

# Craving: an early and predictive marker of addiction?

## Baseline results of a prospective study.

E. Baillet<sup>1,2,3</sup>; L. Lambert<sup>1,2,3</sup>; F. Serre<sup>1,2,3</sup>; S. Moriceau<sup>1,2,3</sup>; L. Fournet<sup>1,2,3</sup>; M. Auriacombe<sup>1,2,3,4</sup>

<sup>1</sup>University of Bordeaux, F-33076 Bordeaux, France

<sup>2</sup>CNRS, SANPSY, UMR 6033, F-33076 Bordeaux, France

<sup>3</sup>Pôle Interétablissement d'Addictologie, CH Ch. Perrens and CHU de Bordeaux, F-33076 Bordeaux, France

<sup>4</sup>Department of Psychiatry, Perelman School of Medicine, University of Pennsylvania, Philadelphia, USA

## INTRODUCTION

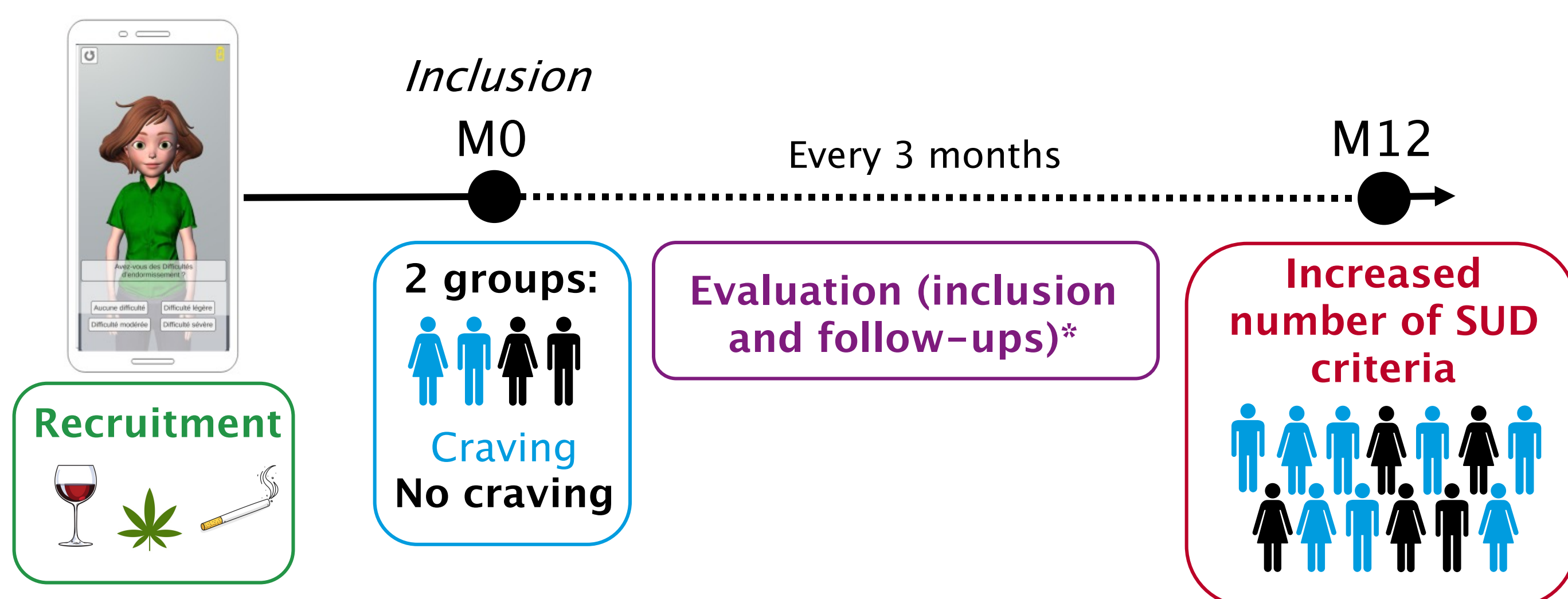
**Craving**, defined as an intense and unwanted desire to use, could play a key role in Substance Use Disorders (SUD). Craving is both a core (loss of control) diagnostic criterion for SUD in DSM-5 and a dynamic phenomenon with daily variations that are prospectively associated with use (Cleveland et al., 2021; Serre et al., 2015).

