

# NEETs in Scotland: a longitudinal analysis of health effects of NEET experiences

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### Definition

- NEET—young people Not in Employment, Education or Training
- The high level of NEETs is regarded as a serious social problem







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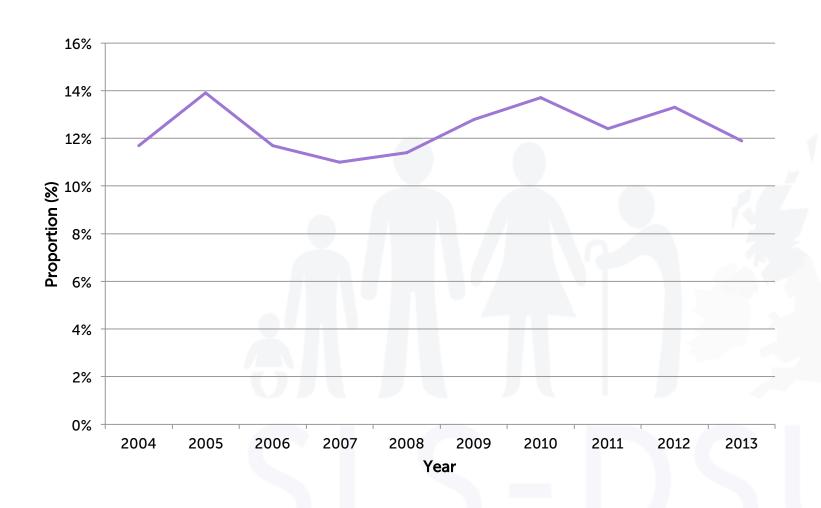
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# Proportion of NEETs in Scotland 2004-2013





### Overview

- In Scotland NEETs are usually defined as those aged 16-19.
- Training Programmes: Modern Apprentices,
   Skillseekers, Get Ready for Work, Training for Work
- Financial schemes: EMAs



# Previous findings

- There is a consistent scarring effect for being unemployed youth in later labour market participation and payment penalty;
- There is a negative effect of NEET experiences on physical, psychological health, and wellbeing;
- The effects of NEET vary with gender, males are shown to suffer poorer performance in labour market while females are shown to suffer in terms of both employment and health.



### Previous studies

- Most studies are descriptive
- Self-reported health outcomes
- Lack of research on long-term effects of NEET on health, especially in the contemporary context



# Research questions

To what extent does NEET status affect health in the long term?



### **Data**

The Scottish Longitudinal Study (SLS)

- Based on 20 dates of birth, semi-random sample, 5.3% of Scottish population (N=260,000)
- Record linking through census, vital registrations, patient records, school census
- Starts from 1991



# Study population



N = 8,588, 11.7% NEETs in 1991



## Hospitalisation

- SMR01, ISD (Information Service Department)
- 2001-2010
- Any admission during the period
- Female pregnancy related admission excluded



### Prescribing data

- ISD (Information Service Department)
- Prescribing information system
  - **●** 2009 2012
  - BNF (British National Formulary codes):
    - 4.2 (antipsychotics)
    - 4.3 (anti-depressants)
    - 4.1.2 (anxiolytics)



#### Methods

- Descriptive analysis
  - Summary by age, gender, qualifications, housing tenure, health
- Statistical analysis:
  - logit regression
    - Outcome
      - hospitalisation, 2001- 2010
      - Poor mental health, 2009-2012

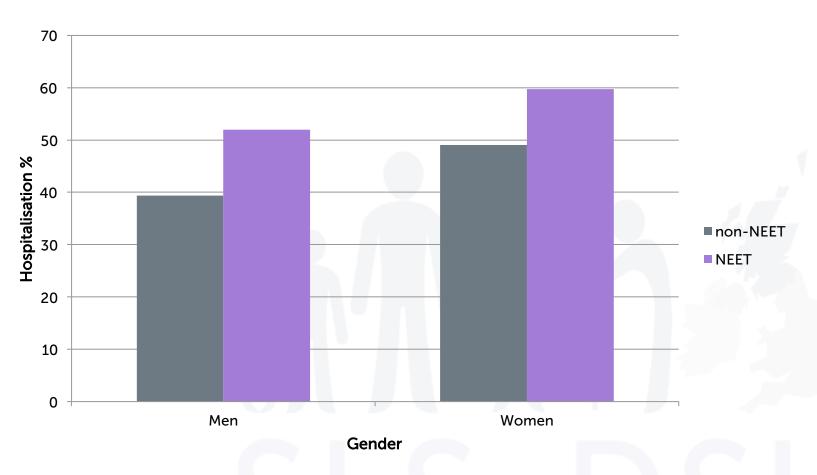


### **LLTI** in 1991





# Hospitalisation 2001-2010 by gender and 1991 NEET status





# Depression & anxiety 2009-2012 by gender and 1991 NEET status





## Modelling analysis

- Outcomes
  - 1. Hospitalisation 2001-2010
  - 2. Depression and anxiety, 2009-2012
- Confounders: age, gender, educational qualification, tenure, deprivation, council
- Variable of interest:
  - NEET status 1991
  - Interaction of 1991 NEET and 2001 NEET status



