# Effectiveness of a smoking cessation intervention for people with severe mental illness treated in ambulatory mental healthcare in the Netherlands: the KISMET trial

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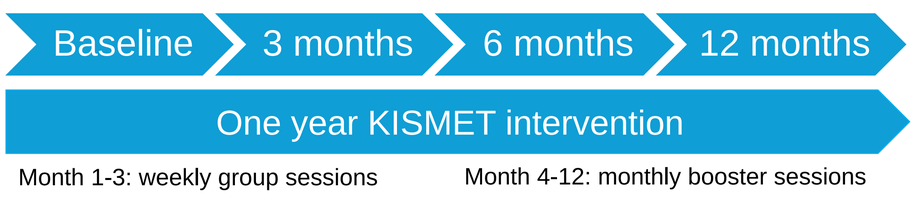
## Background

- Smoking is highly prevalent among people with severe mental illness (SMI): around **80% of people with SMI**
- Smoking rates **2-3 times higher** than in general population
- Up to **25 life years lost** due to associated diseases
- Tobacco smoking is an important lifestyle factor contributing to **poorer physical and mental health**
- Evidence for **effective smoking cessation (SC) interventions** is scarce

## Methods

- **Research design:** cluster-randomised controlled trial carried out in **21 ambulatory mental healthcare teams**
- **Inclusion:** diagnosis SMI, current smoker, >18 years old, motivation to quit
- **Primary outcomes:** biochemically verified **smoking status** (through carbon monoxide) at every visit
- **Secondary outcomes include:**
  - ❖ **Depression and anxiety** with the Hospital Anxiety and Depression Scale (HADS) at baseline, 6- and 12-months
  - ❖ **Psychotic symptoms** with the Positive and Negative Syndrome Scale (PANSS-6) at every visit
- **Data collection and intervention timeline**




## Research Objective

To examine the **effectiveness** of a one-year smoking cessation intervention in ambulatory mental healthcare facilities for people with severe mental illness

## The KISMET intervention

- Developed in collaboration with an expert panel applying the Delphi method
- Combined treatment consisting of three components:
  I. Cognitive behavioural group counselling led by two mental healthcare professionals (e.g. clinical nurse specialist, psychologist)
  II. Pharmacological treatment supervised by a psychiatrist (options: nicotine replacement therapy, Cytisine, Bupropion, Nortriptyline)
  III. Peer support group led by an expert-by-experience

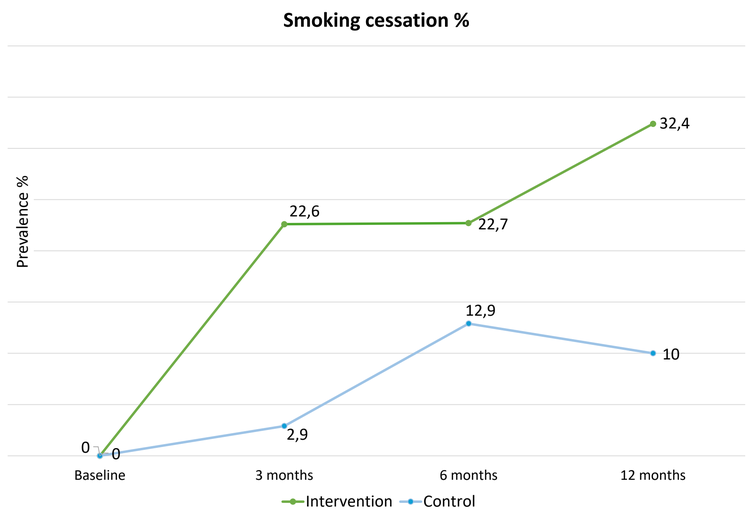
## Baseline demographics and clinical characteristics