These characteristics give craving a prognostic and potential etiological value in addictive disorders. Item response theory (IRT) analysis showed that craving was the most **prevalent** criterion, i.e., the most frequent; and the most **discriminant**, i.e., the one that best distinguished those with from those without the disorder (Kervran et al., 2020; Shmulewitz et al., 2021).

A recent network analysis showed that craving was the most **central** criterion among SUD (Auriacombe et al., CPDD 2022). Also, the presence of craving in subjects with mild severity SUD (Chung et al., 2012) suggest that it could be among the **earliest** symptom to appear, making craving a candidate early marker of addiction. However, it has been little studied in users without SUD.

The main objective was to explore whether craving was an early marker of addiction

## METHODS



### Population:

Recruitment from general population not in treatment by KANOPEE Smartphone Application (Auriacombe et al. 2021)

- Screened for use of tobacco, alcohol and cannabis once or more in past 12 months



Google Store



Apple Store

### Evaluation (inclusion and follow-ups):

- Addiction Severity Index
- Craving Numeric scale
- SUD DSM-5 criterion

**Data Analysis strategy:** Description of sample with JMP® Pro (Version 16.0.0)

**Contacts:** [emmanuelle.baillet.1@u-bordeaux.fr](mailto:emmanuelle.baillet.1@u-bordeaux.fr); [fuschia.serre@u-bordeaux.fr](mailto:fuschia.serre@u-bordeaux.fr); [marc.auriacombe@u-bordeaux.fr](mailto:marc.auriacombe@u-bordeaux.fr)

## PARTNERS

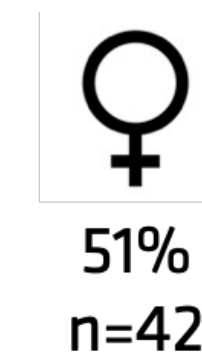


**Financial support:** Institut National du Cancer & Institut de Recherche en Santé Publique French Cancer and Public Health instituts



## BASELINE RESULTS

 N=83

 51% n=42

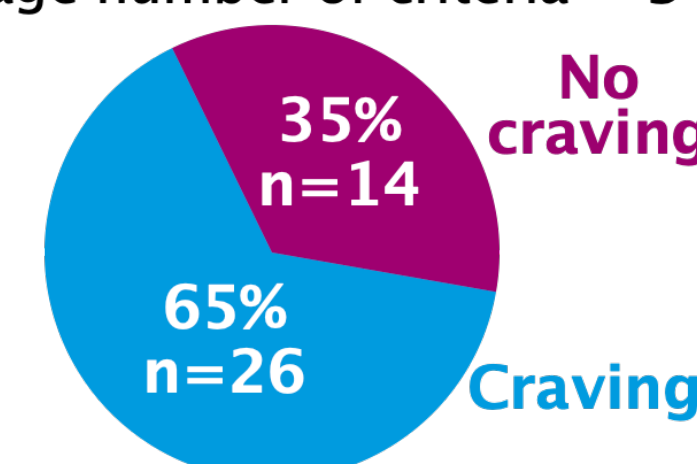
 46.8 y.o. (15.6)

 15.5 y. (2.4)

