

Health related behaviours and wellbeing in adolescence

Amanda Sacker

May 2012

Abstract Youth risk behaviours and subjective well-being in the UK are rated to be among the poorest in the developed world. The most favourable profiles for health and health-related behaviours are seen during early adolescence, with less favourable patterns emerging as adolescence proceeds. Health behaviours such as smoking and physical activity, taken up during adolescence track into adulthood, as do mental health problems. Therefore, adolescence could be a prime time to intervene. But given the UK's low standing in the well-being rankings, a first step is to examine more fully the relationship between health behaviours and young people's well-being. We used data from the youth panel of Understanding Society, the new UK Household Longitudinal Study. Young people aged 10-15 in the household completed a questionnaire that included the Strengths and Difficulties Questionnaire (SDQ) and questions on happiness in different life domains, as well as items on smoking and alcohol consumption, dietary patterns (intake of fruit and vegetables, crisps, sweets, fizzy drinks and fast-food) and sporting activities. The SDQ and happiness questions were used to identify low and high well-being. Smoking and drinking was rare early in youth, while healthy eating and exercise habits were less common in older youth. Smoking, higher fruit and vegetable consumption and lower fast food consumption and sports participation were more common in girls. Generally, health protective behaviours were associated with high well-being while health-risk behaviours were associated with low well-being. Gender differences in some effects were observed. Interventions to encourage healthy lifestyles among adolescents may not only benefit their future physical health but also their current well-being. A gendered approach to targeting interventions is also recommended.

Speaker Amanda Sacker is a Research Professor in Quantitative Social Science at the Institute for Social and Economic Research, University of Essex. Her research interests include cross-national and cross-cohort comparative studies of lifecourse influences on health and well-being. She is a member of the national Academies Panel on Measuring Subjective Well-Being in a Policy-Relevant Framework.



The International Centre for Lifecourse Studies in Society and Health (ICLS) is funded by the UK Economic and Social Research Council (ESRC) RES-596-28-0001. The Centre supports research at UCL, Imperial College, Centre for Census and Survey Research (CCSR), Manchester University and the Institute for Social and Economic Research (ISER), Essex University.
E: icls@ucl.ac.uk W: www.ucl.ac.uk/icls



ICLS OCCASIONAL PAPERS, SERIES 9 WELLBEING

ICLS hosted a policy seminar on Well-being at UCL on 2 May 2012. The seminar was chaired by Professor Mel Bartley, ICLS Director and the presentations co-ordinated by Professor Amanda Sacker, University of Essex and ICLS. Transcripts from this event, including this paper, have been made available via the ICLS Occasional Paper Series. This series allows all (those who were or were not able to attend) to read an account of the presentation.

Policy Seminar Abstract

The current Office of National Statistics (ONS) programme to measure national wellbeing is unlikely to have escaped many people's attention. Media attention on "happiness" has obscured the broader aims of this initiative, including measuring individual wellbeing in all its complexity. Is subjective wellbeing a useful measure for impact assessment by policy makers and practitioners? Will wellbeing continue to be the domain of health professionals or will all policy makers and service providers be expected to use subjective wellbeing as an outcome in their assessments? This seminar will present the results of some studies carried out by members of National Centre for Social Research (NatCen) and the ESRC International Centre for Life Course Studies in Health and Society (ICLS) using recently available survey data. The studies cover topics on measuring wellbeing and on factors that can have long-reaching implications for wellbeing over the life course. Taken together, they shed light on the role that wellbeing can play in the process of intervention development and implementation.

Presentations and Speakers

OP 9.1 Mental health and wellbeing

Sally McManus, Research Director, NatCen Health and Well-being Team

OP 9.2 Health related behaviours and wellbeing in adolescence

Amanda Sacker, ICLS and Professor of Quantitative Social Science at the Institute for Social and Economic Research, University of Essex.

OP 9.3 Do physical working conditions influence quality of life after retirement?

Loretta Platts, ICLS PhD student, Imperial College

OP 9.4 Well-being within older couples: Does your partner's health affect your happiness?

