**Supplementary Table 1**. Items used to measure anxiety, depression, mania, and psychotic experiences

|  |
| --- |
| **Psychopathological domain** |
| **Anxiety(CIDI 3.0)** |  |
|  |  Item 1 | SC20a “Have you ever in your life had an attack of fear or panic when all of a sudden you felt very frightened, anxious, or uneasy?” |
|  |  Item 2 | SC20a a “Have you ever had an attack when all of a sudden you became very uncomfortable, either became short of breath, dizzy, nauseous, or your heart pounded, or you thought that you might lose control, die, or go crazy?” |
|  |  Item 3 | SC26a “Did you ever have a time in your life when you were a “worrier” – that is, when you worried a lot more about things than other people with the same problems as you?” |
|  |  Item 4 | SC26aa “Did you ever have a time in your life when you were much more nervous or anxious than most other people with the same problems as you?”SC26ba “Did you ever have a period lasting one month or longer when you were anxious and worried most days?” |
|  |  Item 5 | SC29a “Was there ever a time in your life when you felt very afraid or really, really shy with people, like meeting new people, going to parties, going on a date, or using a public bathroom?” |
|  |  |  |
| **Depression(CIDI 3.0)** |  |
|  |  Item 1 | SC21a “Have you ever in your life had a period lasting several days or longer when most of the day you felt sad, empty or depressed?” |
|  |  Item 2 | SC22a “Have you ever had a period lasting several days or longer when most of the day you were very discouraged about how things were going in your life?” |
|  |  Item 3 | SC23a “Have you ever had a period lasting several days or longer when you lost interest in most things you usually enjoy like work, hobbies, and personal relationships?” |
|  |  |  |
| **Mania(CIDI 3.0)** |  |
|  | Item 1 | SC24a “Have you ever had a period lasting four days or longer when you became so happy or excited that you either got into trouble, people worried about you, or a doctor said you were manic?” |
|  | Item 2 | SC25a “Have you ever had a period lasting four days or longer when most of the time you were very irritable, grumpy, or in a bad mood?” |
|  |
| **Supplementary Table 1. (continued)** Items used to measure anxiety, depression, mania, and psychotic experiences  |
| **Psychotic experiences**  |
|  | Item 1 | “people were spying on you” |
|  | Item 2 | „people were following you“ |
|  | Item 3 | “you were secretly being tested on” |
|  | Item 4 | “someone was conspiring against you” |
|  | Item 5 | “a 'double' had taken the place of a loved one” |
|  | Item 6 | “someone was reading your mind” |
|  | Item 7 | “you could hear the thoughts of others” |
|  | Item 8 | “others could hear your thoughts” |
|  | Item 9 | “alien thoughts were placed in your head” |
|  | Item 10 | “someone took thoughts from your head” |
|  | Item 11 | “special messages were sent to you through media” |
|  | Item 12 | “you were influenced by strange energies” |
|  | Item 13 | “you were being controlled by an outer force” |
|  | Item 14 | “your thoughts were being influenced by machines” |
|  | Item 15 | “any other delusion reported by subject” |
|  | Item 16 | “you saw things that no one else could see” |
|  | Item 17 | “you could hear things that no one else could hear” |
|  | Item 18 | “your own thoughts were broadcasted” |
|  | Item 19 | “you smelled strange things, that others could not smell” |
|  | Item 20 | “you had strange sensations, like being touched when no one was around” |

*Note*: CIDI, Composite International Diagnostic Interview
a denotations are based on screening items of the CIDI Version 3.0

