# **Chapter Two: The British Cohort Study: Youth Transitions in Education and Employment**

"a different country… You have to blink and rub your eyes". – Jacques (1982)

# **Introduction to Chapter Two**

Continuing the theme set in chapter one, chapter two attempts to replicate the previous analysis of entry from school into work. This chapter focuses on the British Cohort Study, the third birth cohort study in the UK that started in 1970. As in chapter one, this chapter will focus on the pathways and choices made by individuals in the BCS after they reached 16 and ended mandatory schooling. Once more focus will be placed upon structural inequalities of social class, sex, and housing tenure to understand young people’s transitional experiences during this period. An attempt is made to replicate the NCDS chapter as precisely as possible to enable a comparison of cohort transitional experiences.

This chapter thus begins with a literature review of present literature on the topic of BCS youth and their transitional experiences. Then this chapter will move on to a replication analysis of the model used in chapter one, with sensitivity analysis and handling missing data sections. Finally, this chapter will conclude with a comparison of NCDS and BCS youth, pointing out any similarities or diversions in their biographical life courses.

The data used comes from sweeps from birth up to age 30 using the BCS. The present chapter continues the tradition of the previous by updating prior literature with modern statistical techniques. This chapter will look at four primary economic activity outcomes: employment, education, training & apprenticeship, and unemployment & out of the labour force. Due to the nature of the BCS, missingness will form a key discussion within this overall chapter.

**Literature Review: BCS Timeframe and Context**

This section provides an overview of the literature within the field of youth transitions of the BCS cohort. This review focuses on existing research outlining the school-to-work transition and examination of the structural impacts upon that transition within the context of the BCS cohort. Initially literature will focus upon the historical and temporal context of the BCS cohort to ground the empirical research on transitions. As with chapter one, major transition themes are identified as they relate to employment, education, training, and unemployment. Each are influenced to some degree by structural factors that impact individual choice and opportunity. The changing nature of the labour market, and British polity during the BCS timeframe have had a substantive impact on the role of training and apprenticeships within an individuals first major transition from mandatory schooling into the world of economic activity.

At the time of the BCS cohort, young people were in full time education until the age of 16 – like the NCDS cohort. At this age, individuals were typically expected to sit some form of examination – for the BCS cohort they were some of the last individuals to sit the O-level at 16, prior to its replacement with the GCSE. After this period of mandatory schooling there were options of continuing within education, moving on to training under the YTS scheme, entering employment, or becoming unemployed or out of the labour force. The relative diversity of options comparative to the NCDS cohort was restricted. Traditional apprenticeship schemes were gone, as was unemployment benefit for individuals aged 16-18. These effects will be discussed at length in the literature review below.

**Story of transitions for BCS youth**

Within Britain, the 1970s and 1980s were periods of large-scale transformation (Bynner, Ferri and Shepherd, 2019). The 1970 BCS cohort can be characterized by a continuing decline in manufacturing and apprenticeships, high levels of unemployment, greater government intervention in young people’s economic activity, and a growing higher education framework. The 1970s cohort experienced a society in which Harold Macmillan proclaimed so confidently that ‘’You never had it so good’’ (Hamnett, McDowell and Sarre, 1989).

The 1960s saw the ‘white heat’ of Wilson’s technological revolution that transformed British society and its subsequent labour markets into a service based, consumer based economy (Hamnett, McDowell and Sarre, 1989). The 1970s onwards saw a continuing trend post-war of a simultaneous growth of automation and technology alongside a decline of manufacturing, though this came more out of the 1970s recession that devastated the heavy industrial markets of the North of England – the recovery and rebuilding of a service economy was located exclusively within the South of England (Hamnett, McDowell and Sarre, 1989) – half of all jobs created between 1983-87 were created in the south east (ibid). These pressures brought about major labour market and societal transformation for society, and increased uncertainty and risk for the worker (Schoon, 2007; Beck, 2014). A result of this transformation of society, Hutton describes this period of British history as the ‘30/30/40’ society, whereby 40 per cent of the population are permanently in casual employment, 30 per cent are doing fine, and another 30 per cent are struggling, leading to the phrase ‘Getting on, getting by, getting nowhere’ (Bynner, Ferri and Shepherd, 2019).

