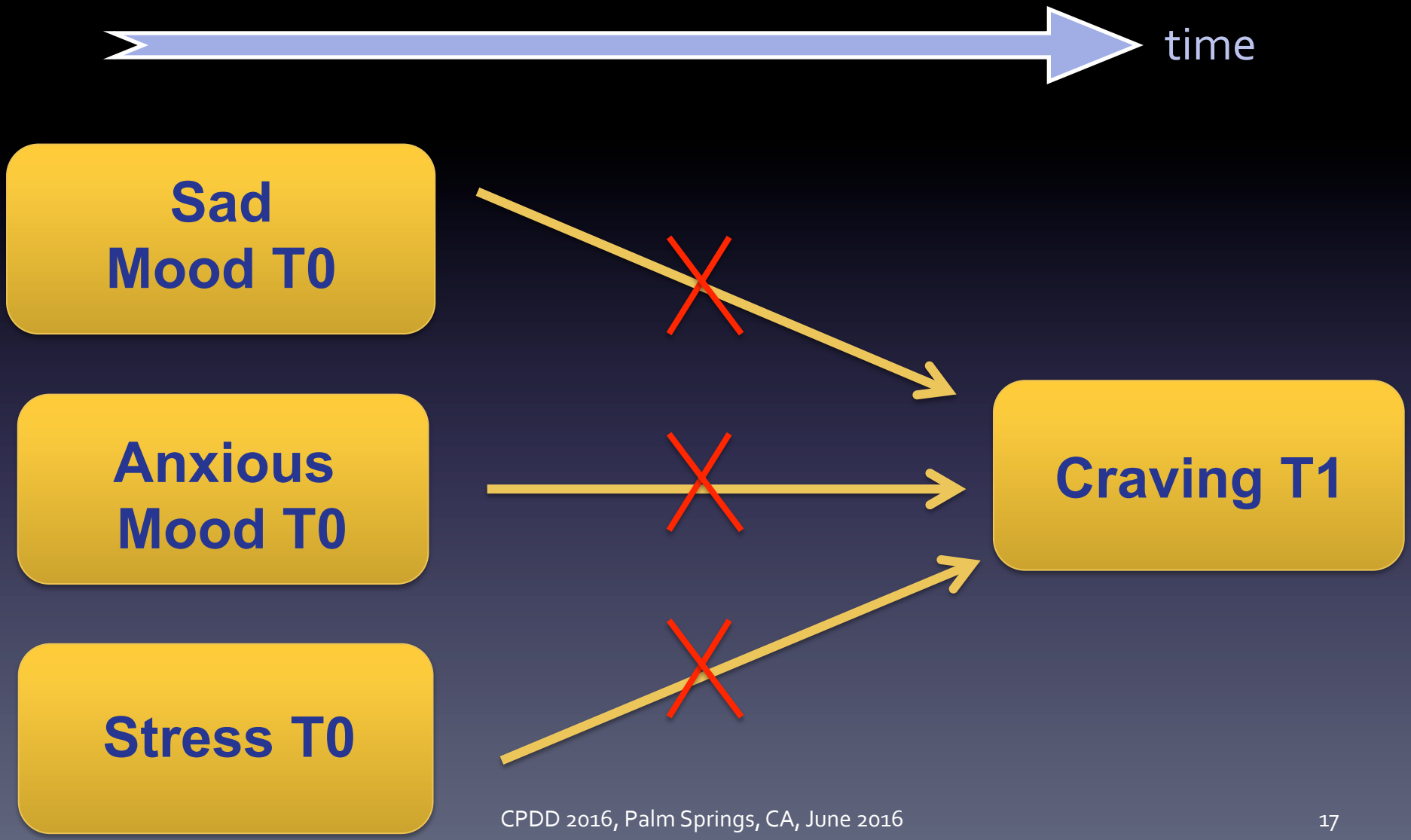
Results – Psychiatric comorbidity / Craving and Use



