Health consequences of young people not in employment, education or training: A 20 year longitudinal analysis

Zhiqiang Feng[1], Kevin Ralston[1], Dawn Everington[1], Chris Dibben[1], Elspeth Graham[2]
[1]University of Edinburgh
[2]University of St Andrews

Abstract

Young people not in employment, education or training (NEET) are a serious policy concern in many European countries. The Europe 2020 flagship initiative Youth on the Move and the 2012–2013 Youth Opportunities Initiative specify many schemes that aim to reduce the number of NEET young people and re-engage them into education and labour market. The European Commission has introduced new indicators, such as the NEET rate, to monitor the labour market and social situation of young people and facilitate comparison between Member States in the context of the Europe 2020 strategy. This has further strengthened the position of young people in the political agenda (Eurofund, 2012).

Although young people not in employment, education or training have been identified as one of the most vulnerable group since 1990s, little is known about the long-term effect of NEET experiences, especially the health consequences (Scott et al, 2013). Most existing studies are descriptive and focus on short-term outcomes. Many surveys are retrospective and use self-reported measures that may produce recall bias and subjectivity (Bynner and Parsons, 2002: Benjet et al 2012). This paper examines NEETs in Scotland where the prevalence of NEET is persistently high compared to England and many countries in Europe (Scottish Executive, 2006). The research uses the Scottish Longitudinal Study (SLS) and aims to explore the long-term effect of being NEET on mental health in a 20 year follow-up from 1991 to 2010.

Data

The data used in these analyses are from the Scottish Longitudinal Study (SLS). The SLS is an anonymous dataset. It links information from the 1991, 2001, and 2011 censuses. Anyone whose birthdate falls on one of the 20 birthdates chosen by the SLS is included in the sample. The sample members are updated through birth and migration. The SLS covers just over a 5% sample of the Scottish population, and includes about 14,000 members aged 16-19 years old.

One unique feature of SLS is that it links to a wide range of administrative data such as vital events (e.g. birth, death), hospital discharges, and prescribing data. Hospital discharge data include information on inpatients and day cases from NHS hospitals, as well as people admitted to specialist mental health facilities. The prescribing data include information on prescription of antidepressants or antianxiety medications. In addition, the SLS includes school census data which include information on free school meals, exclusions, absences and educational attainment.

Records of young people 16-19 years old at census 1991 were extracted for these analyses. This provides a sample at baseline of 14567. This sample is followed up at both subsequent censuses with a number of health outcomes measured from 1991 and onwards.

NEET classification is based upon an economic activity variable included in the 1991 census. Those who were in employment were coded as non-NEET, as were those who were students, those on

training schemes and waiting to start a job. The unemployed, permanently sick, looking after home/family and other inactive were coded as NEET. There were 1972 individuals coded as NEET, this equivalent to a NEET rate of 13.5% which matches official census releases of full population aggregated data.

The mental health outcome was derived from the prescribing data from the Prescribing Information System (PIS). These data provided information on the prescription of antidepressants and antianxiety medications between 2009 and 2012. If an individual was given any prescription of such medications in the period, then this individual was classified as having suffered from depression and anxiety.

Methods

Both descriptive and statistical analyses were carried out. In the statistical analysis, we fitted a series of logistic regression models separately for the total, males and females. In one set of models we compared NEET young people with their non-NEET peers using a binary indicator. In another set of models, we included a variable indicating changes between NEET status in 1991 and subsequent economic activity in 2001 to predict the probability of depression and anxiety. Thus we were able to examine whether being disengaged from employment and education in both 1991 and 2001 had a cumulative, negative effect on future mental health. We were also able to explore whether moving from 1991 NEET status into employment in 2001, or moving from non-NEET status in 1991 into economically inactive status in 2001, had any effect on later mental health. A number of confounders including age, limiting long term illness, educational qualifications, housing tenure, areal deprivation were controlled for in the model.

Results

From the descriptive summaries, we can see that over half of young people who were NEET in 1991 were treated for depression and anxiety, while in contrast a third of non-NEETs had the same experience.

Logistic regression models were fitted to investigate the relationships between NEET status and the risk of depression and anxiety. For the model for all people, being NEET in 1991 was associated with a higher risk of depression and anxiety, indicating that this group was over 70% (OR: 1.70, 95%CIs: 1.46-1.99) more likely to be treated for depression and anxiety than their counterparts who were non-NEET in 1991.

From the model for the 1991 cohort, we can also see that young adults who were disadvantaged in both 1991 and 2001 (NEET and economically inactive respectively) were 2.7 times (OR 2.71, 95%CIs: 1.78-4.11) as likely as their counterparts who were advantaged at both time points to be treated for depression and anxiety. Those who were non-NEET in 1991 but became economically inactive in 2001 also showed a higher risk of depression and anxiety compared with the reference group, with nearly double the odds of those who were non-NEET in 1991 and economically active in 2001. Young people who changed from being NEET in 1991 to being economically active in 2001 also had higher risks of depression and anxiety, again suggesting the long lasting negative effect of the NEET experience, and that the effect of NEET is not fully offset by entering employment at a later stage.

The results from models separately for males and females show that the association between NEET status and poor mental health remains consistent. Again both males and females who were disengaged from education and employment in both 1991 and 2001 had the highest risk of depression and anxiety indicative of the cumulative effect.

Overall, the results show that NEET experiences are associated with an increased risk of antidepressants and antianxiety treatment in the 20 year follow-up period and that this effect is independent of a number of socio-economic factors at both individual and area levels.

Conclusions

Being NEET is associated with over 70% higher risk of poor mental health compared with their non-NEET peers in the 20 year follow-up period. It appeared that although moving into labour market 10 years later reduced the risk of poor mental health but the risk is not fully attenuated compared with those young people who were non-NEET at two time points. This further shows that being NEET is related to higher risks of poor mental health despite improvement in participation in labour market or education. It is clear that the NEET problem is not entirely economic but also a public health issue. Intervention is necessary to support young NEET people to participate in education or employment.

References

Benjet C, Hernandez-Montoya D, Borges G, Mendez E, Medina-Mora M, Gaxiola S. (2012) Youth who neither study or work: mental health, education and employment. *Salud Publica de Mexico*;54:410-7
Bynner J. & Parsons S. (2002). Social exclusion and the transition from school to work: The case of young people not in education, employment, or training (NEET). Journal of Vocational Behavior, 60, 289-309
Eurofound. (2012) NEETs: young people not in employment, education or training: Characteristics, costs and policy responses in Europe. 2012.
www.eurofound.europa.eu/pubdocs/2012/54/en/1/EF1254EN.pdf.
Scott, J., Fowler, D., McGorry, P., Birchwood, M., Killackey, E., Christensen, H., Glozier, N., Yung, A., Power, P., Nordentoft, M. and Singh, S., 2013. Adolescents and young adults who are not in employment, education, or training. *BMJ*, *347*.
Scottish Executive, (2006) More Choices, More Chances: a Strategy to reduce the proportion young people not in education, employment or training in Scotland, Scottish Executive, Edinburgh

Acknowledgements

The authors gratefully acknowledge the support of the Scottish Longitudinal Study team at the Longitudinal Studies Centre Scotland (LSCS), the electronic Data Research and Innovation Service (eDRIS) and the National Records of Scotland. The LSCS is supported by the ESRC/JISC, the Scottish Funding Council, the Chief Scientist Office and the Scottish Government.

The authors alone are responsible for the interpretation of the data. Census output is Crown copyright and is reproduced with the permission of the Controller of HMSO and the Queen's Printer for Scotland.