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## Outcome of a psychosocial health promotion intervention aimed at improving physical health and reducing alcohol use in patients with schizophrenia and psychotic disorders (MINT)

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Table 1. IMPaCT health promotion therapy in Sweden

| <u>Module<sup>1</sup></u>            | <u>Individual or group meetings</u> |
|--------------------------------------|-------------------------------------|
| Module 1: Basic CBT in mental health | ≤ 8                                 |
| Module 2: Smoking                    | ≤ 8                                 |
| Module 3: Diabetes                   | ≤ 8                                 |
| Module 4: Healthy eating             | ≤ 8                                 |
| Module 5: Alcohol                    | ≤ 8                                 |
| Module 6: Exercise                   | ≤ 8                                 |

<sup>1</sup>Techniques from CBT, cognitive behavioral therapy and/or MI, Motivational interview were integrated in all modules

Table 2. Pre-baseline characteristics of patients in the intervention group (n= 119<sup>1</sup>) and the control group (n= 1020<sup>1</sup>)

|   |        | <i>Intervention group</i> | <i>Control group</i> | <i>p</i> |
|---|--------|---------------------------|----------------------|----------|
| <i>Sociodemographic variables</i>   |        |                           |                      |          |
| Age (years)   | Mean   | 46.5                      | 46.8                 | 0.799    |
| Male sex  | % (n)  | 50 (59)                   | 55 (564)             | 0.236    |
| Level of education (college or above)   | % (n)  | 27 (31)                   | 33 (304)             | 0.193    |
| Patient's main psychiatric diagnosis <sup>2</sup>                               |        |                           |                      | 0.010    |
| Schizophrenia   | % (n)  | 48 (53)                   | 55 (508)             |          |
| Schizoaffective disorder  | % (n)  | 17 (19)                   | 11 (100)             |          |
| Delusional disorder   | % (n)  | 13 (14)                   | 6 (53)               |          |
| Psychosis (unspecified)   | % (n)  | 7 (8)                     | 13 (117)             |          |
| Bipolar disorder  | % (n)  | 5 (5)                     | 7 (63)               |          |
| Other disorder  | % (n)  | 11 (12)                   | 9 (86)               |          |
| <i>Cardiometabolic and lifestyle measures</i>                                   |        |                           |                      |          |
| Diagnosis of diabetes   | n (%)  | 11 (12)                   | 88 (10)              | 0.772    |
| Smoker ("yes")  | % (n)  | 39 (45)                   | 42 (389)             | 0.561    |
| Number of cigarettes <sup>3</sup>   | M (SD) | 19.8 (10.79)              | 19.6 (12.73)         | 0.947    |
| Central obesity <sup>4</sup>  | % (n)  | 77 (80)                   | 65 (590)             | 0.013    |
| <i>Self-reported health and quality of life</i>                                 |        |                           |                      |          |
| EQ5D VAS score  | M (SD) | 61 (19.9)                 | 64 (20.3)            | 0.181    |
| EQ5D index assessment   | M (SD) | 0.73 (0.219)              | 0.74 (0.250)         | 0.296    |
| <i>Psychological functioning and severity of illness</i>                        |        |                           |                      |          |
| Better current social, occupational, and psychological functioning <sup>5</sup> | % (n)  | 32 (33)                   | 47 (422)             | 0.003    |
| More severe illness <sup>6</sup>  | % (n)  | 63 (66)                   | 52 (456)             | 0.029    |

Abbreviations: EQ VAS, visual analog scale of the EuroQol five dimensions questionnaire; EQ5D, EuroQol five dimensions questionnaire; GAF, Global Assessment of Functioning scale; CGI, Clinical Global Impressions scale

<sup>1</sup> All patients included at pre-baseline. Sporadic missing values occur.

<sup>2</sup> According to DSM-IV.

<sup>3</sup> Only smokers: n<sub>MINT</sub>= 40 and n<sub>Controls</sub>= 351

<sup>4</sup> Waist circumference >94 cm for Europid men and >80 cm for Europid women in accordance with the International Diabetes Federation consensus definition of the metabolic syndrome.

<sup>5</sup> GAF score > 50. Scores are divided into numerical ranges (0, 1-10, 11-20, and so on, up to 91-100); lower scores indicate worse functioning and higher scores, better functioning.

<sup>6</sup> CGI severity of illness global subscale score >3. Scores range from 1-7; higher scores indicate more severe illness (1=normal, not at all ill; 2=borderline mentally ill; 3=mildly ill; 4=moderately ill; 5=markedly ill; 6=severely ill; 7=among the most extremely ill patients).