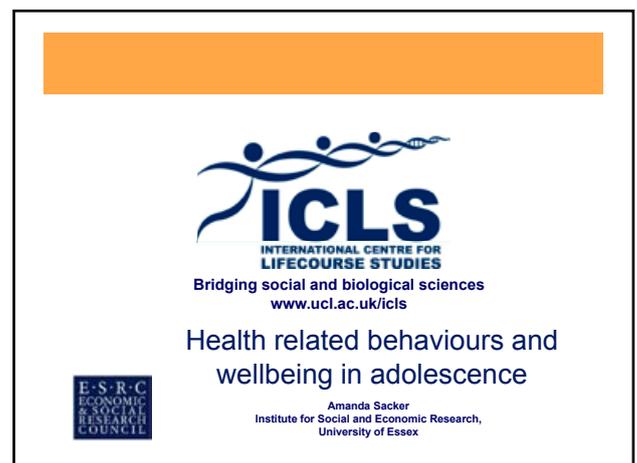
Jessica Abell, ICLS PhD student, Imperial College

Health related behaviours and wellbeing in adolescence

Amanda Sacker

SLIDE 1

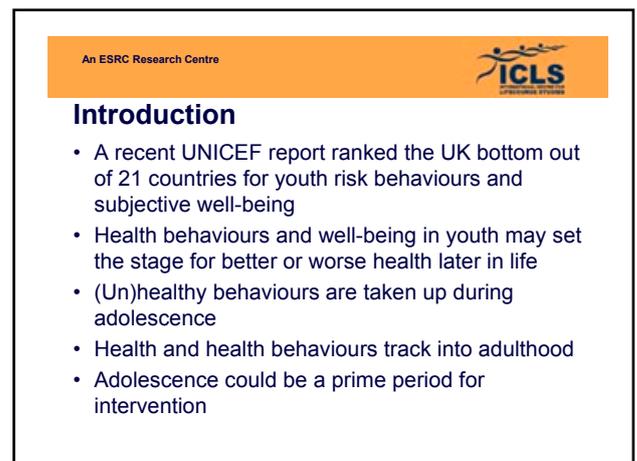
Thank you Mr Chairman for that introduction I'll go straight on to the next slide.



Slide 1 content: An orange header bar at the top. Below it is the ICLS logo, which consists of a stylized blue figure with arms raised, followed by the text 'ICLS INTERNATIONAL CENTRE FOR LIFECOURSE STUDIES'. Underneath the logo is the text 'Bridging social and biological sciences' and the website 'www.ucl.ac.uk/icls'. To the left of the main text is the ESRC logo. To the right is the title 'Health related behaviours and wellbeing in adolescence'. At the bottom right is the author's name 'Amanda Sacker' and affiliation 'Institute for Social and Economic Research, University of Essex'.

SLIDE 2

Why are we interested in health behaviours and well-being among young people? Well, a recent UNICEF report ranked the UK bottom out of 21 countries for youth risk behaviours and for subjective well-being. So obviously this is of concern to UK policy makers. It's not just the ranking that is important, it's also what these things can mean for later life. Health behaviours and well-being in youth may set the stage for better or worse health in later life since unhealthy behaviours tend to get taken up during adolescence and once people adopt unhealthy behaviours like smoking and so on they tend to track for quite a long time into the adult years. Similarly well-being tends to change during adolescence and again tracks into adulthood. So if these aspects of young people's lives seem to change throughout adolescence and they're then linked to health and illness later in life, then adolescence could be a prime time for intervention, for trying to break those links.



Slide 2 content: An orange header bar at the top with the text 'An ESRC Research Centre' on the left and the ICLS logo on the right. Below the header is the title 'Introduction'. Underneath is a bulleted list of five points: 'A recent UNICEF report ranked the UK bottom out of 21 countries for youth risk behaviours and subjective well-being', 'Health behaviours and well-being in youth may set the stage for better or worse health later in life', '(Un)healthy behaviours are taken up during adolescence', 'Health and health behaviours track into adulthood', and 'Adolescence could be a prime period for intervention'.

