

How many young people are accruing the assets they need for a healthy transition into adulthood?

Young People's Future Health Inquiry quantitative analyses

Ann Hagell and Rakhee Shah, Association for Young People's Health

Russell Viner, Jennifer McGowan, Dougal Hargreaves and Michelle Heys, University College London – Institute of Child Health

This working paper is produced as part of the Young People's Future Health Inquiry. For more information about this work, see: www.health.org.uk/FutureHealthInquiry

Authors

- Ann Hagell
- Rakhee Shah
- Russell Viner
- Jennifer McGowan
- Dougal Hargreaves
- Michelle Heys

Contact details: Ann Hagell ann@youngpeopleshealth.org.uk

Contents

Authors	2
Acknowledgements	4
Abstract	5
Background	5
Aims and Methods	5
Results	5
Discussion and conclusions	6
Background	7
Aims and methods	9
Building measures of 'Assets'	11
Building measures of 'Building blocks'	15
Results	18
To what extent do young people have the four critical assets?	18
Patterns of accumulating or losing assets	19
Possession of 'building blocks' in the early 20s	21
Predicting from individual assets to building blocks	22
Predicting the number of successful age 25 outcomes	25
The role of ethnicity and gender	27
Discussion and conclusions	28
Areas for future research	30
References	31
Appendices	32

Acknowledgements

The research team is very grateful to the Health Foundation for funding this work as part of their ongoing Future Health Inquiry.

Acknowledgements relating to the data

Next Steps: Sweeps 1-8, 2004-2016: Secure Access

Study number: 7104

Principal Investigator

University College London, UCL Institute of Education, Centre for Longitudinal Studies

Sponsor

Economic and Social Research Council

Distributed by:

UK Data Service. October 2018 (4th Edition)

Citation for this data

All works which use or refer to these materials should acknowledge these sources by means of data citation. To ensure that such source attributions are captured for citation indexes, citations must appear in footnotes or in the reference section of publications. The citation for this data collection is:

University College London, UCL Institute of Education, Centre for Longitudinal Studies. (2018). *Next Steps: Sweeps 1-8, 2004-2016: Secure Access*. [data collection]. *4th Edition*. UK Data Service. SN: 7104, <http://doi.org/10.5255/UKDA-SN-7104-4>

Copyright

Copyright Centre for Longitudinal Studies

Disclaimer

Although all efforts are made to ensure the quality of the materials, neither the original data creators, depositors or copyright holders, the funders of the data collections, nor the UK Data Archive, nor the UK Data Service bear any responsibility for the accuracy or comprehensiveness of these materials.

File last updated: 11 October 2018

Abstract

Background

While employment and education rates have been extensively studied, little is known about how general well-being through early-late adolescence affects health and well-being into adulthood. Utilising participant-led research, we mapped the presence and trajectories of 'assets' identified by young people as important during their adolescence to health, well-being and 'success' in early adulthood.

Aims and Methods

Young people identified four 'assets': 'appropriate skills and qualifications', 'personal connections', 'financial support' and 'emotional support', which were mapped across early (age 13-15), mid (16-17), and late (18-20) adolescence. The Health Foundation was interested in four adult (age 25-26) outcomes: 'suitable/rewarding work', 'satisfactory housing', 'good relationships', and 'healthy habits'. The presence or absence of these assets and outcomes were identified using binary measures, developed from the 'Next Steps' dataset - a longitudinal study following UK individuals born in 1989/1990 and followed up yearly until 2010, and then once more in 2016 (N=15,770). Trajectories were categorised as an asset being 'stable present', 'stable not present', 'late rising', 'early rising', 'late falling', 'early falling', and 'unstable'.

Results

Assets were reported by over 90% (emotional support) to less than 12% (personal connections) of young people at different time points, and generally decreased in prevalence over adolescence. Young people generally reported having 2-3 of the four assets at any time-point. At age 25/26, just over half of young people reported 'satisfactory housing' (53.8%) or 'suitable/rewarding work' (59.9%). The majority reported 'good relationships' (87.7%) and 'healthy behaviours and health' (74.3%). Although some young people had stable levels of assets throughout adolescence, many seemed to have more at one stage than another.

Various aspects of the earlier assets were significantly associated with positive outcomes at age 25. This was particularly the case for earlier accumulation of 'appropriate skills', which predicted not just to later work, but also to satisfactory housing and relationships. Financial support was also important, as were personal connections. Emotional support at the earlier ages was a less good predictor, but it was also the most poorly measured construct.

The number of positive outcomes attained at age 25 was also positively related to the presence of skills at every time point, and to personal connections and emotional support at younger ages.

Discussion and conclusions

The assets available to young people predict their young adult outcomes across distinct pathways. Not all assets are commonly available to young people. The stability of these assets across adolescence is of particular importance to adult outcomes, as young people who reported stable and high levels of assets in their teens showed the best outcomes in early adulthood. The presence of assets may be especially important in early-mid adolescence.

These results suggest that it is worth intervening to help young people to acquire the assets they need, as these assets go on to predict a range of outcomes at age 25. Results also indicate that early adolescence may be a good time to intervene, where effective interventions exist.

Background

The Health Foundation launched its Young People’s Future Health Inquiry in 2017, a first-of-its-kind research and engagement project that aimed to build an understanding of the influences affecting the future health of young people. The starting point for the inquiry was the issues that young people themselves identified as important for the transition to a healthy adulthood.

The young people consulted at the start of the inquiry suggested that all young people needed to accumulate **four main assets** (appropriate skills; personal connections; financial and practical support, emotional support). It was not clear how many young people were indeed gathering these assets; a survey of young people undertaken at the time by the Health Foundation suggested a significant proportion felt they did not have them by their mid 20s (Kane and Bibby, 2018). Figure 1 provides more detail on how the young people defined these four assets.

Figure 1: Young people’s definitions of four critical assets

Appropriate skills - “How right are my skills for the career I want?”
Personal connections – “The confidence and connections to navigate the adult world”
Financial and practical support “Having the support to achieve what I want from life”
Emotional support “People I can lean on emotionally”

As well as wanting to know more about the distribution of assets and the patterns of accumulating them, the Health Foundation’s inquiry team were interested in how these related to **four building blocks** representing a solid basis in early adulthood including suitable/rewarding work, satisfactory housing, good relationships and healthy habits.

The Association for Young People’s Health and University College London’s Institute of Child Health were sub-contracted to undertake quantitative analysis to test these questions using existing longitudinal datasets. Could existing longitudinal data sets tell us how many young people were accumulating these assets, and what the relationship was between the assets and the later building blocks? This working paper summarises our findings. A full account of the process and the findings are being submitted to a refereed journal, and also being presented at academic conferences in the 2019/2020 year.

As part of the preparation work, two scoping reviews were undertaken and subsequently published as working papers. The first focused on the literature on what we know already

about the social determinants of young people's health (Hagell *et al.*, 2018). The second provided an overview of evidence relating specifically to the issues and questions raised by the young people in the initial engagement work. We looked at existing evidence relating to the four assets they identified, and evidence for the relationship of these assets to early adult outcomes (Hagell *et al.*, 2019). Together these provide the background to the quantitative analyses presented below.