**Table 1.** Baseline demographics and clinical characteristics

| | Intervention group (N=74) | TAU (N=42) |
|---|---|---|
| **Demographic characteristics** | | |
| **Age in years (mean (SD))** | 47.2 (11.4) | 46.3 (12.1) |
| **Gender, no. (%)** | | |
| **Woman** | 39 (52.7) | 15 (35.7) |
| **Man** | 35 (47.3) | 27 (64.3) |
| **Partner, no. (%)** | 12 (16.2) | 11 (26.2) |
| **No partner, no (%)** | 62 (83.8) | 31 (73.8) |
| **Clinical characteristics** | | |
| **Primary DSM-5 diagnosis, no (%)** | | |
| **Schizophrenia spectrum** | 45 (59.2) | 16 (39.0) |
| **Bipolar disorder** | 8 (10.5) | 1 (2.4) |
| **Depressive or anxiety disorder** | 12 (15.8) | 11 (26.8) |
| **Personality disorder** | 5 (6.6) | 7 (17.1) |
| **Autism spectrum** | 2 (2.6) | 2 (4.9) |
| **Other psychiatric disorders*** | 4 (5.3) | 4 (9.8) |
| **Body mass index (mean, (SD))** | 28.9 (7.5) | 27.9 (5.4) |
| **Number of cigarettes per day (mean, (SD))** | 19 (10.7) | 17 (9.4) |
| **HADS anxiety scale** | 9.1 (4.9) | 8.2 (5.5) |
| **HADS depression scale** | 7.6 (4.5) | 7.2 (5.1) |
| **PANSS-6 psychotic symptoms** | 13.2 (6.6) | 10.8 (5.0) |
| **Use of antipsychotic medication, no (%)** | 46 (51.7) | 26 (59.1) |
| **Use of antidepressive medication, no (%)** | 51 (57.3) | 32 (72.7) |

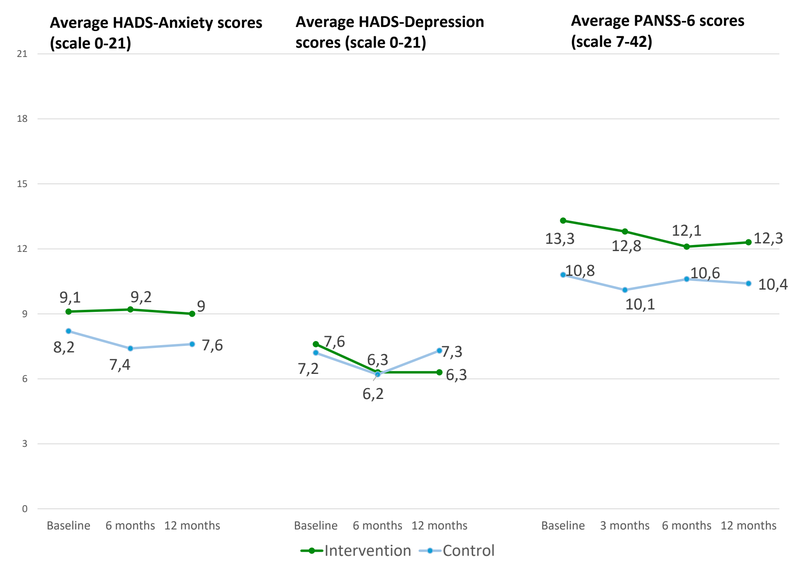
## Key preliminary findings 1: Positive effect of KISMET intervention on smoking behaviour

- **32.4% of patients** in the intervention group (n=37) quit smoking at 12 months compared to 10.0 % in the TAU group (n=30)
- Differences between groups not significant
- **Drop-out:** 52 patients (58.4%) in intervention group and 14 patients (31.8%) in the TAU group




## Key preliminary findings 2: No differences in mental health outcomes

- **No significant differences** in depression, anxiety and psychotic symptoms between baseline and 12 months between groups




## Conclusions and clinical implications

- Percentage of smoking cessation at 12 months **favours the KISMET intervention**
- **No detrimental effects** on depression, anxiety and psychotic symptoms of the KISMET intervention or smoking cessation within 12 months
- The KISMET intervention **can be offered safely** to people with severe mental illness
- Strategies to **improve inclusion and reduce study attrition** are needed

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