SLIDE 3

The first thing we wanted to do was to ask the question “What is the pattern of health behaviours that we’re observing in today’s generation of young people?” We examined differences by gender, age group, and family socio-economic position. And then we go on to ask, “Is there a link between different health behaviours and well-being in our adolescent sample?” We look at both higher and lower levels of well-being. We were thinking about it as two ends of a scale rather than two discrete different dimensions of well-being but it remains an open question with this age group. We are using data from the new Understanding Society survey. It surveyed young people separately from

An ESRC Research Centre 

- What is the pattern of behaviours
 - By gender?
 - By age group?
 - By family socio-economic position?
- Is there a link between different health behaviours and well-being in adolescents
 - With higher or lower well-being?
- Used data from the new *Understanding Society* survey youth questionnaire (N ≈ 5000)

3 www.ucl.ac.uk/icls

their parents. We have approximately 5,000 young people who were given the questionnaire and included in that questionnaire are items on both different health behaviours and well-being.

SLIDE 4

First of all we looked at whether they smoke cigarettes. These were 10 to 15 year olds, below the age when they’re supposed to be smoking. Relatively few, only seven per cent of our sample said that they smoked.

Next we looked at alcoholic drink consumption in the last month. Again this is a young adolescent group, so most of them thankfully, 75% said that they’d never drunk alcohol. But a small minority, 3%, are drinking regularly more than once a week. And another 9% were drinking alcohol two to three times in the last month. So still evidence of a problem.

The measures of diet were crisps, sweets and other additional snacks, fast food consumption and fruit and vegetable consumption. Most young people basically snack most days. But then there is a large minority, around 30% that don’t seem to snack on these items.

Looking at fast food meals, the majority said they are having fast food meals now and then, and there shouldn’t be any harm associated with having the occasional fast food meal. But 18% were saying that they had fast food meals one or more times a week.

An ESRC Research Centre 

Health behaviours

Health Behaviour	Measurement
Smokes cigarettes	Yes (7%); No (93%)
Alcoholic drink in last month	≥ once per week (3%); 2-3 times (9%); once (13%); never (75%)
Crisps/sweets/fizzy drinks	Most days (45%); once per week (26%); now and then/never (29%)
Fast food	≥ 1 occasion per week (18%); now and then (49%); never/hardly ever (33%)
Eat fruit/vegetables	0-2 portions (45%); 3-4 portions (41%); ≥ 5 portions per day (14%)
Sports participation	< 1 day (6%); 1-2 (19%); 3-4 days (27%); 5-6 days per week (18%); every day (30%)

4 www.ucl.ac.uk/icls

When you bear in mind that the recommendations for fruit and vegetables is to have five portions a day, only 14% of this age group were having the recommended levels of fruit and vegetables each week. And a large minority, 45%, are only having one or two portions a day.

Sports participation was our final health behaviour that we could measure in the survey. Participation ranged from less than one day in the last week up to every day. And young people do seem to be participating in a reasonable amount of sporting activities, both at school and outside.

SLIDE 5

If we look at the pattern of these behaviours across different age groups – 10 – 11 year olds (younger) and 12 – 15 year old (older) we find that unsurprisingly the older group are more likely to smoke cigarettes than the younger group. They're more likely to have taken up alcohol. And because they're more likely to have some sort of autonomy they're more likely to have snacks, probably because they're independently coming home after school etc. Also this age group is more likely to eat fast food.

By contrast the younger group are more likely to have healthy habits as far as fruit and vegetables are concerned and they are more likely to take part in sport. We know that there is this decline in sports participation as people get older.

