# Mental health and SES: a comparative study of the general and prison population in Belgium

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## Introduction

Prison-inmates are known to have a higher prevalence of (severe) mental illnesses than the majority population (ref.). Also, people with lower socio-economic status (SES) are at greater risk of experiencing mental illness during their lifetime than their counterparts with a higher SES (ref).

### **Methods and Materials**

Data from the Belgian National Health Survey in 2012 (general population) and Health Profile of Detainees-study in 2015 (prison population) was used. Logistic regressions were carried out to estimate the effect of SES and being in prison on several mental health indicators. Interaction-effects between SES and being in prison were constructed to evaluate whether being in prison changes the relation between SES and mental health.

|  | Data  |  |  |  |  |
|--|---|--|--|--|--|
| Belgian National Health Survey (2012)  | Health profile of Detainees (2015)                                  |  |  |  |  |
| 46961 participants (over 18 years old) | 751 participants (over 18 years old)                                |  |  |  |  |
| Thorough Belgium                       | In 12 Flemish prisons   |  |  |  |  |
| Individual questionnaire (written)     | Individual questionnaire (written)                                  |  |  |  |  |
|  | Variables   |  |  |  |  |
|  | Dependent variables   |  |  |  |  |
| Sleeping disorder                      | Composite measure of following items:                               |  |  |  |  |
|  | How much, in the past week, have you been distressed by             |  |  |  |  |
|  | -Trouble falling asleep   |  |  |  |  |
|  | -Awakening early in the moring                                      |  |  |  |  |
|  | -Sleep that is restless or disturbed                                |  |  |  |  |
| Lifetime suicidal ideation             | Have you ever seriously thought of ending your life?                |  |  |  |  |
|  | Independent variables   |  |  |  |  |
| Age                                    | Continuous - Range: 18-105  |  |  |  |  |
| Gender                                 | Male (ref) - Female   |  |  |  |  |
| Nationality                            | Belgian (ref) – Non Belgian   |  |  |  |  |
| SES                                    | Operationalized as educational attainment - low, middle, high (ref) |  |  |  |  |
| Population                             | National Health Survey (ref) - Prison                               |  |  |  |  |
| Interaction 1                          | SES:low*Population  |  |  |  |  |
| Interaction 2                          | SES:middle*Population   |  |  |  |  |

#### Aim

To investigate how SES and being in prison affects mental health and if being in prison affects the relationship between low SES and mental health in any way.

#### **Results**

| Sleeping Disorder |          |             |          |              | Lifetime Suicidal Ideation |              |           |              |
|-------------------|----------|-------------|----------|--------------|----------------------------|--------------|-----------|--------------|
|                   | Model 1  |             | Model 2  |              | Model 1                    |              | Model 2   |              |
|                   | Exp(B)   | 95%-CI's    | Exp(B)   | 95%-CI's     | Exp(B)                     | 95%-CI's     | Exp(B)    | 95%-CI's     |
| Age               | 1,007*** | 1,006-1,009 | 1,007*** | 1,006-1,009  | 0,982***                   | 0,980-0,985  | 0,982***  | 0,980-0,984  |
| Gender            | 1,402*** | 1,326-1,483 | 1,402*** | 1,325-1,483  | 1,324***                   | 1,219-1,437  | 1,323***  | 1,219-1,437  |
| Nationality       | 0,855*   | 0,804-0,975 | 0,881**  | 0,800-0,970  | 0,918                      | 0,809-1,0,43 | 0,912     | 0,802-1,036  |
| SES:low           | 1,562*** | 1,455-1,677 | 1,582*** | 1,472-1,699  | 1,088                      | 0,982-1,205  | 1,107     | 0,996-1,231  |
| SES:middle        | 1,263*** | 1,174-1,358 | 1,263*** | 1,173-1,359  | 1,156**                    | 1,048-1,275  | 1,170**   | 1,059-1,293  |
| Population        | 5,096*** | 4,319-6,012 | 6,861*** | 4,415-10,664 | 10,564***                  | 8,854-12,605 | 15,349*** | 9,618-24,493 |
| Interaction 1     |          |             | 0,643    | 0,395-1,045  |                            |              | 0,649     | 0,388-1,085  |
| Interaction 2     |          |             | 0,861    | 0,508-1,460  |                            |              | 0,649     | 0,373-1,131  |

## **Conclusions**

Our results show that the subject of mental health in prisons should be of main concern to policy makers, since detainees are significantly more at risk of experiencing worse mental health than the general population. The odds to have a sleeping disorder and to experience suicidal ideation during their lifetime is 5 and 10 times higher than for the general population, controlling for other characteristics. Also, people with low and educational attainment are at more risk to suffer from a sleeping disorder and to have suicidal thoughts than people with a high educational attainment. However, no indication was found that the effect of SES on mental health indicators was different for the prison population than for the general population.





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