Aims and methods

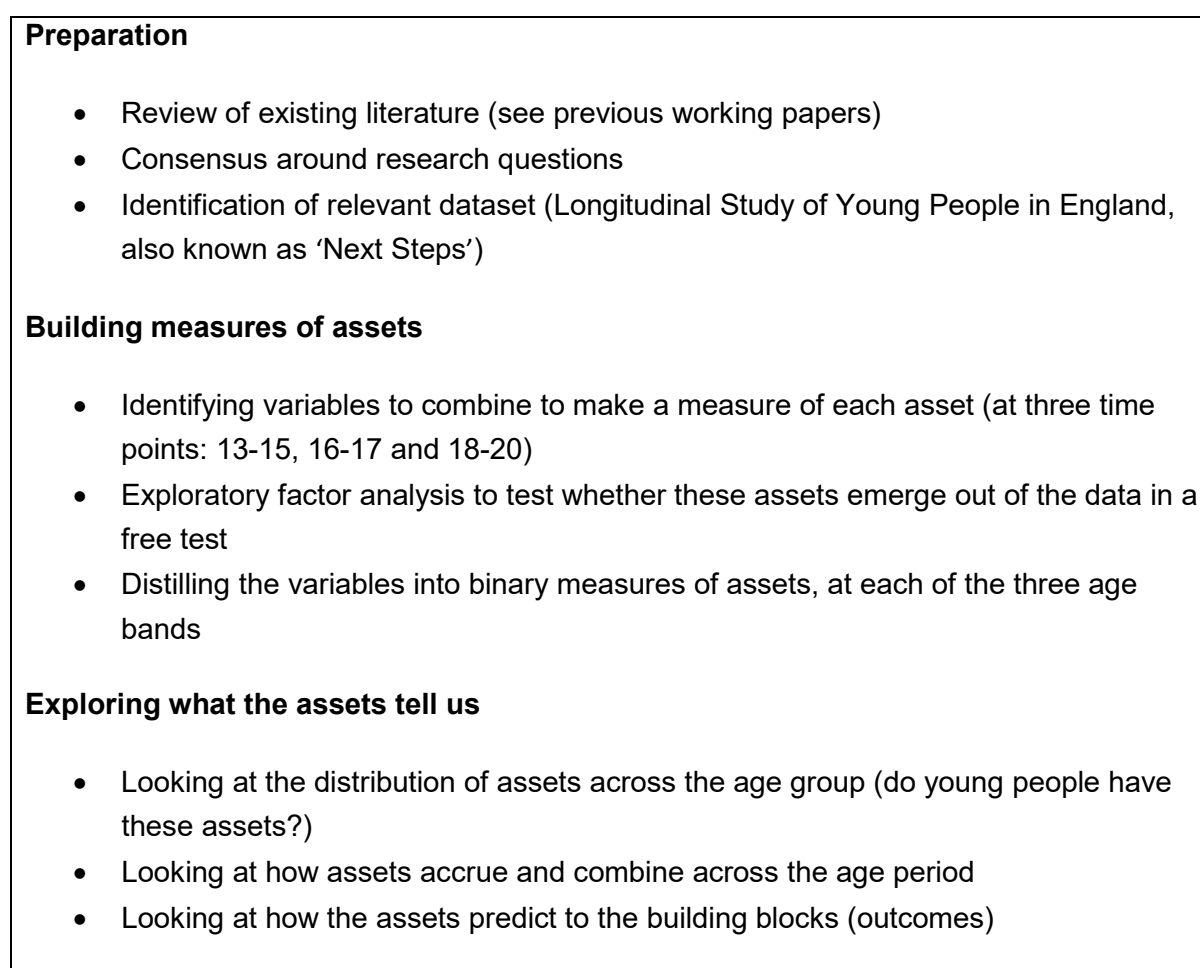
The quantitative analyses undertaken to support the Health Foundation's future health inquiry was designed to address four research questions. These are set out in Figure 1 below.

Figure 1: Research questions

- What is the distribution of assets across the 12-22 age range (or as close to this age range as the available data allows)?
- What are the combinations and trajectories of assets across that period?
- What is the relationship between the assets and the building blocks for a healthy life at age 23-25 (or as close to this age range as the available data allows)?
- What is the relationship between the asset trajectories and the building blocks at age 23-25?

The work fell into three blocks. Figure 2 provides an overview of these. First there was a substantial period of preparation and ground clearing. This was followed by a process of building the measures of the assets from what was available in the relevant longitudinal datasets. Finally, we undertook quantitative analysis exploring what the data show about the relationship between assets and outcomes.

Figure 2: Stages in analysis



The preparation stage helped to firm up the research questions for the quantitative analysis. It guided the decision to concentrate on three distinct age periods of 13-15 (leading up to GCSEs), 16-17 (sixth form years or equivalent), and 18-20 (post-compulsory education/training). It also revealed that the most appropriate longitudinal study with relevant variables was the Longitudinal Study of Young People in England (LYSPE), recently renamed as "Next Steps". However, we acknowledged at the outset that some aspects of the assets and building blocks were better measured than others. This is a theme we will refer back to later.

The LSYPE study is a yearly longitudinal study following the same individuals born in 1989/90 who attended state or independent schools in England in 2004 (N=15,770). The study initially followed these individuals yearly from the ages of 13-14 to 20/21. A further wave of data was collected at age 25/26. Pupils were sampled using a two stage design. Schools were sampled in the first stage, and then pupils were sampled from each of the schools in the second stage. Some schools were over-sampled on the basis of their

deprivation status (free school meals) and pupils from some ethnic minority groups were oversampled too. Young people not on the school roll, boarders, children in very small schools, and some other groups were not included.

We have labelled the three age bands that we used for analysis as 13-15, 16-17 and 18-20. The data are collected yearly at the same time for all participants regardless of when in the year they were born - so some may have gone over the line into the next age at the point when the data were collected (e.g. those born in January would be 18, not 17, when the data were collected in February). However, this will have little or no impact on the results, as the young people will still all be in the same period of their lives – e.g. in the same year in school, and had roughly the same amount of life experience/opportunity as their peers from similar circumstances. This is also a common issue in longitudinal datasets.

Building measures of ‘Assets’

As LSYPE had not been designed to measure the assets identified as important by the young people in the HF inquiry, a process of mapping was undertaken to identify appropriate variables that could be used as proxies for the assets in our analyses. Our task was not to define the assets, but to work out how to measure them in the best available dataset.

A pragmatic approach was taken to this. Variables were chosen based on (a) how well they reflected the core elements of the asset, (b) the number of responses available, (c) the completeness of the data across waves (was the same variable used several times?), and (d) the variability of responses (was there enough variation in the responses to discriminate between positive and negative outcomes?).

Figure 4 presents the groups of variables from LSYPE falling under each asset title after assessment for completeness of data, relationship to the other variables (through factor analysis), and fit with the original description of the assets. So for example, for Appropriate Skills, we had several variables at different time points reflecting level of education. In order to differentiate between ‘personal connections’ and ‘emotional support’, ‘personal connections’ was defined as connections that improve employability and advancement, and ‘emotional support’ was defined as familial and social support groups.