We also investigated the gender differences in these behaviours. Girls were more likely to smoke cigarettes. It used to be boys who smoked more often, now it is girls. There is no difference between boys and girls in the amount of alcohol or snacking. Boys are more likely to want to eat fast food. Girls are more likely to eat fresh fruit and vegetables. And again, unsurprisingly the

An ESRC Research Centre 

Patterns of Behaviour

Health behaviour	Age group	Gender	Income
Smokes cigarettes	Older		No difference
Alcohol in last month	Older	No difference	No difference
Crisps/sweets/fizzy drinks	Older	No difference	£
Fast food	Older		£
Eat fruit/vegetables	Younger		££££
Sports participation	Younger		££££

5 www.ucl.ac.uk/icls

boys are more likely to take part in sport. I think there was something on the news this morning about trying to encourage girls to take part in sports in school.

When we look at socio-economic difference in the uptake of these behaviours there is no difference across income groups in the children smoking or consuming alcohol. Households on lower incomes were more likely to snack and to eat fast food, and the higher income households were more likely to eat more fruit and veg, and to take part in sports. So there may be some sort of financial, or lack of finance, as a disincentive for taking part in sports.

SLIDE 6

Well-being in youth. We have two measures that we used in the survey: The first one is a scale, a happiness scale, that looks at happiness with different aspects of young people's lives such as their schoolwork, parents, family, friends, the school as a whole, and life as a whole. And there were seven emoticons, happy or sad faces, going from completely happy down to not at all happy. And the teenagers ticked the one that related to them. Then we summed the responses and took the top ten per cent as having high well-being. On the other side we have a scale, the Strengths and Difficulties Questionnaire, which measures socio-emotional problems. This has five different sub-domains about conduct problems,

An ESRC Research Centre 

Well-being in youth

- Happiness with
 - School work
 - Appearance
 - Family
 - Friends
 - The school they go to
 - Life as a whole
- 7 emoticons  
 - Completely happy
 - Not at all happy
- Summed responses
- Top 10% had high WB
- Socio-emotional problems
- Strengths and difficulties (SDQ) questionnaire
 - Conduct
 - Hyperactivity/attention
 - Emotional
 - Peer
 - Prosocial
- 20 problem items summed
- Scores ≥ 20 indicate low WB

6 www.ucl.ac.uk/icls

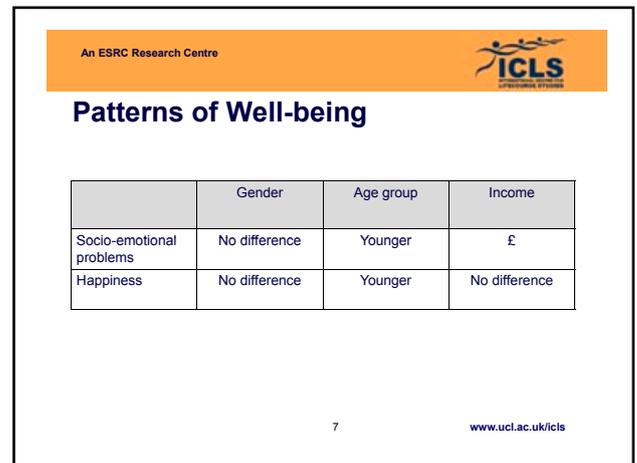
hyperactivity, emotional or peer problems, and then a positive sub-scale, the pro-social scale. It's common to sum the four problem domains and then indicate low well-being from the top

SLIDE 6 ... continued

ten per cent in that scale. A score greater than 20 indicates low well-being and suggests the young person may be at risk for mental health problems.

