Investigating outcomes in childhood and adolescence using the British Youth Panel

Dr David J. Pevalin
Department of Health and Human Sciences
University of Essex
Colchester
UK
pevalin@essex.ac.uk

Abstract

This paper will be in four parts. The first part will introduce the British Youth Panel and its parent study, the British Household Panel Survey. The history, establishment, sampling, following rules and content will be covered which will provide detailed information on the potential of the panel data. The second part will examine the main published studies that have used the BYP data. This will include: Scott's work on education, well-being and health risk behaviours; Glendinning's work on smoking behaviours along with Blow et al. and Loureiro et al.'s parallel work on adolescent smoking, parental income and parental smoking behaviour; Schmitt's study of computer use in the home and educational achievement; and Brynin's paper on volatility in adolescence. The third part will present work I have done with the BYP data which includes the effects of family poverty on childhood self-esteem and educational expectations (with Ermisch and Francesconi) followed by adolescent gender differences in depression comparing the BYP with Canadian and American data (with Wade and Cairney). The final part of this paper will compare the BYP data to other potential UK data sources suitable for studies into childhood and adolescence.

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1. The British Youth Panel (BYP)

The British Youth Panel (BYP) is part of the British Household Panel Survey (BHPS). The BHPS started in 1991 and is an on-going annual survey. Fifteen waves of data are now available. In 1991 the original sample included approximately 5,500 households and 10,200 individual interviews of adults aged 16 and over.

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Over the years additions have been made to the main panel:

- In 1994 (wave 4) the BYP was added for household members aged 11-15 years.
- From 1997 to 2001 a sample of low income households was included that formed the UK part of the European Community Household Panel (ECHP).
- In 1999 two booster samples of households in Wales and Scotland.
- In 2001 a booster sample of households in Northern Ireland (for UK rather than GB coverage).

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The last wave (19th) of data will be collected in 2009 and in 2010 the BHPS sample will be incorporated into the new UK Household Longitudinal Study (UKHLS).

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The BHPS has fairly complex "following rules" as the concept of a household is problematic in a longitudinal study. After the initial household sample, individuals are followed so individual circumstances are set in household context.

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The BHPS has a core set of items to collect the same data at every wave. There are also rotating sets of questions asked less frequently (every 2 or 5 years), one off sets (complete marital and work histories), and a variable set for particular issues are from "bids" from researchers.

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The response rates have been reasonably good. At wave 1 70-74% (full interview + proxy interview) and then the year on year re-interview rates have been steady from wave 3 onwards.

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The BYP has a smaller data collection instrument than the main panel. The BYP was initially funded by a grant from the Health Education Authority (HEA) but the panel continued with main research council funding. The focus of the

content in the early waves of the BYP was on health and health-risk behaviours (mostly smoking) but the content has gradually changed to focus on education although some items have been carried at all waves.

Data collection in the BYP is done slightly differently to the main BHPS survey because of the practical difficulties of interviewing children in a household context. Especially as parental influence can be a problem where information might be sensitive or subject to sanctions or control. Personal tape players are used as a user-friendly way of guaranteeing that the children's answers would be private and confidential both for ethical reasons and to encourage the children to be as frank and honest as possible. Plus this negated the issues of children's reading skills in a self-completion questionnaire. The questionnaire is pre-recorded on the tape and the answer booklet only contains the response categories so anyone looking at the answer booklet does not know what question is being answered by the child.

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2. Review of published studies using BYP data

Researchers have used the BYP data in one, or a mix, of the following ways:

- BYP data on its own.
- BYP data with data from BHPS providing family context.
- BYP data matched with BHPS data on the same person as they age.

The topics of the papers reflect the content of the BYP in that the early papers focus on health and smoking while the latter papers focus on educational outcomes.

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Brynin M & Scott J (1996) *Young People, Health and the Family*. HEA Family Health Research Reports.