Figure 4: Sub-groups of variables from LSYPE falling under each asset title

ASSET HEADING SUB-GROUPS OF RELEVANT VARIABLES	Available at ages		
	13-15	16-17	18-20
1. Appropriate skills			
a. Level of education	-	Y	Y
b. School quality	Y	Y	Y
c. Grades achieved	Y	Y	Y
d. Employment	-	Y	Y
e. Housing (adult)	-	Y	Y
2. Personal connections			
a. Parent's social network	Y	Y	-
b. School connectedness	Y	Y	-
c. Volunteering experience	Y	-	Y
d. Part-time job while at school	Y	-	Y
3. Financial and practical support			
a. Housing (child/young person)	Y	Y	Y
b. Parental income	Y	Y	Y
c. Parental employment	Y	Y	-
4. Emotional support			
a. Parental involvement in education	Y	-	-
b. Relationship status	-	-	Y
c. Relationship with parents	Y	-	-
d. Social cohesion	Y	-	Y

Appendix A presents detailed tables showing frequencies for all the variables making up each sub-group under each asset heading, at each of three time points (13-16; 16-18; 18-20). For example, the sub-group 'Level of education' under the 'Appropriate skills' asset heading was made up of measures of whether the young person was in school (age 13-15), whether they were in school, college, training or work at age 16-17, and whether they were in school, college, training, university or work at age 18-20. 'Educational attainment' under the same asset heading was measured by Key Stage 3 results at age 13-15, achievement of GCSEs by 16-17, and Key Stage 5 (A levels etc) achievement by 18-20.

The next task was to distil the sub-groups of variables down to binary measures, which young people either had or did not have, for each of the three time points (13-16, 16-18, 18-20). Combining data within the age three separate age bands was a deductive process, in

that decisions had to be made about where the cut lay between 'yes' and 'no' for different variables. The conversion of variables into binary format was based on the data directly, where possible. Where the data did not allow for the creation of a binary variable, the process involved discussions with the Young People's Future Health Inquiry team at the Health Foundation. Where the data did not easily lend itself to formation of a binary variable, and a review of the literature was unable to guide variable manipulation, the measures were excluded from further analysis.

In a final stage we combined the binary measures of the sub-groups so that every young person had one overall score for each asset at each of the three time points. Figure 5 illustrates how the dichotomised sub-groups were built up into an overall measure of whether an asset was present or not for each of the three age bands. This example presents the process for 'Emotional support', which was the asset with the fewest available contributory variables in LSYPE corresponding to what the young people had described as important. Four sub-groups of variables were chosen from the dataset to represent the overall asset – parental involvement in education, parent-child relationship, social cohesion, and whether the young person was in a relationship. At 13-16 we had measures of the first three, but not whether the young person was in a relationship. At 16-18, we had no measures. At 18-20, we had two of the four measures. In order to be considered as having an asset (asset present), individuals needed to have at least 50% of the possible asset variables for that age band.

Figure 5 is thus an illustration of the responses for one example person in the dataset. They were a 'yes' on parental involvement in education at age 13-15, and a 'yes' on being in a relationship at age 18-20. The final line gives their overall 'score' for each age band. They had fewer than half of the available asset components for age 13-15 (rating an overall 'no' for that age band), unscorable for 16-17 (because there were no suitable variables), and half or more for 18-20 (rating an overall yes for that age band). So they had the asset at 18-20, did not at 13-15, and it was not possible to tell at 16-17. This is quite an extreme example as the emotional support asset was the one with the fewest relevant variables available to us.

Figure 5: Dichotomising sub-groups of variables and making an overall asset rating for each time period (present/absent) using a 50% cut off

Variables making up 'emotional support' asset	Asset components present?		
	Age 13-15	Age 16-17	Age 18-20
Parental involvement in education	1	-	-
Parent-child relationship	0	-	-
Social cohesion	0	-	0
YP in a relationship	-	-	1
Maximum possible score for Emotional support	3	0	2
Example overall score for emotional support	1 (33%)	0	1 (50%)
	Asset absent	Not possible to measure asset	Asset present

The thing to note about this process is that a number of decisions needed to be made about how to use data that were not coded in ways that were easy to make into binary measures. Where it was not clear how to create a binary variable, the research team had extensive discussions, using our understanding of the literature and the experiences of the age group to guide the decisions. Splits were either made on a categorical basis (e.g., young people either were, or were not, in education), or around the mean (e.g. Key Stage 5 scores on or above the sample mean versus below).

Overall, this method was intended to be a pragmatic solution to translating the assets defined by young people into quantified variables, but this involved multiple reclassification – dichotomising variables, ascribing positive or negative value to them, assigning them to assets and dichotomising the assets so that they could be said to be 'present' or 'not present'. All stages in this process were undertaken through group discussion within the research team (led by RV, AH, MH and JM), and where possible all stages were informed by our understanding of the relevant literature. However, it was an experimental and novel way of testing questions in a large longitudinal dataset, and the analyses as a whole should be regarded as exploratory as a result.

It is possible that a data driven approach may have been more fruitful, but it would not have met the criteria of being led by the definitions of assets provided in the initial qualitative work by young people. However, in order to understand a little better the possible implications of our 'forcing' of the data into the assets, we did also undertake an exploratory factor analysis using varimax rotation to test how the data clustered into assets, if they were not forced into them. A factor approximating 'education' emerged, coinciding the 'skills' asset, and a second factor on 'financial support' coincided with the asset of the same name. Personal

connections and emotional support did not emerge as separate factors. This was most likely to be due to the lack of consistent data available on these constructs in the dataset, which was something that had been challenging in the whole process of operationalising the assets, and it has implications for the interpretation of some of the analysis that follows.

Building measures of 'Building blocks'

We undertook a similar (but simpler) process of constructing the outcome variables. Like the assets, which were pre-determined by the young people, the building blocks were pre-determined by the Health Foundation as being the outcomes in which they were interested as the basis for a healthy adult life. These 'building blocks' were defined as attainment of suitable/rewarding work, satisfactory housing, good relationships and healthy habits (Kane and Bibby, 2018). This classification drove the grouping of the variables used to assess positive outcomes in the early 20s. The Health Foundation was particularly interested in outcomes in early adulthood, and the data were available in the chosen dataset up to age 25/26.

Variables were chosen to represent these building blocks based on (a) how well they reflected the core elements of the building blocks, (b) the number of responses available, and (c) the variability of responses (was there enough variation in the responses to discriminate between positive and negative outcomes?). Next the measures needed to be split into positive or negative outcomes. Again this was done through research team discussion, on the basis of messages from the literature, and in discussion with the Health Foundation team. Data which could not be split into 'positive' or 'negative' outcomes (eg. employment status; 'how often sees family'; 'age moved out of parents home'; 'Number of addresses lived outside of parent's home'; annual rent) were removed.

Figure 6 presents the variables used to construct the building block. In addition, Appendix 2 presents more detail on the frequencies for the individual variables making up each of these categories.