Table 3. Changes in the intervention group during the run-in period 6 months before the start of the intervention (n= 119<sup>5</sup>).

|  | 6 mo. before the start of<br>the intervention |          |           | The start of the<br>intervention |           |          |                       |
|--|---|----------|-----------|----------------------------------|-----------|----------|-----------------------|
| Variable   | <i>n</i>                                      | <i>M</i> | <i>SD</i> | <i>M</i>                         | <i>SD</i> | <i>p</i> | <i>r</i> <sup>6</sup> |
| <i>Cardiometabolic and lifestyle measures</i>                        |   |          |           |                                  |           |          |                       |
| Smoker (“yes”)   | 107   | 40%      | 49.3%     | 38%                              | 48.8%     | 0.417    | 0.88                  |
| Number of cigarettes   | 38  | 19.8     | 10.62     | 18.9                             | 11.38     | 0.538    | 0.71                  |
| Body mass index  | 100   | 30.7     | 6.27      | 30.3                             | 6.20      | 0.013    | 0.97                  |
| Waist circumference in cm  | 95  | 105.5    | 16.00     | 103.3                            | 16.07     | 0.002    | 0.91                  |
| Systolic blood pressure  | 98  | 129.9    | 16.46     | 126.4                            | 14.70     | 0.034    | 0.45                  |
| Diastolic blood pressure   | 98  | 82.9     | 11.04     | 82.1                             | 10.45     | 0.367    | 0.62                  |
| Pulse rate   | 96  | 79.9     | 14.23     | 76.9                             | 14.07     | 0.008    | 0.71                  |
| Triglycerides  | 97  | 1.80     | 1.22      | 1.68                             | 1.54      | 0.244    | 0.50                  |
| Cholesterol  | 97  | 5.43     | 0.97      | 5.35                             | 0.99      | 0.431    | 0.74                  |
| HDL cholesterol  | 97  | 1.24     | 0.42      | 1.25                             | 0.37      | 0.429    | 0.87                  |
| LDL cholesterol  | 90  | 3.44     | 0.86      | 3.39                             | 0.85      | 0.473    | 0.73                  |
| Fasting serum glucose  | 93  | 5.93     | 2.23      | 6.12                             | 2.46      | 0.053    | 0.79                  |
| Long-term blood glucose control<br>(HbA1c)                           | 97  | 40.6     | 10.70     | 40.3                             | 13.41     | 0.029    | 0.77                  |
| Alcohol consumption (AUDIT)  | 108   | 3.3      | 3.71      | 3.1                              | 3.55      | 0.317    | 0.59                  |
| <i>Self-reported health and quality of life</i>                      |   |          |           |                                  |           |          |                       |
| General health   | 105   | 2.48     | 1.01      | 2.24                             | 0.84      | 0.004    | 0.61                  |
| EQ5D VAS score   | 104   | 60.8     | 20.32     | 63.5                             | 17.82     | 0.083    | 0.65                  |
| EQ5D index   | 104   | 0.73     | 0.22      | 0.76                             | 0.23      | 0.139    | 0.39                  |
| <i>Psychological functioning and severity<br/>of illness</i>         |   |          |           |                                  |           |          |                       |
| Current social, occupational, and<br>psychological functioning (GAF) | 92  | 48.3     | 10.93     | 49.1                             | 11.78     | 0.292    | 0.81                  |
| Severity of illness (CGI)  | 91  | 3.87     | 1.33      | 3.65                             | 1.36      | 0.012    | 0.82                  |

HDL, high-density lipoprotein; LDL, low-density lipoprotein; AUDIT, Alcohol Disorders Identification Test; EQ5D VAS, visual analog scale of the EuroQol five dimensions questionnaire; EQ5D, EuroQol five dimensions questionnaire; GAF, Global Assessment of Functioning scale; CGI, Clinical Global Impressions scale

<sup>5</sup> Sporadic missing values occur.

<sup>6</sup> Pearson’s product moment (parametric) or Kendall’s rank correlation (non-parametric) coefficient.



Table 4. Changes in cardiometabolic and lifestyle measures, self-reported health and quality of life, and psychological functioning and severity of illness in the intervention group (n= 88<sup>1</sup>) and control group (n= 570<sup>1</sup>) between the start and the end of the intervention (IMPACT therapy)