SLIDE 7

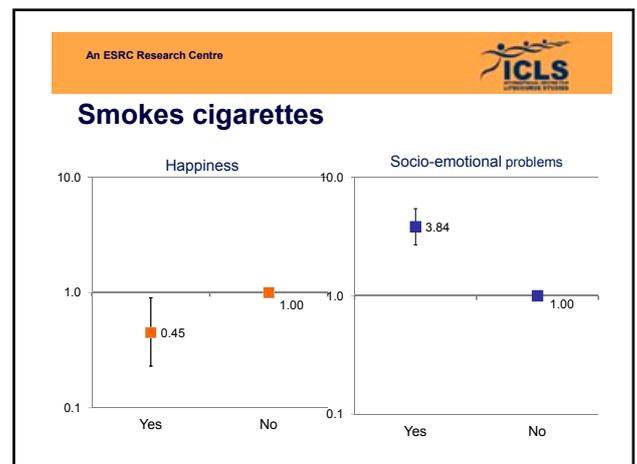
Again if we look at the patterns of well-being across our different dimensions there is no difference in socio-emotional problems or in happiness across boys and girls. The younger group were both more likely to have socio-emotional problems and to report greater happiness, likelihood of being in the top happiness scale. Socio-emotional problems are more likely among the low income groups. This is consistent with much of the literature. There is no difference at all in the happiness scale. Like adults, perhaps young people adapt to their current circumstances.



SLIDE 8

This slide looks at young people smoking cigarettes and having high happiness or a high risk for socio-emotional problems. The horizontal line at 1, on the left hand side of the graph is the reference line. If the markers are below that line that means they're less likely to have a high happiness score. Above the line, more likely to have a high happiness score. So here if young people are smoking they are less likely to be in the top ten per cent of the happiness scale. And the vertical lines around the square marks show the reliability of that estimate. If it doesn't cross that horizontal 1 line it is statistically significant.

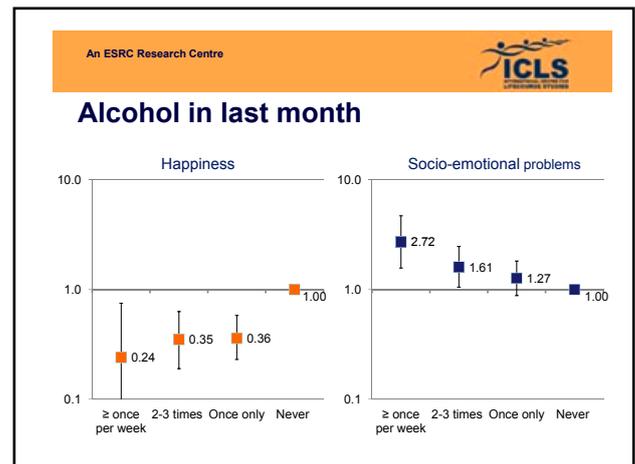
In this slide we see that young people are about half as likely to be highly happy if they smoke. By contrast if they smoke they're almost four times more likely to have socio-emotional problems. So a difference in the effect size between looking at happiness or looking at the other end of the scale, at problem behaviours.



SLIDE 9

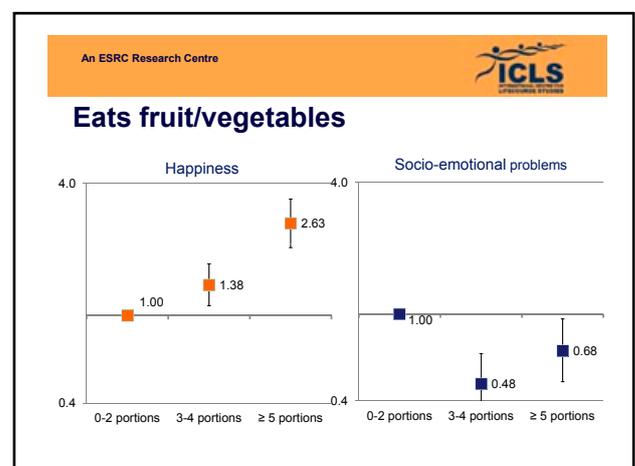
This slide shows a dose response relationship for alcohol consumed in the month prior to the survey.

The more the young person drinks the less likely they are to be happy. Alternatively, the more the young person drinks the more likely they are to have socio-emotional problems. Perhaps surprisingly, the relationship between alcohol consumption and happiness was stronger than between alcohol consumption and socio-emotional problems.