Figure 6: Constructing the building blocks (outcome variables)

BUILDING BLOCK HEADING	SUB-GROUPS OF RELEVANT VARIABLES
1. Suitable/rewarding work	<ul style="list-style-type: none"> Current activity* Whether does overtime Hours per week worked Job permanency Gross pay Total household take-home pay Student loans Hard work is rewarded
2. Satisfactory housing	<ul style="list-style-type: none"> Number of parents lived with Housing tenure How managing financially
3. Good relationships	<ul style="list-style-type: none"> Cohabiting In a relationship Life satisfaction Locus of control How often sees friends Has people willing to listen to problems
4. Healthy habits	<ul style="list-style-type: none"> Weight; Exercise per week; Hours slept; General Health Questionnaire** score; Self-assessed health; Long-standing illness; Smoking status
<p>* Full or part-time employed, vs Unemployed/ education/sick/disabled/volunteer/looking after family</p> <p>** a screening questionnaire designed to identify risk of mild mental health disorders in the general population</p>	

As with the assets, a number of choices were made about how well the variables aligned with our overall construct for each building block, and the extent to which the variables were suitable for being broken into ‘positive’ and ‘negative’ outcomes. Again, any measures where there was insufficient variability in the data (e.g., where over 90% of young people reported having or not having the measure) were removed from the variable set. This meant we did not use variables describing, for example: zero hours contracts, having a secondary job, property type, marital status, getting money from parents, marital status, or happiness in

relationship. The aim was to get as close to the pre-determined meaning of the four main outcomes, but as with the assets, the process involved a number of decisions being made and the results need to be regarded as exploratory rather than definitive.

At the end of this process all the building blocks had at least three useful measures. It is notable that this was an easier process than constructing the assets. This is partly because the issues reflected in the building blocks were more closely related to those the dataset was originally intended to address, and also because we were using one timepoint, not three (unlike the assets). Despite much discussion in the research community around asset focused approaches, in the big longitudinal datasets we found it much easier to construct traditional outcome measures than to construct accumulation of assets.

Results

To what extent do young people have the four critical assets?

Assets were reported by over 90% (emotional support) to less than 12% (personal connections) of young people at different time points across the years 13-20, and generally decreased in prevalence over adolescence ($ps<.001$). Young people generally (72.1-79.1%) reported having 2-3 of the four assets at any time-point.

Figure 7 presents a summary of the percentage of young people reported as asset ‘present’ (reporting over 50% of the variables available) at each age band.

Figure 7: Average percentage of young people reported as having each asset at each age band

Asset	Age 13-15 % (SE)*	Age 16-17 % (SE)	Age 18-20 % (SE)
Skills	72.2 (0.1)	60.2 (1.4)	73.5 (0.7)
Connections	18.6 (0.4)	64.1 (0.7)	11.4 (0.4)
Financial support	79.4 (0.5)	79.3 (0.6)	59.9 (0.7)
Emotional support	93.1 (0.2)	No data	94.4 (.03)

*Percentages are reported on weighted data. Weighting the data means we are estimating the number of people in each group so the standard error reflects how accurately this may reflect the population average.
SE: standard error

We can see that the majority were acquiring **skills** – on average around two thirds to three quarters of young people had the skills asset at each of the time points. This is a mixture of where they were studying, quality of the school they were in & grades they were getting.

Personal connections seemed low at 13-15 and 18-20, but were good at 16-17. Overall this was a mixture of whether any family member was saving money for the young person’s education, how connected they felt to school, whether they were volunteering, and whether they were doing part-time work. At age 16-17 this measure only reflected the financial arrangement variable (which was usually ‘no’), and school connectedness (which was usually ‘yes’).

Financial support was generally fairly high, falling a little in the older age group. This included housing status (of parents), whether living at home, parental income, and parental employment. These variables drop away by 16-17 so that we only have the housing variables left at that point.

Emotional support was the most difficult asset to operationalise. According to the variables that were available to us, the majority of young people seemed to have a fair amount of emotional support at 13-15 and 18-20 (reflecting parental involvement in education, relationship with parents, how they spent their free time and number of close friends), but we had no appropriate variables to use at age 16-17.

As well as the presence or absence of individual assets, we were interested in the extent to which young people build up a ‘portfolio’ of different assets. Figure 8 shows the presence of numbers of assets at each age band. Very few young people were found to have gone through adolescence without at least one asset, and the majority reported 2-3 assets at each age band. However, relatively low proportions acquired all the possible assets at each age (12.1% at age 13-15, 37.5% at age 16-17, and 5.5% at age 18-20). On average across all three ages of adolescence that we looked at, this is a rate of approximately 1 in 5 (18.4%).

Figure 8: Number and percentage of young people reporting the presence of different numbers of assets at each age band

No. Assets reported	Age 13-15 N (%)*	Age 16-17 N (%)	Age 18-20 N (%)
0	487 (0.8)	2896 (7.1)	89 (1.4)
1	1879 (10.6)	4612 (20.8)	1098 (14.0)
2	4678 (29.6)	4331 (34.6)	3526 (35.0)
3	7143 (46.9)	4222 (37.5)	4445 (44.1)
4	1935 (12.1)	**	641 (5.5)

* Ns reflect the raw number of people included in the analysis. The percentages have undergone weighting to approximate the general population this age. As such, raw numbers do not match the percentages.

** Emotional support not measured at age 16-17

Patterns of accumulating or losing assets

There were various different patterns of gaining or losing assets across the three age bands. Figure 9 shows the possible patterns.

Figure 9: Patterns of accumulating and losing assets across time

Categorisation	Age 13-15 Asset present	Age 16-17 Asset present	Age 18-20 Asset present
Stable present	Yes	Yes	Yes
Late falling	Yes	Yes	No
Early falling	Yes	No	No
Late rising	No	No	Yes
Early rising	No	Yes	Yes
Stable not present	No	No	No
Unstable	Yes	No	Yes
Unstable	No	Yes	No

Figure 10 shows the percentage of young people reflecting these different patterns for all four of the assets.

Figure 10: Percentage of young people reflecting different patterns of asset accumulation and loss

Categorisation	Skills (N=9239; 6881 participants missing)	Personal connections (N=9540; 6570 missing)	Financial support (N=9502; 6619 missing)	Emotional support* (N=9530, 6476 missing)
Stable not present	553 (8.3)	2392 (29.4)	1328 (13.9)	59 (0.7)
Late rising	1230 (12.1)	203 (1.8)	159 (1.2)	
Early rising	348 (3.6)	752 (6.0)	216 (1.1)	596 (6.6)
Stable present	4122 (42.9)	288 (3.0)	5403 (56.4)	8439 (87.8)
Early falling	497 (6.2)	289 (3.7)	323 (3.8)	436 (4.9)
Late falling	1014 (10.7)	1105 (12.7)	1609 (19.4)	
Unstable	1475 (16.2)	4511 (43.4)	465 (4.3)	

**Emotional support only had two time points*

Percentages are not directly comparable due to use of different weightings

A variable number of young people are achieving ‘stable present’ assets between 13-20 years – from 88% for ‘emotional support’, to 3% in ‘personal connections’. The frequency of ‘stable present’ patterns suggests that when a young person started adolescence with an asset, they tended to keep it, at least according to the data available to us. Assuming the importance of *all* these assets to a successful adulthood, this highlights the areas of adolescent care which may require more attention. ‘Stable not present’ is important to note, as this depicts young people who have never achieved an asset over their young adulthood. It is generally a small proportion, other than in relation to personal connections (1 in 3 young

adults), and financial support (1 in 7). But as we have already noted, these are areas where we had far fewer variables to draw on, and it is difficult to assess the extent to which this may reflect measurement error in these domains.