**Supplementary Table 2.** Basic characteristics of groups derived from 5212 participants

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Overall number of observations(N=14973) | Group 1:Nosymptoms*(N*= 6901) | Group 2:Affectivedisturbance(*N*= 6534) | Group 3:Psychotic experience(*N*= 261) | Group 4:Affective disturbance + moderate psychosis e(*N*= 879) | Group 5:Affective disturbance + high psychosis e*(N*= 398) | test statistics | p |
| Age (years), mean (S.D.) | 48.9 (12.9) | 46.0 (12.3) | 46.7 (13.2) | 44.8 (12.6) | 43.3 (12.8) | F= 41.56, df= 4 | <0.001 |
| Gender, n (%) |  |  |  |  |  |  |  |
|  | male | 3448 (50.0) | 2693 (41.2) | 111 (42.5) | 315 (35.8) | 152 (38.2) | χ2 = 144.42, df= 4 | <0.001 |
|  | female | 3453 (50.0) | 3841 (58.8) | 150 (57.4) | 564 (64.2) | 246 (61.8) |
|  |  |  |  |  |  |  |  |  |
| Level of education, n (%)  |  |  |  |  |  |  |  |
|  | primary | 267 (3.9) | 273 (4.2) | 13 (5.0) | 54 (6.1) | 22 (5.5) | χ2 = 91.94, df= 12 | <0.001 |
|  | lower secondary | 1773 (25.7) | 1658 (25.4) | 77 (29.5) | 265 (30.2) | 131 (32.9) |
|  | higher secondary | 2154 (31.2) | 2115 (32.4) | 98 (37.6) | 319 (36.3) | 146 (36.7) |
|  | higher professional | 2707 (39.2) | 2488 (38.1) | 73 (28.0) | 241 (27.4) | 99 (24.9) |
|  |  |  |  |  |  |  |  |  |
| Urbanicity a, f |  |  |  |  |  |  |  |
|  | countryside | 705 (10.2) | 550 (8.4) | 26 (10.0) | 66 (7.5) | 29 (7.3) | χ2 = 44.09, df= 16 | <0.001 |
|  | village | 2777 (40.3) | 2508 (38.4) | 111 (42.5) | 337 (38.3) | 145 (36.5) |
|  | small city  | 885 (12.8) | 846 (13.0) | 37 (14.2) | 109 (12.4) | 68 (17.1) |
|  | medium city | 1030 (14.9) | 1110 (17.0) | 36 (13.8) | 147 (16.7) | 66 (16.6) |
|  | big city | 1498 (21.7) | 1516 (23.2) | 51 (19.5) | 220 (25.0) | 89 (22.4) |
|  |  |  |  |  |  |  |  |  |
| Minority status b |  |  |  |  |  |  |  |
|  | yes | 408 (5.9) | 443 (6.8) | 15 (5.75) | 77 (8.8) | 51 (12.8) | χ2 = 37.29, df= 4 | <0.001 |
|  | no | 6493 (94.1) | 6091 (93.2) | 246 (94.3) | 802 (91.2) | 347 (87.2) |
|  |  |  |  |  |  |  |  |  |
| Regular cannabis use c, f |  |  |  |  |  |  |  |
|  | yes | 45 (0.7) | 181 (2.9) | 6 (2.3) | 47 (5.6) | 37 (9.9) | χ2 = 239.76, df= 4 |  <0.001 |
|  | no | 6737 (99.3) | 6120 (97.1) | 252 (97.7) | 786 (94.4) | 336 (90.1) |
|  |  |  |  |  |  |  |  |  |
| Childhood trauma (80th perc.) d |  |  |  |  |  |  |  |
|  | yes | 754 (10.9) | 1483 (22.7) | 56 (21.5) | 312 (35.5) | 194 (48.7) | χ2 = 743.86, df= 4 | <0.001 |
|  | no | 6147 (89.1) | 5051 (77.3) | 205 (78.5) | 567 (64.5) | 204 (51.3) |
| **Supplementary Table 2 (continued)** Basic characteristics of groups derived from 5212 participants |
|  |  |  |  |  |  |  |  |  |
|  | Depression | - | 4615 (70.6) | - | 685 (77.9) | 342 (85.9) | - | - |
|  | Anxiety | - | 4838 (74.0) | - | 722 (82.1) | 363 (91.2) |
|  | Mania | - | 2455 (37.6) | - | 424 (48.2) | 241 (60.6) |

*Note:* Data with an overall number of 14973 observations from surveys of 5212 participants who completed all assessment at T1, including the digit-span task and with potentially missing data at T2

a defined as exposure to urban environment until the age of 16 years, classified based on Dutch classification data of population density: countryside (large distance to amenities), village (<25000 inhabitants), small city (25000 – 50000 inhabitants), medium city (50000 – 100000 inhabitants), and larger cities (>100000 inhabitants).

b born in any other country than Netherlands

c regular cannabis use was based on the section of Illegal Substance Use from CIDI 3.0. A pattern of use during the lifetime period of heaviest use of once per week or more were used as the cut-off.

d based on sum scores of items asking for five types of childhood trauma before the age of 16: two incidents or more of emotional neglect (not listened to, ignored or unsupported), physical abuse (kicked, hit, bitten or hurt with object or hot water), psychological abuse (yelled at, insulted, unjustly punished, treated, threatened, belittled or blackmailed) or one incidence or more of sexual abuse (any unwanted sexual experience) and peer victimization (bullying). The childhood trauma sum score was dichotomized at the 80th percentile.

e defined as: moderate psychosis, 1-2 psychotic experiences; high psychosis, 3 or more psychotic experiences or psychosis-related help-seeking behaviour
f number of missing values: urbanicity: 11 observations;cannabis use: 426 observations

| **Supplementary Table 3.** Model fit statistics for multinomial logistic regression models  |
| --- |
|  |  |  |  |  |  |  |
|  |  | **df** | **LL** | **AIC** | **BIC** |  |
| Models regarding JTC bias |  |  |  |  |  |  |
|  | Model 1 |  | 8 | -13734.56 | 27485.12 | 27545.03 |  |
|  | Model 2 |  | 20 | -13515.73 | 27071.46 | 27221.23 |  |
|  | Model 3 |  | 36 | -13177.58 | 26427.17 | 26696.75 |  |
|  | Model 4 |  | 40 | -13152.55 | 26385.11 | 26684.65 |  |
|  |  |  |  |  |  |  |  |
| Models regarding WMP |  |  |  |  |  |  |
|  | Model 1 |  | 8 | -15196.59 | 30409.18 | 30469.86 |  |
|  | Model 2 |  | 20 | -14961.39 | 29962.78 | 30114.46 |  |
|  | Model 3 |  | 36 | -14567.11 | 29206.21 | 29479.25 |  |

*Note:* df, degrees of freedom; LL= Log-likelihood; AIC, Akaike Information Criterion; BIC, Bayesian Information Criterion.