These ‘new’ jobs were defined by their transferable skills across the service sector (Bynner and Ferri, 2003). As a result, the apprenticeship scheme that was linked to traditionally heavy manufacturing highly specialised training went into decline and was eventually replaced by the Youth Training Scheme in 1983 under the management of the Manpower Services Commission. This in turn would be replaced by Youth Training in 1990 (Droy, Goodwin and O’connor, 2019). The YTS arguably advented the first time in Britain that youth had become a category of large-scale policy intervention beyond that of education (Wallace and Cross, 1990). The YTS modus opernadi was based on keeping kids off the streets and filling unemployment gaps – this became especially apparent during the recession of 1986-7 whereby the unemployment rate for men was 2.6 per cent but 12 per cent were in some form of government training, though this eventually fell below unemployment figures in 1988 post-recession (Bynner and Ferri, 2003). The YTS has experienced sustained sociological critique (Droy, Goodwin and O’connor, 2019), its main issue comes from the fact that it was an attempt at direct intervention from a collapsing youth labour market from a government that was anti-interventionist. It started out as a one-year in 1983 (eventually to two-year in 1986) scheme that provided mostly low-level training that was more comparable to an alternative to unemployment than to higher education or employment (Bynner and Ferri, 2003). Whilst the YTS did maintain a stay average of 400,000 people between the years of 1958-89, it was neither an adequate replacement from the highly skilled training of a traditional apprenticeship, nor was it an adequate form of pay and employment. The description by some (Wallace and Cross, 1990) that the YTS represented a ‘dual-carriageway’ between school and work for school-leavers is adequate only if you envisage the car being in both lanes at the same time. The YTS was also internally stratified. There were some attractive highly trained schemes that it did offer, so called ‘Model A’ schemes that worked directly with employers, however these were very hard to acquire and oftentimes went to those that did not need them the most (Wallace and Cross, 1990). The ‘Model B’ schemes were most numerous and typically what people mean when they describe the YTS. Among these unattractive schemes, individuals were typically sorted into the growing service sector, associated with insecurity and risky employment prospects. This liminal zone of the youth labour market was stratified along gender and class grounds (Droy, Goodwin and O’connor, 2019).

It was for many a stopgap – an unattractive one at that. It would not be accurate to compare the YTS – which was a training scheme, to the much more rigorous training and education of a traditional apprenticeship (Bynner *et al.*, 2002). Most young people felt forced into the YTS scheme due to the Thatcher government cutting unemployment benefits for all people between the ages of 16-18 in 1988. This is arguably the start of the punitive approach toward unemployment and welfare in the late 20th century (Droy, Goodwin and O’connor, 2019). Due to the timing of these unemployment benefit cuts, the 1970 cohort were still able to claim if they so desired, though they still suffered as part of the ‘vulnerable core’ of the labour market through Thatcher’s cutes and de-regulations towards employment rights and the minimum wage (Hamnett, McDowell and Sarre, 1989). The proclamation in 1981 under the New Training Initiative of heralding in universal youth training for all was in reality a poorly thought out scheme that some compared to a stopgap, whilst harsher critiques referred to it simply as ‘slave labour’ (Bynner, Ferri and Shepherd, 2019). The YTA offered cheap, subsidised labour to employers with no requirements to continue an individual’s employment after the scheme was completed (Droy, Goodwin and O’connor, 2019). It would be fair to characterise the YTS as a short-term benefit to businesses whilst leaving the individual worker under-trained, under-paid, and often unemployed.

The initial desired purpose of the scheme was to establish a training scheme comparable alongside German lines (at the time argued to be the best apprenticeship program in Europe). The result however, was a scheme that failed to appropriately train youth, and the best form of vocational training was instead found to be employment itself (Bynner *et al.*, 2002). In fact, the YTS has been found to have had negative consequences for men’s employment prospects (Droy, Goodwin and O’connor, 2019; Goodwin *et al.*, 2020), and overall a negative impact on earnings over the life course (ibid).