Relatively small number of young adults are moving between ‘present’ and ‘not present’ asset groups in any particular direction– as depicted by the other trajectories – other than in relation to the ‘late falling’ group, which appears in 10-20% of young adults. This is important to review, as it may highlight a lack of continuing support and investment beyond the age of 17. Nevertheless, taken together there is a large amount of fluidity in asset presence across ages according to the variables we utilised. This could be considered in a positive or negative light – on the one hand, it seems possible to adapt a young adult’s trajectory at any points in their young adulthood. On the other hand, an average of 50% of young adults do not have asset stability (including in relation to ‘skills’ – our most well documented asset), and currently seem to be more likely to lose an asset than to gain one.

It is not entirely clear how much this variation in patterns is a function of the underlying measures and their ability – or not – to really reflect the assets as we wanted, or how much it is a function of what is happening at this age group, which is indeed quite a lot of movement, transition and change.

Possession of ‘building blocks’ (positive outcomes) at age 25

More than half of the young people had accumulated a positive ‘yes’ for each of the four building blocks by the time they were in their mid-20s. In fact, over three quarters rated positively for good relationships and 'healthy behaviours and health'. Figure 11 presents the proportions scoring ‘yes’ on at least 50% of the measures making up each building block.

Figure 11: Percentage of young people marked as ‘building block present’ (reporting the presence of at least 50% of the variables for each building block)

Outcome (N=7537)	Mean % (SE*)	N
Suitable, rewarding work	59.9 (0.7)	4515
Satisfactory housing	53.8 (0.8)	4055
Good relationships	87.7 (0.5)	6610
Healthy behaviours and health	74.3 (0.6)	5600

*SE: standard error

As can be seen from these results, just over half of young people aged 25 report satisfactory housing and report suitable, rewarding work. However, the majority do report good relationships (88%) and health (74%).

We were also interested in whether these four building blocks correlated – ie. whether young people with one outcome were more likely to show another. We ran a weighted correlation analysis to identify this, but found no strong correlation between any outcomes. This is not to say that (for example) suitable employment and satisfactory housing are not linked – just that no relationship was found using the variables available to us.

Figure 12 shows the accumulation of these building blocks by age 25 in the sample. Very few young people had reached this age without acquiring at least one of the building blocks, and the majority reported around three.

Figure 12: Percentage of young people reporting accumulation of different numbers of building blocks by age 25

Number of outcomes achieved	N (%)
0	129 (2.0)
1	612 (9.1)
2	1836 (24.9)
3	3216 (40.8)
4	1914 (23.1)

* Ns are the raw number of people included in the analysis. The percentages have undergone weighting to approximate the general population this age. As such, raw numbers do not match the percentages.

Predicting from individual assets (age 13-20) to building blocks (age 25)

Turning next to the relationship between the original assets and the later building blocks, we looked at each outcome in turn and assessed the extent to which the assets accumulated between the ages of 13 and 20 predicted age 25 outcomes.

Using multivariable logistic regression analyses adjusted for sex, and ethnicity, we identified that attaining ‘**Suitable/rewarding work**’ at age 25/26 was associated with the presence of ‘skills’ and ‘financial support’ at all adolescent age-bands, and ‘personal connections’ at ages 16-20. The results are presented in Figure 13.

Figure 13: Association between assets accumulated by ages 13-15, 16-17 and 18-20, and suitable work at age 25 (weighted)

Asset (N=7537)	P value	Coef.	95% C.I.s*	
T1 (ages 13-15)				
Skills	<.001	1.36	1.18	1.58
Personal connections	0.89	0.99	0.86	1.14
Financial support	0.01	1.21	1.04	1.41
Emotional support	0.65	0.95	0.77	1.18
T2 (ages 16-17)				
Skills	<.001	1.30	1.13	1.49
Personal connections	<.001	1.30	1.13	1.49
Financial support	0.01	1.27	1.05	1.52
Emotional support	-	-	-	-
T3 (ages 18-20)				
Skills	0.002	1.29	1.10	1.51
Personal connections	0.01	1.28	1.07	1.53
Financial support	0.01	1.21	1.05	1.39
Emotional support	0.72	1.06	0.78	1.45

*CI: confidence intervals

Figure 14 shows that ‘**Satisfactory housing**’ was associated with skills (which increased in significance over time), personal connections, and financial support at all time-points, and emotional support at T3.

Figure 14: Association between assets accumulated by ages 13-15, 16-17 and 18-20, and satisfactory housing at age 25 (weighted)

Asset (N=7537)	P value	Coef.	95% C.I.s	
T1 (ages 13-15)				
Skills	0.001	1.27	1.10	1.48
Personal connections	<.001	1.56	1.36	1.80
Financial support	0.02	1.20	1.03	1.40
Emotional support	0.23	1.15	0.92	1.44
T2 (ages 16-17)				
Skills	<.001	1.32	1.15	1.51
Personal connections	<.001	1.32	1.16	1.50
Financial support	0.001	1.34	1.13	1.60
Emotional support	-	-	-	-
T3 (ages 18-20)				
Skills	<.001	1.28	1.19	1.60
Personal connections	0.02	1.23	1.04	1.45
Financial support	0.02	1.17	1.02	1.34
Emotional support	<.001	1.80	1.35	2.41

‘Good relationships’ was associated with all assets, except financial support at T3, as shown in Figure 15.

Figure 15: Association between assets accumulated by ages 13-15, 16-17 and 18-20, and good relationships at age 25 (weighted)

Asset (N=7537)	P value	Coef.	95% C.I.s	
T1 (ages 13-15)				
Skills	<.001	1.52	1.24	1.87
Personal connections	<.001	2.30	1.78	2.99
Financial support	0.003	1.37	1.11	1.69
Emotional support	<.001	1.85	1.37	2.49
T2 (ages 16-17)				
Skills	0.01	1.31	1.07	1.61
Personal connections	<.001	1.45	1.17	1.79
Financial support	<.001	1.52	1.20	1.92
Emotional support	-	-	-	-
T3 (ages 18-20)				
Skills	<.001	1.79	1.41	2.29
Personal connections	0.02	1.40	1.05	1.86
Financial support	0.58	1.07	0.85	1.33

Emotional support	<.001	3.86	2.74	5.44
-------------------	-------	------	------	------

The earlier accumulation of assets was less clearly related to ‘**Healthy behaviours and health**’. Figure 16 shows that these were associated with personal connections at T1 and 2, financial support at T1, and skills at T3.

Figure 16: Association between assets accumulated by ages 13-15, 16-17 and 18-20, and health outcomes at age 25 (weighted)

Asset (N=7537)	P value	Coef.	95% C.I.s	
T1 (ages 13-15)				
Skills	0.10	1.15	0.97	1.35
Personal connections	0.002	1.30	1.10	1.53
Financial support	0.04	1.20	1.01	1.43
Emotional support	0.13	1.23	0.94	1.60
T2 (ages 16-17)				
Skills	0.70	1.03	0.89	1.19
Personal connections	<.001	1.48	1.28	1.71
Financial support	0.43	1.09	0.89	1.33
Emotional support	-	-	-	-
T3 (ages 18-20)				
Skills	<.001	1.40	1.18	1.65
Personal connections	0.23	1.14	0.92	1.41
Financial support	0.23	1.11	0.94	1.31
Emotional support	0.13	1.31	0.93	1.85

With the possible exception of ‘emotional support’ (although as noted this may be a reflection of the lack of data for this asset), all assets as identified by young people were important to their adult outcomes.