**With SUD**  
(≥2/11 criteria)

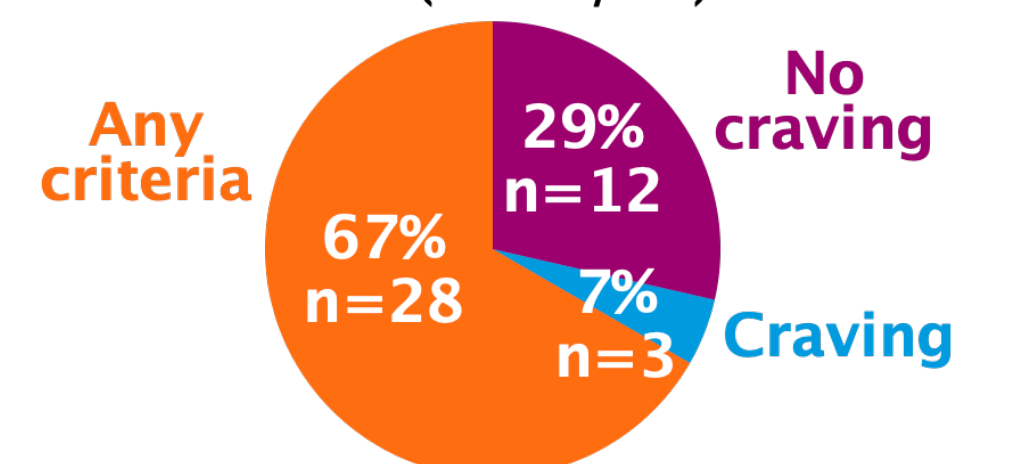
**No SUD**  
(<2/11 criterion)

49% (n=40/82)  
Average number of criteria = 3

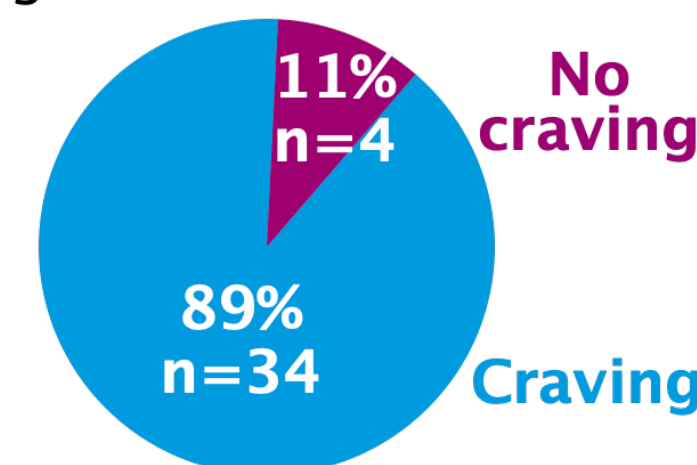


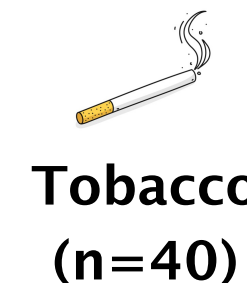
 Alcohol  
(n=82)

51% (n=42/82)