| Variable                                      | Intervention group |       |               |       | Control group |       |               |       | ANOVA |       |                |
|---|--------------------|-------|---------------|-------|---------------|-------|---------------|-------|-------|-------|----------------|
|   | Measurement 1      |       | Measurement 1 |       | Measurement 1 |       | Measurement 2 |       | Group | Time  | Time*Group     |
|   | M                  | SD    | M             | SD    | M             | SD    | M             | SD    | p     | p     | p              |
| <i>Cardiometabolic and lifestyle measures</i> |                    |       |               |       |               |       |               |       |       |       |                |
| Smoker %/n                                    | 37%                | 32    | 34%           | 29    | 39%           | 204   | 39%           | 205   | 0.568 | 0.254 | 0.203          |
| Number of cigarettes <sup>2</sup>             | 16.8               | 11.2  | 13.2          | 12.1  | 17.5          | 13.6  | 17.5          | 13.2  | 0.422 | 0.672 | See footnote 3 |
| Body mass index                               | 30.4               | 6.02  | 30.5          | 5.57  | 29.1          | 6.02  | 29.2          | 6.01  | 0.067 | 0.615 | 0.972          |
| Waist circumference in cm                     | 103.9              | 15.9  | 105.4         | 14.4  | 102.4         | 14.9  | 103.0         | 15.0  | 0.241 | 0.010 | 0.272          |
| Systolic blood pressure                       | 127                | 14.5  | 130           | 14.6  | 128           | 18.1  | 129           | 16.7  | 0.902 | 0.040 | 0.221          |
| Diastolic blood pressure                      | 83                 | 10.3  | 82            | 10.0  | 83            | 11.7  | 83            | 11.3  | 0.517 | 0.742 | 0.690          |
| Triglycerides                                 | 1.75               | 1.68  | 1.70          | 1.01  | 1.79          | 1.28  | 1.74          | 1.22  | 0.815 | 0.394 | 0.987          |
| Cholesterol                                   | 5.40               | 1.00  | 5.39          | 1.04  | 5.45          | 1.18  | 5.37          | 1.18  | 0.925 | 0.420 | 0.527          |
| HDL cholesterol                               | 1.25               | 0.39  | 1.29          | 0.34  | 1.17          | 0.37  | 1.18          | 0.39  | 0.024 | 0.106 | 0.215          |
| LDL lipoprotein cholesterol                   | 3.45               | 0.84  | 3.41          | 0.90  | 3.50          | 0.98  | 3.43          | 0.99  | 0.742 | 0.237 | 0.717          |
| Fasting serum glucose                         | 6.26               | 2.63  | 5.93          | 1.73  | 5.77          | 1.59  | 5.77          | 1.63  | 0.090 | 0.054 | 0.053          |
| ALT   | 0.45               | 0.266 | 0.44          | 0.262 | 0.57          | 0.445 | 0.56          | 0.432 | 0.008 | 0.569 | 0.974          |
| ALP   | 1.11               | 0.330 | 1.12          | 0.352 | 1.17          | 0.368 | 1.18          | 0.367 | 0.143 | 0.497 | 0.956          |
| GGT   | 0.40               | 0.500 | 0.37          | 0.567 | 0.62          | 0.858 | 0.50          | 0.761 | 0.042 | 0.058 | 0.245          |

***Self-reported health  
and quality of life***

|                          |      |       |      |       |      |       |      |       |       |       |       |
|--------------------------|------|-------|------|-------|------|-------|------|-------|-------|-------|-------|
| General health           | 2.19 | 0.84  | 2.20 | 0.86  | 2.40 | 0.96  | 2.25 | 0.95  | 0.178 | 0.171 | 0.111 |
| EQ5D VAS score           | 64.6 | 18.0  | 64.3 | 19.9  | 63.0 | 21.2  | 64.8 | 21.1  | 0.801 | 0.504 | 0.365 |
| EQ5D index<br>assessment | 0.76 | 0.230 | 0.78 | 0.214 | 0.72 | 0.259 | 0.75 | 0.250 | 0.168 | 0.073 | 0.442 |

***Psychological  
functioning and  
severity of illness***

|  |      |      |      |      |      |      |      |      |       |       |       |
|--|------|------|------|------|------|------|------|------|-------|-------|-------|
| Current social,<br>occupational, and<br>psychological<br>functioning (GAF) | 48.8 | 10.5 | 50.6 | 11.1 | 52.0 | 12.6 | 52.0 | 13.1 | 0.102 | 0.148 | 0.120 |
| Severity of illness<br>(CGI)   | 3.56 | 1.35 | 3.61 | 1.35 | 3.59 | 1.26 | 3.61 | 1.16 | 0.925 | 0.577 | 0.832 |

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HDL, high-density lipoprotein; LDL, low-density lipoprotein; ALT, alanine aminotransferase; ALP, alkaline phosphatase; GGT, gamma-glutamyl transpeptidase; EQ5D VAS, visual analog scale of the EuroQol five dimensions questionnaire; EQ5D, EuroQol five dimensions questionnaire; GAF, Global Assessment of Functioning scale; CGI, Clinical Global Impressions scale

<sup>1</sup> Sporadic missing values occur.

<sup>2</sup> Smokers at baseline or follow-up, n<sub>Intervention</sub>= 33 (4 %) and n<sub>Control</sub>= 214 (40%), non-parametric statistics because of skewed distributions.

<sup>3</sup> Change for patients in the intervention group, p= 0.143; and for patients in the control group, p= 0.873 (Wilcoxon matched pairs test).