Predicting the number of successful age 25 outcomes

Was the overall number of positive outcomes at age 25 predicted by the assets? Again, analyses were undertaken separately for assets accumulated during each of the three age bands (13-15, 16-17 and 18-20), using multivariate logistic regression.

Figure 17 shows that skills was the most consistent predictor, as the number of positive outcomes attained at age 25 was associated with the presence of ‘skills’ at every time point. This may reflect the fact that skills was also the most robust asset analytically – i.e. the one with the most comprehensive range of components.

Figure 16: The association between earlier assets and the number of positive outcomes attained by age 25 (weighted)

Asset (N=7537)	P value	Coef.	95% C.I.s	
T1 (ages 13-15)				
Skills	0.04	1.69	1.02	2.80
Personal connections	0.006	2.61	1.32	5.16
Financial support	0.56	1.18	0.68	2.03
Emotional support	0.02	2.40	1.19	4.86
T2 (ages 16-17)				
Skills	0.002	2.16	1.32	3.56
Personal connections	0.05	1.70	0.99	2.89
Financial support	0.98	1.00	0.53	1.86
Emotional support	-	-	-	-
T3 (ages 18-20)				
Skills	<.001	4.40	2.62	7.41
Personal connections	0.53	1.28	0.60	2.73
Financial support	0.82	0.94	0.53	1.65
Emotional support	0.91	1.07	0.35	3.21

The final question related to whether the pattern of accumulation of assets across time (asset trajectories) was related to acquisition of building blocks at age 25. As described above, young people’s accumulation of assets was classified into different groups including those who had a stable and high level of assets at each time point, those who had stable but low levels at each time point, and those with either a rising pattern (doing better at a later age) or a falling pattern (doing better at an early age). There were six categories in total reflecting all the possible patterns. Regression analyses were used to predict the outcomes at age 25 from these different patterns of asset accumulation. The reference group for the analyses was the ‘stable not present’ group, those young people who consistently did not have assets across their adolescence.

Compared to young people with a ‘stable not present’ pattern of not having many assets at any point, those who consistently seemed to be doing well in their teens (stable present) seemed to have better outcomes at age 25. Across all four outcomes the benefits of the asset trajectories were the same: compared to ‘stable not present’ trajectories, having ‘stable present’ trajectories showed the largest benefit. For ‘skills’, any trajectory other than ‘stable not present’ had a statistically significant positive adult outcome (ps<.002). For example, young people with a ‘stable present’ pattern were twice as likely as those without assets to have a suitable and rewarding work at age 25. For ‘personal connections’ and ‘financial

support', 'early rising', 'stable present', and 'late falling' were consistently related with a positive outcome ($p < .01$ and $< .03$), suggesting that mid-adolescence (ages 16-17) may be the most important time-point at which to implement change towards these outcomes.

Although some potentially interesting patterns were revealed by these trajectory analyses, we do suggest a strong note of caution around their interpretation. The variables used to measure the assets were sometimes different at different age points, and so it is quite a jump to assume that continuity between one time point and the next means continuity in the underlying construct. Where we had most continuity was in measurement of, for example, academic attainment (skills) but even there different academic tests were taken at different ages. Being good at GCSEs, for example, is a good predictor of A level results, but it does not explain all the variation in A level scores. We suggest that further research, using different kinds of data, is necessary to unpack the real meaning of variations in the patterns by which assets are accumulated in the mid and late teen years.

The role of ethnicity and gender

Further analyses were undertaken to test the role of ethnicity and gender in predicting patterns of asset accumulation. Young women were more likely to report certain categories of assets at certain time points than young men, but the patterns were not very distinct or meaningful and the magnitude of the difference between the genders was small, with the possible exception of 'emotional support', which dipped more for men than women over time. There were also no large differences apparent between young men and young women for any of the patterns of asset accumulation.

The analyses were repeated by ethnicity, but due to the large proportion of respondents who identified as 'white', and the lack of information on the other ethnicities, there was no option but to dichotomise into 'white and 'other', which is unsatisfactory for exploring differences by ethnicity. There can be as much variation within the 'other' category as there is between 'white' and 'other'. Results suggested that financial and emotional support were both lower for 'other' than for 'white' ethnicities, and other ethnicities appeared to begin adolescence with fewer skill-based asset, but they caught up towards late adolescence and into early adulthood. There was some evidence of better scores on personal connections.

Discussion and conclusions

The main findings from the analyses can be summarised as follows:

- Very few young people went through adolescence (from 13 to 20) without gaining at least one of four key assets identified by young people in the initial engagement work (appropriate skills; personal connections; financial support; emotional support). The majority reported accumulation of two to three assets at each of three age bands (13-15, 16-17 and 18-20). However, few young people accumulated all the assets at any time point, and this proportion decreased over their adolescence (from 12% to 5.5%).
- Many young people reported assets that were stable across their adolescence. Depending on the asset, between 43% (skills) and 88% (emotional support) had a stable present pattern from age 13-15 to 18-20. The results were different for personal connections, where only 3% had a stable present pattern, but this may have been an issue with measurement. Some reported 'late rising', where assets were not present in the earlier years but had been accumulated later. A small but important group reported a 'stable not present' pattern, where they had not managed to accumulate assets at all by age 20.
- Most young people rated positively on several of the building blocks (outcomes) by age 25. These were building blocks previously identified by the Health Foundation as being important for a healthy future life. Four out of five (89%) had accumulated two building blocks by this age, and a quarter (23%) had all four.
- Various aspects of the earlier assets were significantly associated with positive outcomes at age 25. This was particularly the case for earlier accumulation of 'appropriate skills', which predicted not just to later work, but also to satisfactory housing and relationships. Financial support was also important, as were personal connections. Emotional support at the earlier ages was a less good predictor, but it was also the most poorly measured construct.
- The number of positive outcomes attained at age 25 was also positively related to the presence of skills at every time point, and to personal connections and emotional support at younger ages.

Interpreting with caution

This was a unique and pragmatic attempt to answer a valuable and difficult question, using available data. It was driven by the interests and concerns of young people, and those of

the funder, the Health Foundation. These provided interesting and challenging hypotheses which we put to the test in an existing longitudinal data set. Although we chose the data set with care, it was not designed to answer these questions and there were thus considerable limitations to what could be achieved.

There were several issues that should be noted. We needed to take a series of pragmatic decisions to force existing variables and outcome measures into a limited number of pre-set dichotomous categories. One issue was that this was easier to achieve for some of the constructs than others, depending on the extent to which they were already a focus of the best available dataset. It was thus easier to build suitable measures of 'appropriate skills' than the other assets, as these were well recorded in the dataset, and it was particularly difficult to build a measure of 'emotional support', which was not the main focus of the longitudinal dataset we chose.

A second issue was that, in order to distil the data into the four assets identified by the young people and the four outcomes identified by the Health Foundation, we had to take a range of pragmatic, stepped decisions, and a different research team with different advisors may have reached different conclusions. What gave us some confidence about the procedure was that the assets did indeed predict to the undoubtedly important outcomes, and in ways that make intuitive and theoretical sense. However, where we had null results, it is impossible to say whether this is because the hypothesis was not proved, or because the measurement limitations and iterations of decision making contributed to error.