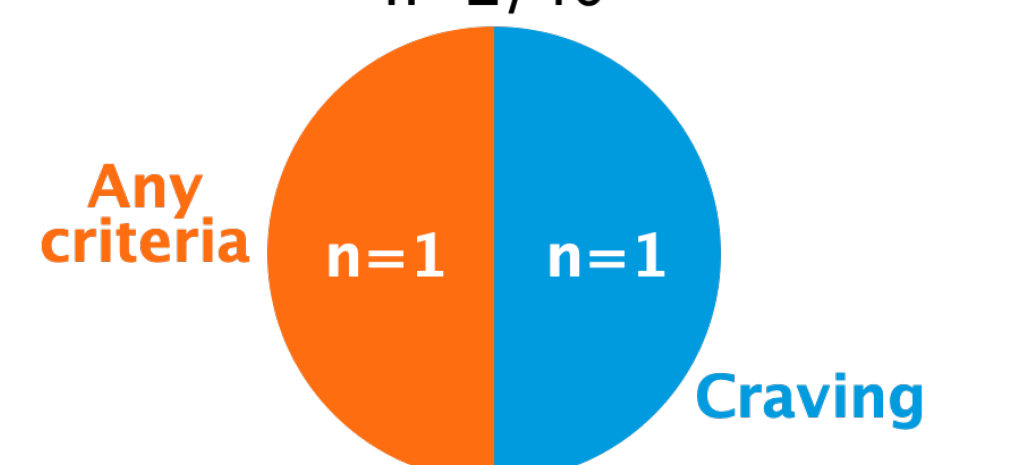


n=38/40  
Average number of criteria = 5

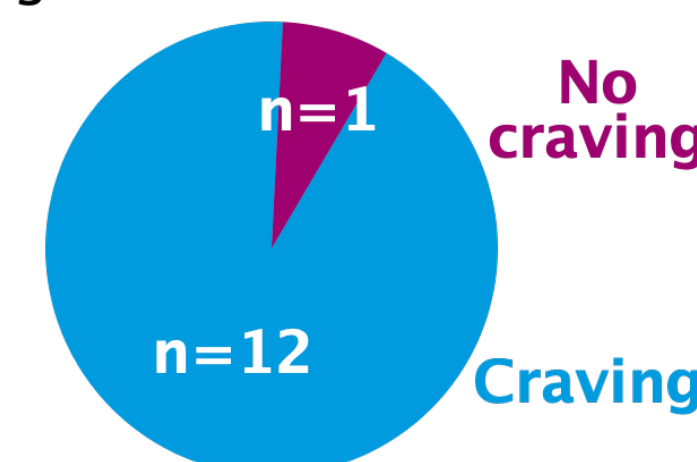


 Tobacco  
(n=40)

n=2/40

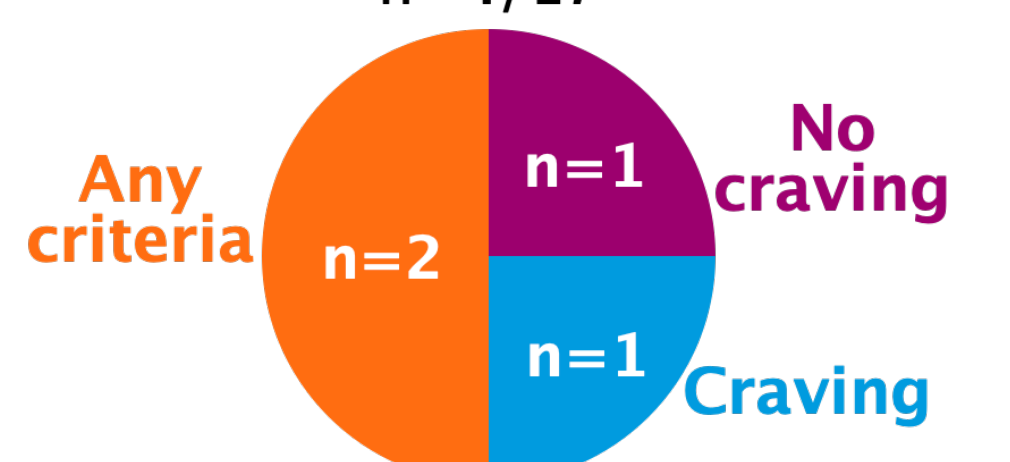


n=13/17  
Average number of criteria = 5



 Cannabis  
(n=17)

n=4/17



## DISCUSSION

51% of the sample reported 2 or more SUD diagnostic criteria at inclusion with an average number of DSM-5 criteria of 3, 5 and 5 for alcohol, tobacco and cannabis respectively. In most cases (65%, 89% and 92%), craving was reported.

Among users with only one or no SUD diagnostic criteria 3, 1 and 1 people reported craving for alcohol, tobacco and cannabis respectively.

## CONCLUSION

Majority of users reporting craving already met criteria for SUD. Only a minority of users without SUD reported craving. One year outcome will allow to determine whether craving predicts SUD.