This was the report for the HEA who funded the first waves of the BYP. The BYP data were from the first wave (1994) with N=773. Brynin & Scott also used data from the BHPS to match data on parents' and family circumstances in their analysis of young people's well-being, health attitudes, and health behaviours. They found that is a mother is stressed or unhappy (as measured by responses to the 12-item General Health Questionnaire) then her children are less likely to be happy, especially girls. Father's level of stress or unhappiness does not have a similar effect.

They examined if both parents have similar or dissimilar views on the child's happiness and found that mothers were more accurate than fathers when gauging the child's own level of happiness but most of the time parents agreed with each other on the happiness of their children. Between siblings they found that they tend to hold similar health attitudes.

At the time, this was one of the first studies that allowed for parent-child comparisons and for differences/agreements between siblings. It might seem

a little obvious now but other data sources at the time tended to only interview one randomly selected child per household if any children under 16 were interviewed at all. For example the 1994 Health Survey for England only interviewed people aged 16 and over while other surveys into health-risk behaviours (especially smoking) were school based and so missed the family context.

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2.1 Studies into youth smoking

- Brynin M (1999) Smoking behaviour: predisposition or adaptation. *Journal of Adolescence*, 22: 635-646.
- Bergman MM & Scott J (2001) Young adolescents' wellbeing and health-risk behaviours: gender and socio-economic differences. *Journal of Adolescence*, 24: 183-197.
- Glendinning A (2002) Self-esteem and smoking in youth – muddying the waters? *Journal of Adolescence*, 25: 415-425.

These three papers, all published in the *Journal of Adolescence*, all address the issue of adolescent smoking especially in relation to self-esteem. The BYP contains a number of items from, or similar to, those in the Rosenberg's self-esteem scale.

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Brynin (1999) used data from 4 waves of the BYP and was particularly interested in the factors associated with starting smoking and those associated with maintenance of smoking. The BYP data was matched with data on parental and family circumstances from the main BHPS data. His main finding was that low self-esteem was associated with starting smoking but not maintenance of smoking suggesting that adolescent smoking is a partially adaptive behaviour.

Bergmann & Scott (2001) used the same 4 waves of BYP data as Brynin (1999) and used Structural Equation Modelling (SEM). The BYP data was match with information on family housing, income, social class and structure (one or two-parent). Using pooled data, they found that self-esteem was not associated with smoking in the last 7 days.

Glendining (2002) writing mainly in response to a paper by McGee & Williams (2000) – also in the *Journal of Adolescence* – examined 6 waves of BYP data to look at the self-esteem/smoking association as cohorts aged. He found that self-esteem was associated with smoking in early adolescence but not in later adolescence suggesting an age/self-esteem interaction that needed to be deconstructed.

2.2 Studies into Educational Outcomes

- Scott J (2004) Family, gender, and educational attainment in Britain: a longitudinal study. *Journal of Comparative Family Studies*, 35: 565-580.

- Schmitt J & Wadsworth J (2006) Is there an impact of household computer ownership on children's educational attainment in Britain? *Economics of Education Review*, 25: 659-673.

Note – the educational system in the UK has two main assessments at 16 and 18 years of age. Compulsory education finishes at 16 years of age. At 16 the main examinations are GCSEs (General Certificate of Secondary Education previously called 'O', or Ordinary, Levels). At 18 the main examinations are 'A' (Advanced) Levels and are the usual criteria for university entrance. However, there are variations across the countries in the UK, especially since Scottish devolution, and the increased use of alternative examinations such as the International Baccalaureate in place of 'A' levels. Therefore, studies of educational outcomes tend to use the terms: "O levels or equivalent" and "A levels or equivalent".

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Scott (2004) used 6 waves of BYP data that was (a) matched with family information and (b) matched with forward data in the BHPS on adolescents/young adults who had moved from the BYP to the BHPS sample. The analysis involved pooling cohorts of adolescents around end points of educational outcomes at 16 and 18 years.