Third, we do not know much yet about how the assets are directly related to health outcomes, but it may be that 25 is too young to check. It is possible that the early 20s may be too early to assess the association of the assets with health outcomes. Some of the health items will be measuring things that could potentially be quite fluid or transitory at this age, and permanent health habits may still be settling down. We would not conclude that this proves there is no relationship, only that we have not been able to see one.

However, with these limitations in mind, we do feel that the results of these analyses add weight to the views of the young people who took part in the initial engagement exercises for the inquiry. Building assets in these domains throughout your teens does indeed seem to be important for various outcomes in your early 20s. The results suggested that the assets available to young people affect their young adult outcomes across distinct pathways. The stability of these assets across adolescence is of particular importance to adult outcomes, and their presence may be especially important in early-mid adolescence. A small proportion of young people seem particularly disadvantaged in terms of accumulating assets, and this seems to have significance for the transition to successful independent early adulthood. To some extent these results confirm what we already know about adolescent development, but have the advantage of being driven by young people's lived experience, based on the constructs and assets that they themselves feel are most important to them.

Areas for future research

It is always difficult undertaking retrospective analysis of a dataset with new hypotheses, and given the results of this study, there would seem to be considerable mileage in investing some of these findings in more detail with data specifically designed for the purpose.

Questions requiring more analysis include the extent to which some assets may be more important than others. These results suggested that this might be the case for skills, but measurement of skills was better than for other assets. With better measurement of the full range of assets, using fuller and more appropriate sets of variables, we might be able to be more definite about how many young people are not accumulating the assets they need for a healthy early adulthood, and about the relative contribution of different kinds of assets. Our suspicion is that the emotional and practical support elements may be particularly important, but these have not traditionally been the focus of data collection with young people in their late teens and early 20s. Research has been very focused on achievements and work, rather than on the softer skills that may contribute just as much to healthy outcomes in early adulthood.

There are also undoubtedly interesting additional questions concerning the importance of different trajectories taken across adolescence for later outcomes. We were concerned not to attribute too much weight to the trajectory analyses, as the same underlying construct was sometimes being measured differently at different time points, but there were some tantalising suggestions that young people may accumulate and lose assets across this age period, and that these patterns may have significance for their later outcomes in their mid 20s. It is also important to find out whether there were critical periods by which point assets need to be accumulated.

References

- Hagell, A. *et al.* (2018) *The social determinants of young people's health: Identifying the key issues and assessing how young people are doing in the 2010s*. London.
- Hagell, A. *et al.* (2019) *Young people's suggestions for the assets needed in the transition to adulthood: Mapping the research evidence (Working Paper)*. London.
- Kane, M. and Bibby, J. (2018) *Listening to our future: Early findings from the Young People's Future Health Inquiry*. London.

Appendices

Table A1: Frequencies for dichotomised variables making up ‘assets’ (age 13-20 predictors)

OVERALL ASSET HEADINGS AND RELEVANT VARIABLES	AGE IN YEARS N(%)		
	13-15	16-17	18-20
1. Skills			
Level of education			
<i>School/college/apprenticeship/training/university</i>		9301 (81.6)	4734 (54.5)
<i>F-T/P-T job/other</i>		2098 (18.4)	3948 (45.5)
School quality			
<i>Above mean no. Students attaining level 5</i>	7090 (47.0)		
<i>Below mean</i>	7997 (53.0)		
<i>Above mean no. Students attaining 5 or more A*-C GCSEs</i>		8319 (53.7)	
<i>Below mean</i>		7167 (46.3)	
<i>Russell group university</i>			961 (9.8)
<i>Other university or none</i>			8838 (90.2)
Grades achieved			
<i>Level 5 or higher at KS3</i>	8742 (57.5)		
<i>Below level 5</i>	6453 (42.5)		
<i>5 or more A*-C GCSEs</i>		5831 (48.4)	
<i>Fewer than 5</i>		6209 (51.6)	
KS5 scores sample mean or above			2753 (46.1)
KS5 scores, below the mean			3225 (54.0)
Level of employment			
<i>F-T/P-T job</i>		688 (6.0)	2768 (31.9)
<i>School/college/apprenticeship/training/university/other</i>		10711 (94.0)	5914 (68.1)
Housing (adult)			
<i>Intends to, or is living in near home, in the family home, or has no preference</i>		7789 (66.6)	6705 (68.4)
<i>Intends to, or is living away from home</i>		3906 (33.4)	3094 (31.6)

	AGE IN YEARS N(%)		
OVERALL ASSET HEADINGS AND RELEVANT VARIABLES	13-15	16-17	18-20
2. Personal connections			
Parent's social network			
Whether any other family member is saving money for YP's education			
<i>Yes</i>	2286 (14.7)	683 (6.0)	
<i>No/not needed</i>	13318 (85.4)	10716 (94.0)	
School connectedness			
<i>High or mean</i>	9404 (60.6)	7744 (66.8)	
<i>Lower than mean</i>	6126 (39.4)	3844 (33.2)	
Volunteering experience			
<i>Yes</i>	221 (1.4)		610 (6.2)
<i>No</i>	15367 (98.6)		9189 (93.8)
Less than fulltime working experience			
<i>Yes</i>	3324 (21.3)		796 (8.1)
<i>no</i>	12272 (78.7)		9003 (91.9)
3. Financial support			
Parental Housing			
<i>Owned/mortgaged</i>	10744 (68.4)	8384 (72.2)	5985 (62.4)
<i>Rent or other</i>	4955 (31.6)	3221 (27.8)	3606 (37.6)
Parental income			
<i>Mean or above</i>	6422 (54.7)	5851 (61.9)	
<i>Below mean</i>	5312 (45.3)	3598 (38.1)	
Parental employment			
<i>At least one parent employed</i>	12641 (78.4)	9561 (81.8)	
<i>Both unemployed</i>	3481 (21.6)	2125 (18.2)	
4. Emotional support			

OVERALL ASSET HEADINGS AND RELEVANT VARIABLES	AGE IN YEARS N(%)		
	13-15	16-17	18-20
Parent's involvement in education			
<i>High</i>	12272, 78.4)		
<i>low</i>	3391 (21.7)		
Relationship status			
<i>In a relationship</i>			3228 (33.1)
<i>Not in a relationship</i>			6520 (66.9)
Relationship with parents			
<i>Good</i>	14728 (99.1)		
<i>bad</i>	134 (0.9)		
Social cohesion			
How YP mainly spends free time			
<i>With friends</i>	10053 (65.5)		
<i>With family/by themselves</i>	5296 (34.5)		
Number of close friends			
<i>2+</i>			9000 (92.5)
<i>0-1</i>			734 (7.5)

*relative poverty, based on calculations used in reports from the Institute of Fiscal Studies (<https://www.ifs.org.uk/comms/comm96.pdf> and <https://www.ifs.org.uk/bns/bn73.pdf>) for the relevant years – 2003 (median income £325 per week) and 2006 (median income £363 per week). For comparison purposes, this works out as an annual salary of £16,900 and £18,876 per annum respectively.

