

EXERCISING DEPRESSION

MARC VAN DER MEIJDEN
MASTER THESIS 2019

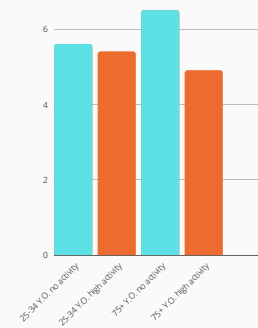
Physical activity is "any bodily movement produced by skeletal muscles that results in energy expenditure"

Depressive symptoms include: feeling depressed, feeling everything is an effort, sleeping poorly, feeling lonely, not enjoying life, feeling sad, and not being able to get going

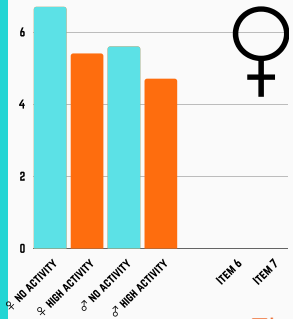
Severity of depressive symptoms can vary from mild to severe, and can lead to various emotional and physical problems, as well as decrease a person's ability to function at work and at home

PHYSICAL ACTIVITY BENEFITS...

...old people more than young people ...
-Older people have higher rates of depressive symptoms.
-But physical activity improves the **immune system**, helps retain **physical ability**, and often leads to a **larger social circle**.



Findings from study: differ in depressive symptoms by age and physical activity level

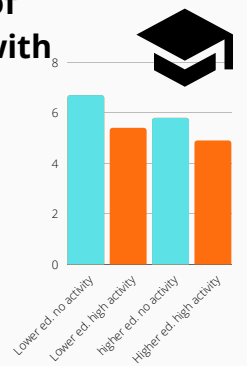


...women more than men...
--Women report **higher levels of depressive symptoms** but any physical activity helps more than for men.

Findings from study: differ in depressive symptoms by gender and physical activity level

...those with lower levels of education more than those with higher education...

Exercise reduces depressive symptoms across all education level, but higher educated people benefit the most



high activity= ●
no activity= ●

...IN REDUCING DEPRESSIVE SYMPTOMS.

MECHANISMS FOR PHYSICAL ACTIVITY REDUCING DEPRESSIVE SYMPTOMS



SIDE NOTE
It is possible that depression also causes a reduction in physical activity

DEPRESSION EPIDEMIC

Depression is the single largest contributor to global disability (7.5% of all years lived with disability in 2015) and in addition is responsible for nearly 800.000 suicide deaths per year.



INCREASED INACTIVITY

in many countries, especially **Western countries**, physical inactivity increased over the last decades.

KEY HYPOTHESIS

Individuals who are more **physically active** in their leisure time are **less depressed** than those with lower levels of physical activity.

DATASET DETAILS

- The **dataset** used is the **7th round of the European Social Survey** (ESS, 2014).
- Provides information on **40185** respondents **aged 14 and older**, who are living across **21 different countries**.
- The ESS 'core module', the 2014th wave provided necessary information on physical activity and depressive symptoms.

INDEPENDENT VARIABLE:
PHYSICAL ACTIVITY

DEPENDENT VARIABLE:
DEPRESSIVE SYMPTOMS

Physical activity had three categories: no activity, insufficient activity (30-120min), and high activity (150min or above).

In this dataset depression was measured using the self-report CESD-8 scale.



WORLD HEALTH ORGANIZATION PHYSICAL ACTIVITY RECOMENDATIONS



- **Adults and elderly** should do at least **150 minutes** of accumulative moderate-intensity activity throughout **a week**,
- OR**
- A shorter, vigorous-intense training.

LIMITATIONS OF STUDY

1. A first drawback is that the design of this study is cross sectional. The data comes from one source at one point in time.
2. The measure of physical activity used in this study is not perfect. There is a chance some respondents from 'high activity' group were put into the 'insufficient' group.