### Status in 1991 and 2001

1991 2001

**NEET** 

**NEET** 

Non-NEET

Non-NEET

**NEET** 

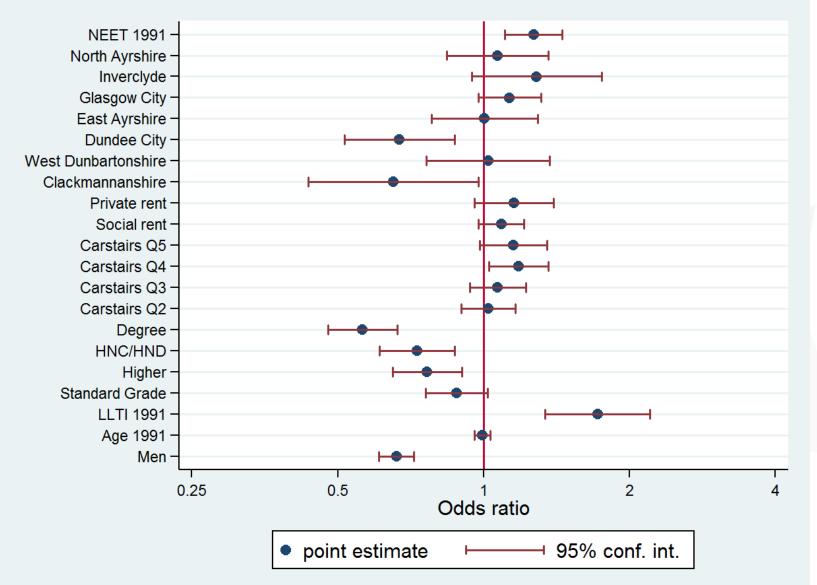
non-NEET

NEET

non-NEET

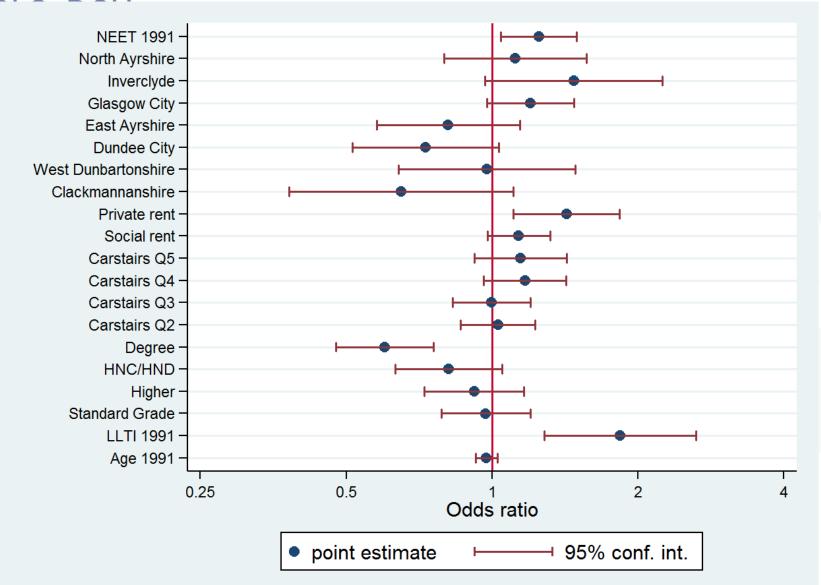


### Hospitalisation, 2001-2010, all



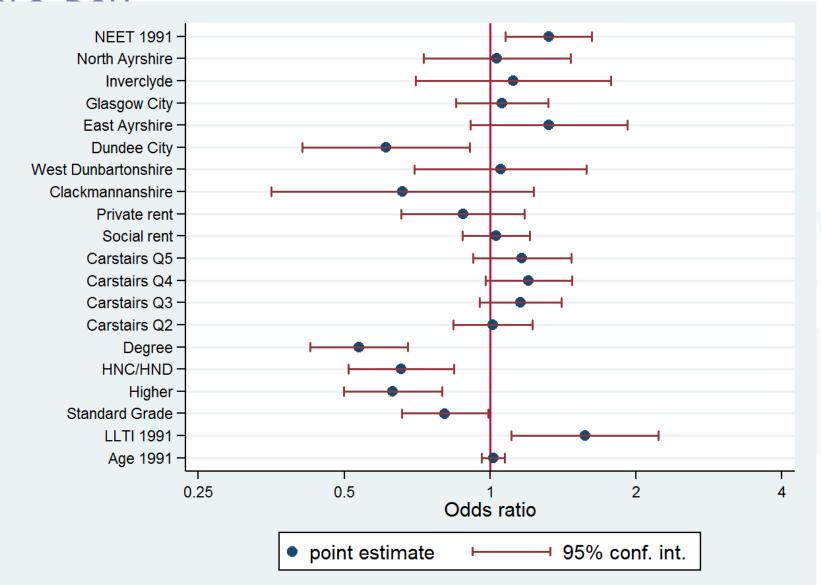