Table A2: Frequencies for variables making up 'building blocks' (age 25 outcomes)

N=7667	N (%)
1. Suitable/rewarding work	
Current activity	
F-T or P-T employment	6238 (81.4)
Unemployed/ education/sick/disabled/volunteer/looking after family	1429 (18.6)
Whether does overtime	
No	2972 (47.4)
Yes	3301 (52.6)
Hours per week worked	38.1 (11.1)
37 or below	3904 (62.9)
38 or above	2306 (37.1)
Job permanency	
Yes	5166 (89.5)
No	608 (10.5)
Gross pay	
2015 national average or above*	716 (13.3)
Below 2015 national average	4688 (86.75)
Total household take-home pay	
Band 1-2	4078 (57.6)
Band 3-4	3003 (42.4)
Student loans	
Average or below	1376 (48.3)
Above average	1476 (51.8)
Hard work is rewarded	
Strongly agree/agree	2869 (38.5)
Disagree/strongly disagree	4577 (61.5)
2. Satisfactory housing (secure, affordable, community)	
Number of parents lived with W&NUMPAR	
0	5015 (65.1)
1+	2692 (34.9)
Tenure	
Owned/mortgaged	1567 (20.4)
Part rent/rent/rent-free/squatting/parents	6098 (79.6)
How managing financially	
Living comfortably/doing alright	5490 (73.1)
Getting by/finding it quite or very difficult	2021 (26.9)
3. Good relationships (stable, supportive, good emotional well-being)	
Cohabiting	
Yes	2836 (36.8)
No	4870 (63.2)

In a relationship		
	Yes	1820 (37.4)
	No	3048 (62.6)
Life satisfaction		
	Very/fairly satisfied	5438 (73.2)
	No strong opinion/fairly or very dissatisfied	1989 (26.8)
Locus of control score (range = 4-16)		
	Internal (score 4-10)	6056 (82.0)
	External (score 11-16)	1328 (18.0)
How often sees friends		
	1-2 times a month or more	930 (12.4)
	Every few months or less/no friends	6571 (87.6)
Has people willing to listen to their problems		
	Somewhat/a great deal	6723 (89.8)
	No/ A little	766 (10.2)
4. Healthy habits		
Weight		
	Average/slightly overweight	6495 (86.9)
	Very overweight/underweight	980 (13.1)
No. Days per week exercise at least 30 mins.		
	4-7	2882 (47.1)
	1-3	3244 (52.9)
Hours per night slept		
	8 or above	2590 (34.9)
	7 or below	4831 (65.1)
GHQ scored** (range = 1-12)		
	Good health (score 1-2)	1912 (45.4)
	Below average health (score 3-12)	2296 (54.6)
Self-assessed health		
	Excellent-good	6745 (89.8)
	Fair-poor	770 (10.3)
Long-standing illness		
	No	6111 (81.3)
	Yes	1406 (18.7)
Smoking		
	Never smoked/ex-smoker	4306 (58.0)
	Smoker	818 (11.0)

F-T: full time

LTFT: less than full time

SD: standard deviation

Table 1. The association between assets trajectories across Time-point 1 (ages 13-15); 2 (ages 16-17); and 3 (ages 18-20) and suitable/rewarding work at age 25 (weighted)

Trajectory and asset (N=7537)	P value	Coef.	95% C.I.s	
Skills				
Late rising	0.006	1.61	1.15	2.25
Early rising	0.01	1.88	1.16	3.06
Stable high	<.001	2.24	1.68	2.98
Early falling	0.002	1.85	1.25	2.75
Late falling	<.001	1.95	1.40	2.72
Unstable	<.001	1.73	1.27	2.36
Confidence and connections				
Late rising	0.36	1.23	0.79	1.93
Early rising	<.001	1.71	1.32	2.21
Stable high	<.001	1.78	1.32	2.41
Early falling	0.41	1.17	0.80	1.72
Late falling	0.07	1.21	0.98	1.51
Unstable	<.001	1.44	1.22	1.69
Financial support				
Late rising	0.45	0.80	0.44	1.44
Early rising	0.97	1.00	0.51	1.92
Stable high	0.004	1.39	1.11	1.73
Early falling	0.26	0.79	0.52	1.19
Late falling	0.10	1.25	0.96	1.64
Unstable	0.57	0.89	0.58	1.34
Emotional support				
Early rising	0.41	0.67	0.26	1.74
Stable high	0.49	0.73	0.30	1.77
Early falling	0.29	0.60	0.23	1.53

Table A4. The association between assets trajectories across Time-point 1 (ages 13-15); 2 (ages 16-17); and 3 (ages 18-20) and satisfactory housing at age 25 (weighted)

Trajectory and asset (N=7537)	P value	Coef.	95% C.I.s	
Skills				
Late rising	0.004	1.67	1.17	2.37
Early rising	0.003	2.06	1.28	3.32
Stable high	<.001	2.24	1.64	3.07
Early falling	0.15	1.34	0.90	2.01
Late falling	<.001	1.89	1.34	2.66
Unstable	0.001	1.75	1.25	2.45
Confidence and connections				
Late rising	0.93	1.02	0.66	1.60
Early rising	<.001	1.72	1.36	2.20
Stable high	<.001	2.29	1.61	3.25
Early falling	0.001	1.98	1.33	2.95
Late falling	<.001	1.94	1.56	2.41
Unstable	<.001	1.35	1.16	1.58
Financial support				
Late rising	0.07	1.71	0.97	3.03
Early rising	0.20	1.56	0.79	2.08
Stable high	<.001	1.62	1.29	2.03
Early falling	0.99	1.00	0.66	1.50
Late falling	<.001	1.64	1.28	2.11
Unstable	0.05	1.48	0.99	2.21
Emotional support				
Early rising	0.58	1.27	0.54	2.97
Stable high	0.50	1.33	0.58	3.08
Early falling	0.33	0.65	0.27	1.55

Table A5. The association between assets trajectories across Time-point 1 (ages 13-15); 2 (ages 16-17); and 3 (ages 18-20) and good relationships at age 25 (weighted)

Trajectory and asset (N=7537)	P value	Coef.	95% C.I.s	
Skills				
Late rising	<.001	2.53	1.60	4.00
Early rising	0.002	2.36	1.36	4.10
Stable high	<.001	3.45	2.38	4.99
Early falling	0.006	2.12	1.24	3.62
Late falling	0.001	2.12	1.38	3.24
Unstable	<.001	2.93	1.93	4.44
Confidence and connections				
Late rising	0.44	1.29	0.67	2.47
Early rising	0.01	1.67	1.14	2.43
Stable high	<.001	4.66	2.27	9.60
Early falling	0.06	2.05	0.98	4.25
Late falling	<.001	3.34	2.24	4.98
Unstable	0.003	1.45	1.14	1.85
Financial support				
Late rising	0.46	1.33	0.62	2.87
Early rising	0.42	1.45	0.59	3.55
Stable high	<.001	1.86	1.38	2.51
Early falling	0.45	1.23	0.72	2.11
Late falling	<.001	2.53	1.74	3.68
Unstable	0.10	1.59	0.92	2.76
Emotional support				
Early rising	0.88	1.07	0.43	2.65
Stable high	0.06	2.24	0.97	5.16
Early falling	0.10	0.48	0.20	1.16