Results – Psychiatric comorbidity / Mood states



Results – Mood states / Craving



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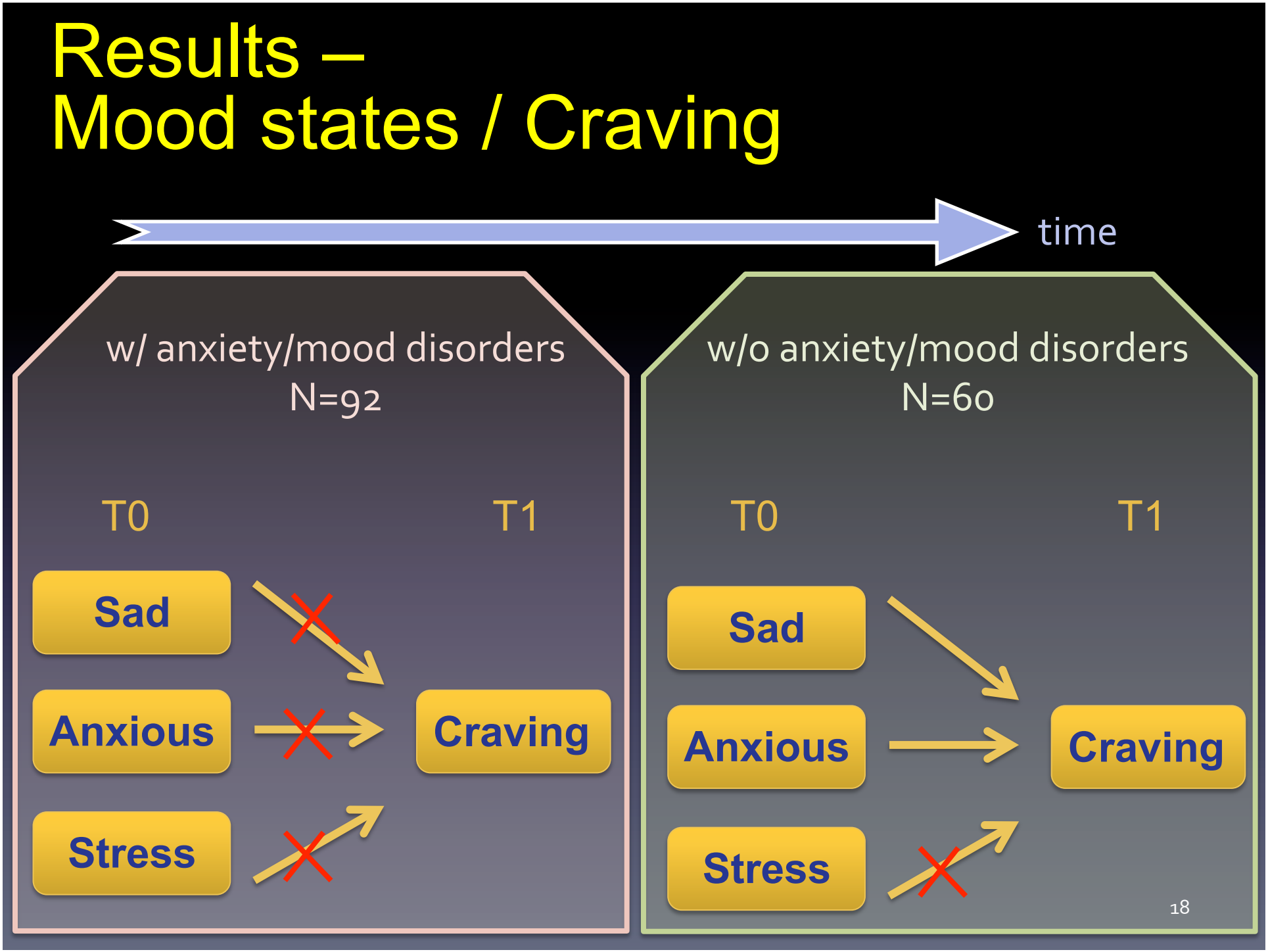