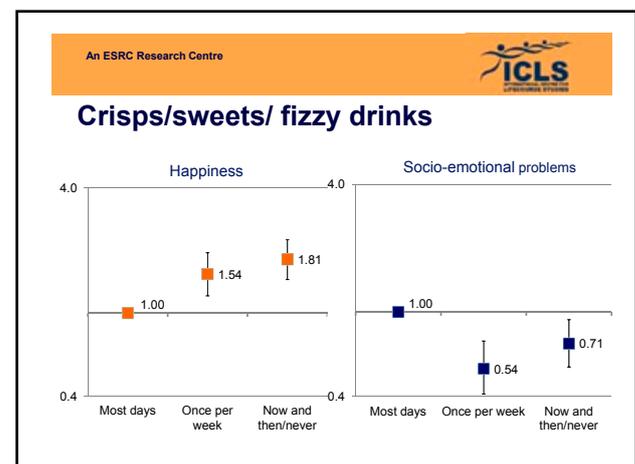
SLIDE 10

Looking at the consumption of fruit and vegetables, again the more fruit and veg adolescents consume the more likely they are to be in that top happiness group. – over two and half times. For socio-emotional problems the relationships aren't quite so clear but there is still a negative effect. Young people are protected from socio-emotional problems the more fruit and vegetables they eat.



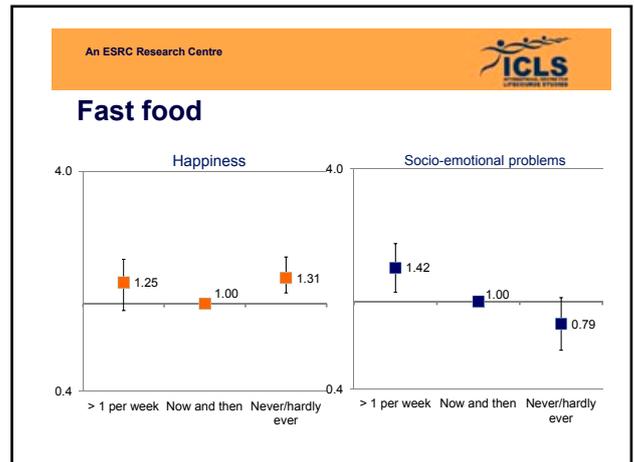
SLIDE 11

For crisps, sweets and fizzy drinks, we see this again, this straight line for happiness, a clear relationship between the amount of consumption of these goods and happiness compared with the socio-emotional problems where again it seems that any consumption of these things is related to having a greater chance of having socio-emotional problems.



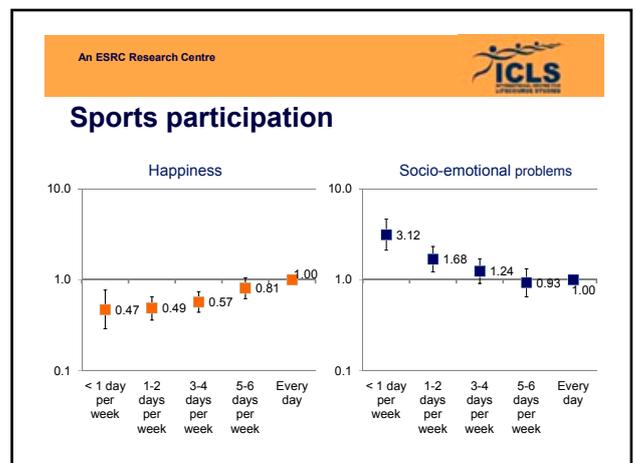
SLIDE 12

For fast food there are statistically significant but weaker relationships with well-being.



SLIDE 13

The more sports the young person is doing each week the more likely they are to be happy and the less likely they are to have socio-emotional problems. The effect looks stronger for socio-emotional problems. The young person has three times the risk of having socio-emotional problems if they are not taking part in much sport compared to doing it every day, compared to half the likelihood of being happy when you contrast the same two extreme groups.



SLIDE 14

You may be asking were these relationships previously outlined just at one point in time and how do we know which way the cause and effect is going. Well, I've got very preliminary results here, based on half the sample of young people who we followed up one year later (2nd wave). This information is recent but not yet peer reviewed. Bear in mind that the findings may not be reliably replicated when the full sample is used.