#### Hospitalisation, 2001-2010, women



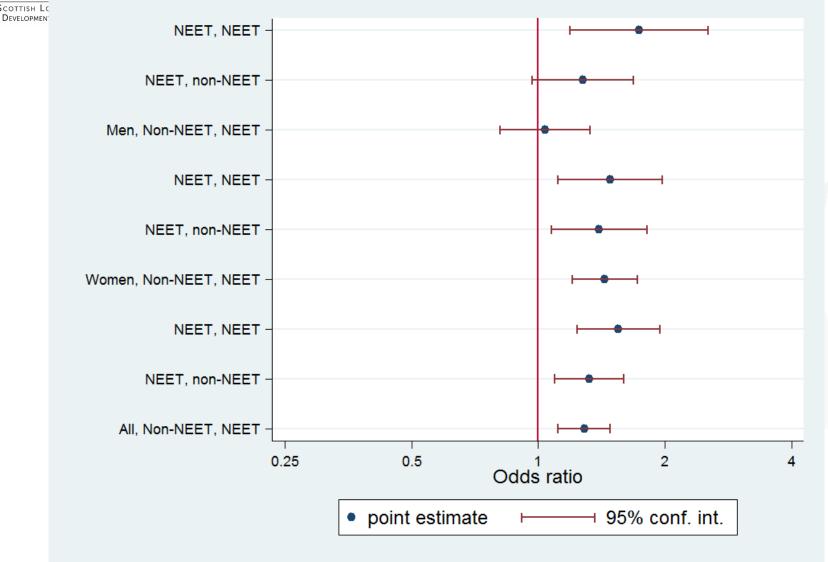


#### Hospitalisation, 2001-2010, men





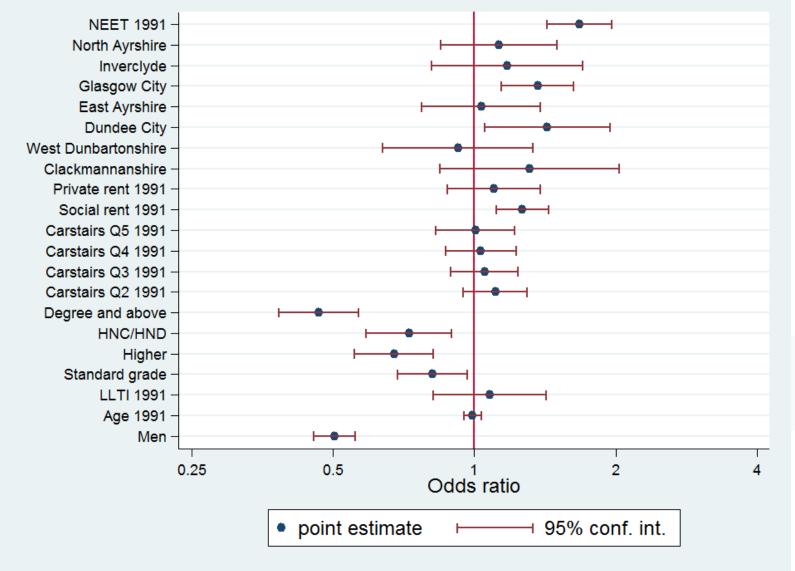
# ORs and CIs of hospitalisation by 1991 & 2001 NEET status