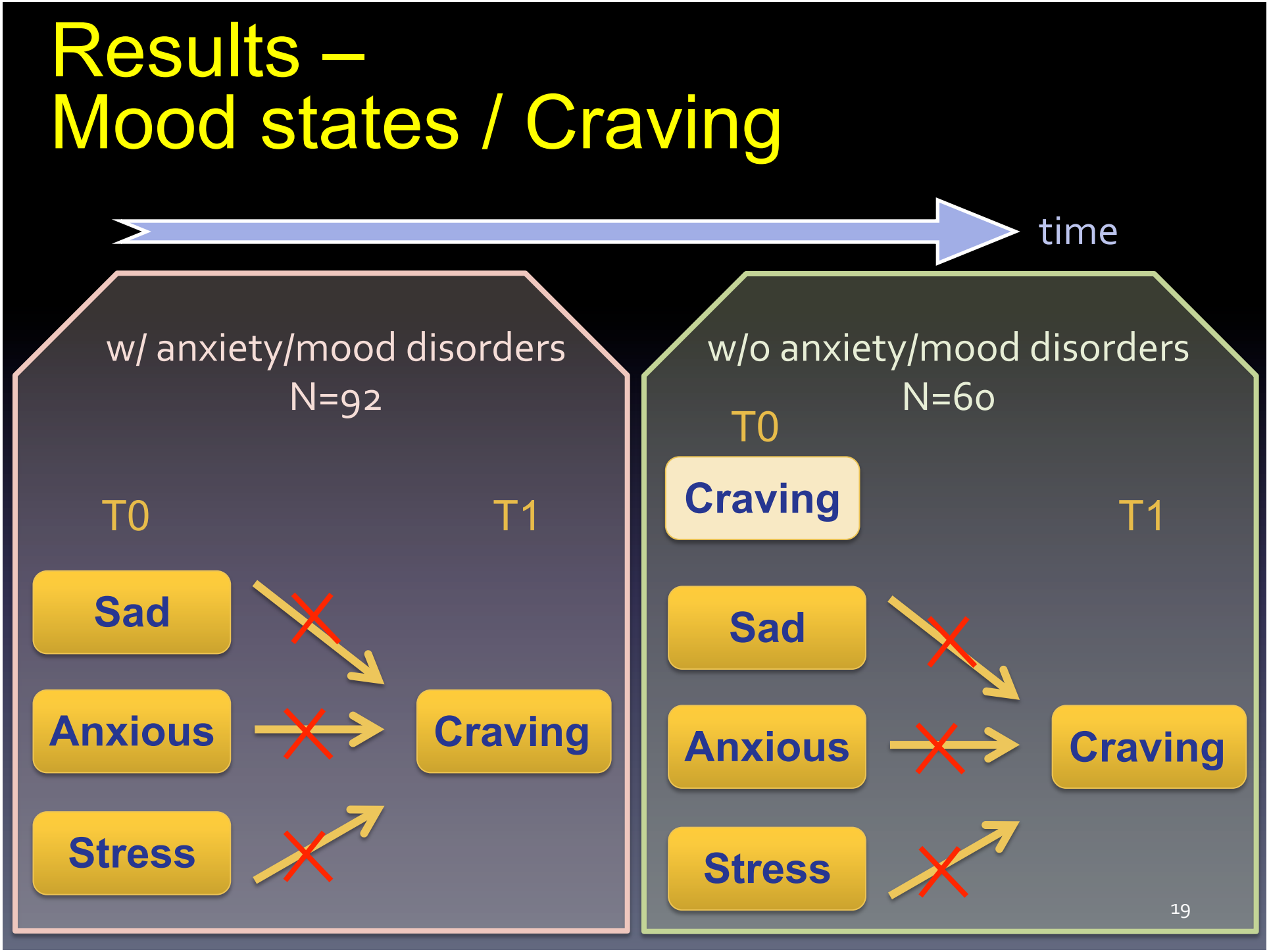
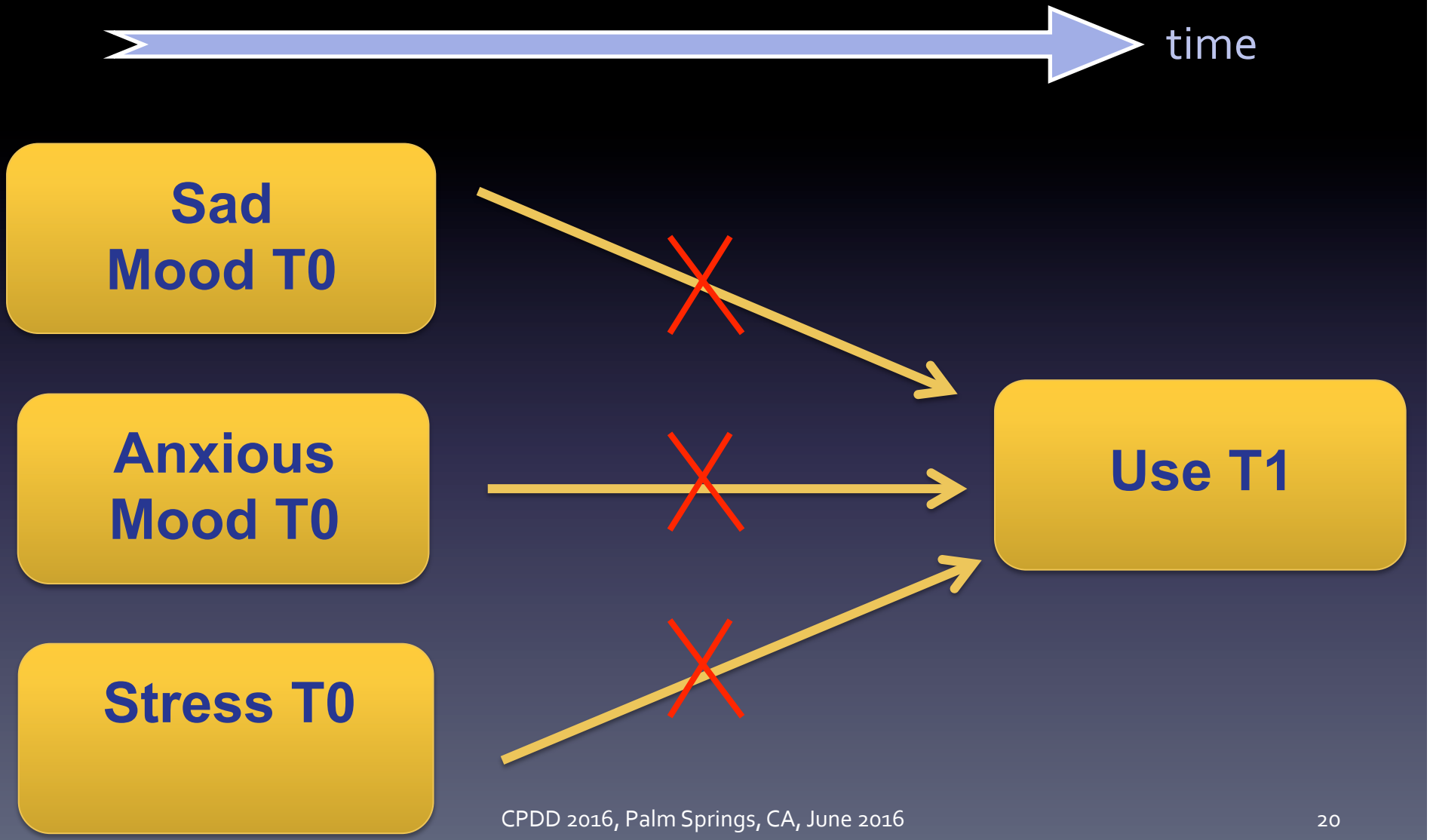