Schmitt & Wadsworth (2006) used household level data from the BHPS – computer ownership – onto 15 year olds in the household and then the educational outcomes for those adolescents at 16 and 18 years of age. They found a positive association between computer ownership and educational outcomes. While they did use individual, family and area characteristics in their regression models, one of the better predictors of educational outcomes at 16 years – intention to stay on at school – was missing as they did not use any BYP data.

2.3 Studies into adolescent attitudes

- Burt KB & Scott J (2002) Parent and adolescent gender role attitudes in 1990s Great Britain. *Sex Roles*, 46: 239-245.

Burt & Scott (2002) used 4 waves of BYP matched to parental attitudinal questions to determine the extent of generational and gender transmission of gender-role attitudes. They found that there were more similar attitudes within, rather than between, generations.

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3. Some of my work with BYP data

3.1 Outcomes for children of poverty

- Ermisch J, Francesconi M & Pevalin DJ (2001) *Outcomes for Children of Poverty*. Department of Work and Pensions Research Report No. 158.
- Ermisch J, Francesconi M & Pevalin DJ (2004) Parental partnership and joblessness in childhood and their influence on young people's outcomes. *Journal of the Royal Statistical Society*, 167: 69-101.

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In this Department of Work and Pensions funded project we used BYP data matched onto family information from the BHPS plus following the BYP adolescents "forward" into the BHPS main panel. Also, we used family information on poverty for children before they were 11 and, thus, eligible for the BYP. Then we could look at "outcomes" at 11 years of age as we had previous measures of family circumstances.

We used two measures of poverty: (1) current or contemporaneous poverty, and (2) persistent poverty. But then we also look at the effect of past poverty on future outcomes to investigate is the timing of poverty has differential effects. However, there were little differences in the results if current or persistent poverty was used.

We investigated a large number of outcomes but the report focused on educational outcomes at 16 and 18 years of age as well as self-esteem, intentions to stay at school beyond 16 (compulsory education), adult mental well-being (GHQ), and adult smoking.

One of the robustness checks we performed on early adult outcomes was to use sibling-difference estimates which can only be achieved if there are data from at least two children from each household.

3.2 Emergence of gender differences in depression in adolescence

- Wade TJ, Cairney J & Pevalin DJ (2002) Emergence of gender differences in depression during adolescence: national panel results from three countries. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41: 190-198.

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In this paper we were interested in determining when the well-established gender difference in depression first emerges. We used panel data from the USA, Canada and Great Britain.

USA
Data: 2 waves of the National Longitudinal Study of Adolescent Health (AddHealth). The public-use data used in this analysis consists of a random selection of 50% of this core sample (N = 6,072) of which 603 were ineligible for follow-up because they graduated or left school after Wave 1.
Measure: A 16-item subset of the 20-item CES-D was used to assess current levels of depressive symptomatology.

Canada
Data: 2 waves of the National Population Health Survey. Among adolescents between 12 and 19, the longitudinal sample response in Wave I was 1,584 and in Wave 2 it was 1,443 f
Measure: Depression was measured by the Composite International Diagnostic Interview–Short Form (CIDI-SF) to provide one-year population prevalence rates of major depressive disorder (MDD). This instrument is a

shortened version of the original CIDI, assigning a diagnosis of depressed mood on the basis of DSM-III-R criteria.

Great Britain
Data: Five waves of BYP data collected between 1995 and 1999. The data used in these analyses are drawn from Waves 5 to 9 (N = 749, 748, 720, 767, and 753 respectively).
Measure: A scale designed to tap depressive symptomatology was constructed from the following three items each containing four response categories: (1) In the past month, how many days have you felt unhappy or depressed (none, 1-3 days, 4-10, 11 or more)? (2) In the past week, how many nights have you lost sleep worrying about things (none, 1-2 nights, 3-5, 6-7)? (3) How often do you feel lonely (hardly ever, occasionally, quite often, very often)? These items are similar to items included in other instruments measuring depressive symptomatology including the Center for Epidemiologic Studies-Depression (CES-D).

We found that across all of the data and measures a significant gender difference emerges by age 14.

4. Other UK data for studies of childhood and adolescence

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