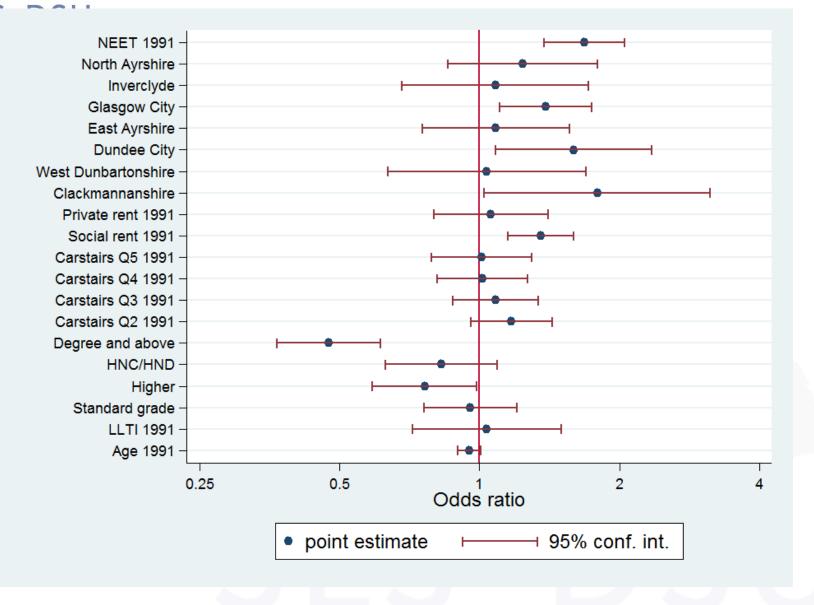


DEVELOP

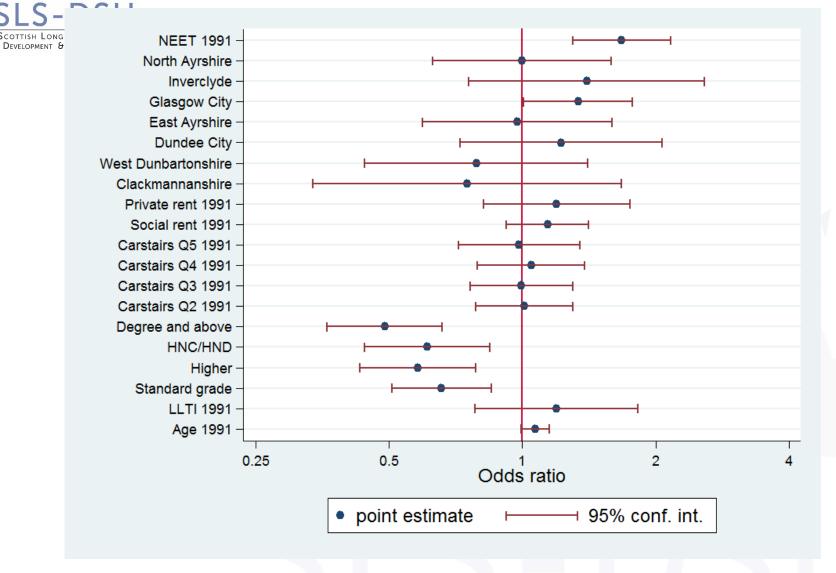
#### Depression and anxiety, 2009-2012, all



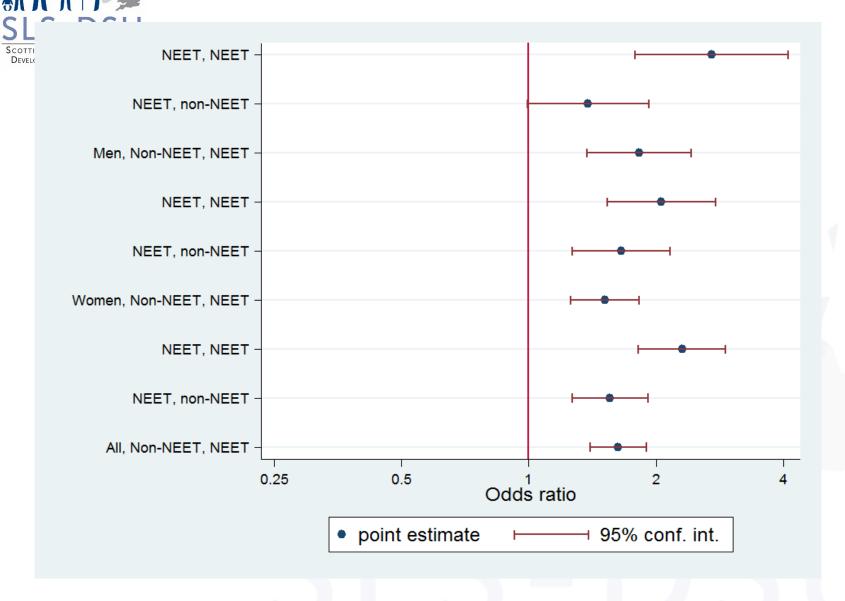
### Depression and anxiety, 2009-2012, women







# ORs and 95% CIs of depression & anxiety by 1991 & 2001 NEET status





### Conclusions

- NEET experiences in 1991 were associated with higher risks of:
  - Hospitalisation
  - Depression and anxiety.
- The higher risk is consistent by gender.
- Being NEET persistently at two time points is associated with the highest risk of poor health, suggestive of cumulative effect
- The effect of 1991 NEET status is not mitigated by involvement of employment and education in 2001.



### Conclusions

- NEET experiences have long term negative effects on health
- Policy intervention is needed to help NEET young people back to work/ education



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