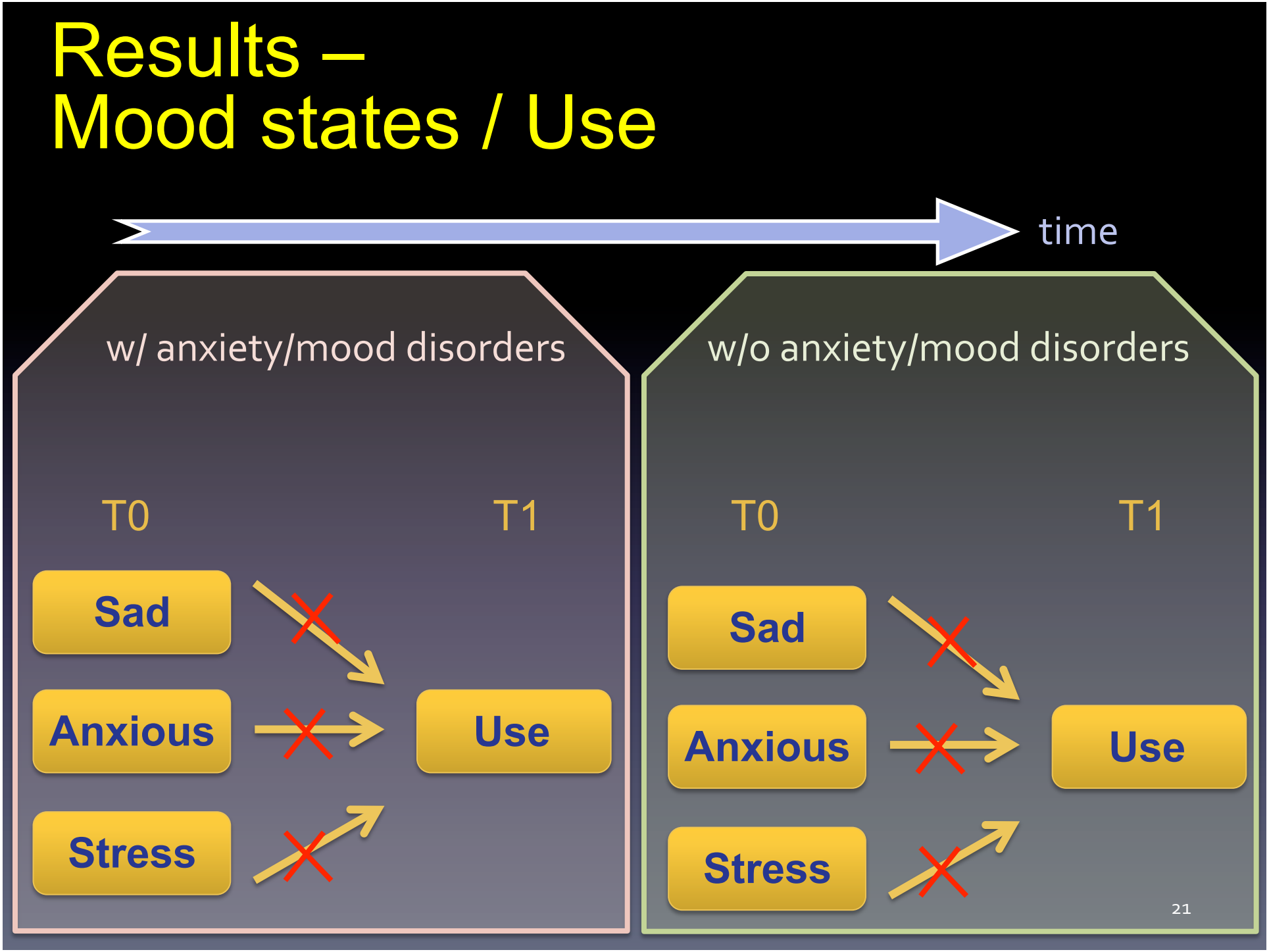
Results – Mood states / Craving



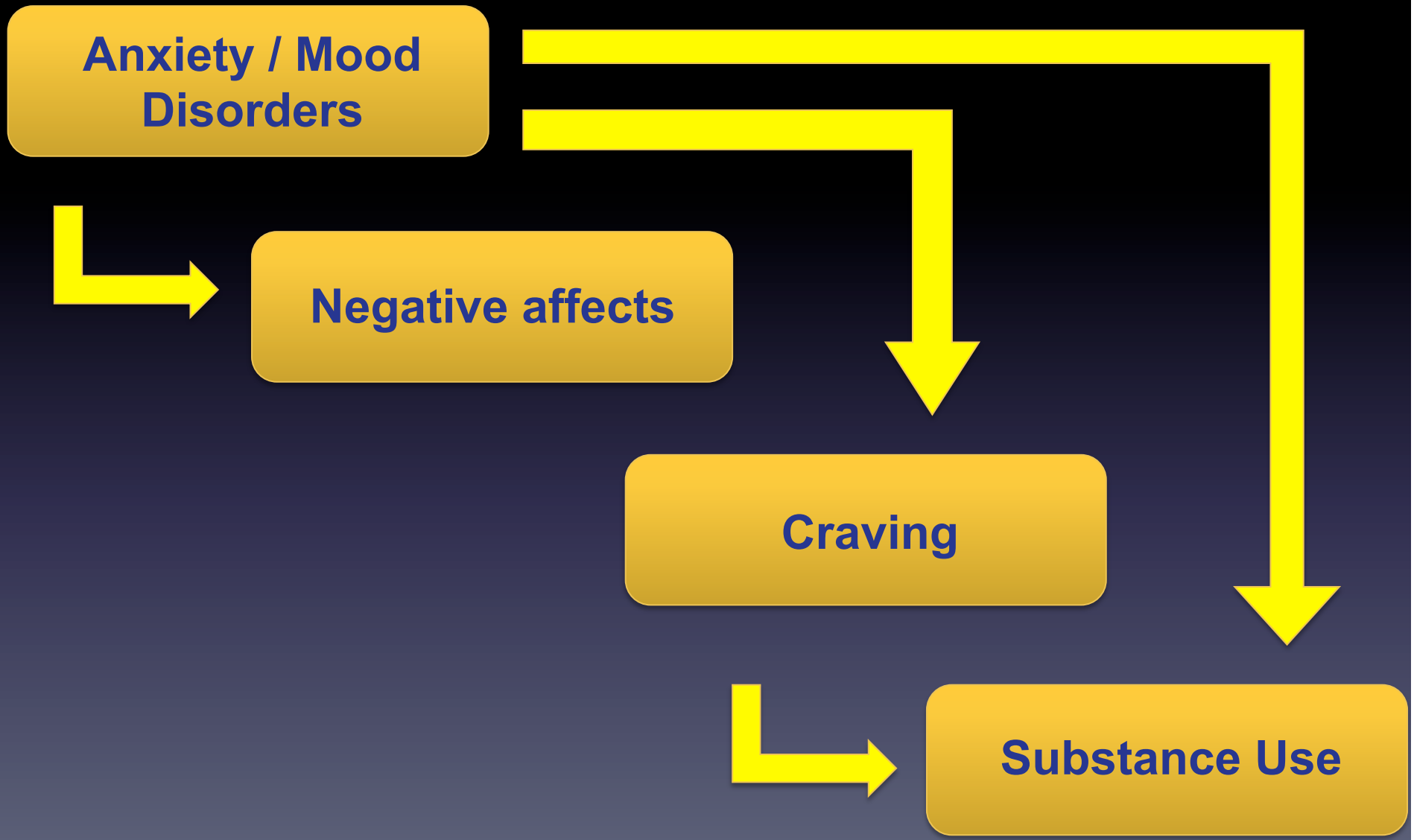
Results – Mood states / Use



Results – Mood states / Use



Summary of results



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Discussion

Predictive value of craving intensity on further substance use

Higher severity of addiction among patients with psychiatric comorbidity

- not mediated by negative affects

Effect on substance use, not completely explained by increase of craving