The questions that were repeated in the second wave of the survey included the ones on fruit and vegetables consumption, sport participation, and alcohol consumption. The measure of behavioural problems was not repeated in the survey one year later but the the happiness scale was. And there seemed to

An ESRC Research Centre ICLS

Direction of causality?

- Very preliminary results with half the sample
- Questions on fruit/vegetables, sports, alcohol and happiness repeated 1 year later
- Suggestion that
 - More fruit/vegetables and less alcohol linked with increases in happiness 1 year on
 - Low happiness and a poor diet predict increased alcohol consumption 1 year later

14 www.ucl.ac.uk/icls

be a suggestion that the consumption of more fruit and vegetables and less alcohol were linked with increases in happiness one year on. The effects were very small but they were statistically significant. And again that low happiness and a poor diet seemed to predict increased alcohol

SLIDE 14 ... continued

consumption one year later. So it looked as though the direction of causality was going both ways. Both from health behaviours to happiness, and from happiness to health behaviours. Which is, if we can see these findings replicated as the

survey unfolds when we have more measures, will be a very interesting. Whether one year on from the first measure is too long a time interval to be able to detect, these changes is, something else that will need to be considered later.

SLIDE 15

To sum up, it seems to be that :

1. Participation in protective health related behaviours were associated with high happiness.
2. Risky health related behaviours were associated with socio-emotional problems.
3. Each of those behaviours had an independent risk or protective relationship with well-being i.e. they add to each other rather than all correlating together.
4. Interventions that reduce risky health related behaviours ,and this is the area where policy could have most effect, might have the potential to reduce inequalities in health and improve well-being throughout the life course if we can

An ESRC Research Centre 

Summary

- Participation in protective health-related behaviours was associated with high happiness while risky health-related behaviour participation was associated with socio-emotional problems
- Each behaviour had an independent risk or protective relationship with well-being
- Interventions to reduce risky health-related behaviours have the potential to reduce inequalities in health and well-being throughout the lifecourse

15 www.ucl.ac.uk/icls

break the cycle between lower well-being and poor health behaviours in adolescence.

SLIDE 16

I'd like to thank my co-authors, the Understanding Society team, and our funders. Thank you.

An ESRC Research Centre 

With thanks to

- Co-authors
 - Yvonne Kelly, Cara Booker, Alex Skew
- The Survey
 - The *Understanding Society* scientific leadership team at the Institute for Social and Economic Research, University of Essex
 - Survey delivery by the National Centre for Social Research
 - Funders: ESRC

16 www.ucl.ac.uk/icls

GLOSSARY

A **cohort** is defined as a group of subjects experiencing some event – typically birth – in a selected time period.

A **longitudinal study** is a research study involving a repeated observations of the same cohort over long periods of time – often many decades, unlike cross-sectional studies that are conducted for a set period

The *Strengths and Difficulties Questionnaire* (SDQ) is a brief behavioural screening questionnaire about 3-16 year olds. It exists in several versions to meet the needs of researchers, clinicians and educationalists. The SDQ has 4 negative subscales (conduct problems, hyperactivity/inattention, emotional symptoms and peer relationship problems) which can be summed to give a total difficulties score and 1 positive subscale (pro-social behaviour).

Understanding Society is an interdisciplinary study of the socio-economic circumstances of adults and children in 40,000 British households. It is funded by the Economic and Social Research Council (ESRC) and run by the Institute for Social and Economic Research (ISER). The study allows for deeper analysis of a wide range of sections of the population as they respond to regional, national and international change. Understanding Society will greatly enhance our insight into the pathways that influence peoples longer term occupational trajectories; their health and well-being; their financial circumstances; and personal relationships and attitudes. The study captures biomedical data on 20,000 participants and place this alongside rich social histories, helping to weigh the extent to which people's environment influences their health. The first data collection took place in 2009.