The relative decline of apprenticeship schemes and increase in education opportunities due to the increasing pressure on young people to accumulate credentials (Bynner and Ferri, 2003) resulted in a much higher proportion of school leavers in the 1970s onwards staying on within education than their earlier cohorts. Those that did not choose to stay on within education and had little to no qualifications faced a harsh reality of ‘patchwork’ career trajectory, characterised by shifting occupations and periods of unemployment (Bynner, 2005). In 1976, the number of individuals that left school without any qualifications was 21 per cent, in 1986 it was only 9 per cent (Wallace and Cross, 1990). The 1970 cohort were the last to ever experience the dual O-level/CSE composition at 16 – the BCS cohort were in the middle of a massive amount of Education reform in that would come in 1988 with the advent of the Education Reform Act. Men in particular saw a large increased probability of being in full-time education over employment in comparison with the 1958 cohort (Bynner and Ferri, 2003), though large members of men were also entering government training schemes like the YTS. For women too, the decreasing numbers of young women being out of the labour force saw a corresponding increase in labour market participation (Bynner and Ferri, 2003) as well as higher education participation. The expansion of the university system in the late 1960s following the Robbins Report (*Robbins Report*, 1963) provided the supply of higher education places that this new service based labour market so often demanded (Bynner and Ferri, 2003). Though comparative to the continent at the time, European rates of participation in education were changing more rapidly than Britain (Bynner, Ferri and Shepherd, 2019). For most, the transition into adulthood is characterised by an initial movement from mandatory education to some for of employment. The fact that the BCS cohort appears to exhibit an elongated stay within education (Bynner *et al.*, 2002) is some indication of the changing nature of the labour market within the UK – and also provides evidence for the development of an ‘Emerging Adulthood’ (Bynner, 2005). This transitional change is indicative of two potential sources, the first would be a major economic shock, in the form of a recession would encourage individuals to stay in education for longer in order to avoid the initial economic shocks and uncertainty that comes with being employed in a labour market experiencing a downturn. The second, relates to a degree of economic restructuring due to technological change, resulting in different skills and credentials, thus encouraging a longer stay within education to garner such skills and credentials. For the BCS cohort, both of these things occurred (Bynner *et al.*, 2002). Leaving school to enter employment for minimum school age leavers was a much more difficult process compared to 10-20 years earlier – even more so for those living in industrial and manufacturing heartlands (Bynner *et al.*, 2002).

The returns to education for the BCS cohort confer a 17 per cent average increase in income for those individuals that stayed on within education post-mandatory schooling compared to their peers (Boero *et al.*, 2020). This is not entirely surprising considering that education is the most important single, individual predictor of adult incomes and earnings (Breen, 2022), though it does emphasise the importance of reflecting on the stratifying influences during education and their subsequent impacts on choice and opportunity post-education. This single most important predictor is a worrying phenomena when combined with a ‘wastage of talent’ (Bukodi, Bourne and Betthäuser, 2017) whereby young people from disadvantaged backgrounds face barriers to fully realise their academic potential within the British educational system.

Labour market restructuring was part of the increase in home ownership from the 1950s to 1990s. During the period of 1951 only 31 per cent of people owned their own home, in 1991 this rose to 67 per cent (Bynner and Ferri, 2003). Whilst home ownership did rise, that too was stratified by parental social class and income (Blanden and Machin, 2017). For the BCS cohort, having parents that were homeowners when they were aged 16 increases the probability of themselves being a homeowner at 42 by 116 per cent (ibid).

All this historic phenomenon has impacted the relative stability of youth transitions that are apparent for the NCDS cohort. The relative decline in individuals moving straight from school into work after mandatory schooling and the growth of difficult transitions and accumulating human capital via higher education suggests an increase in risk and uncertainty (Anders and Dorsett, 2017).

### **Structural Barriers to successful transitions – the role of social-class and sex**

**Social Class**

The BCS cohort experienced a stratified post-mandatory schooling experience. When it comes to participation in higher education, those from the most advantaged social origins background were more likely to attend higher education institutions comparative to less advantage individuals (Alcott, 2013). Prior academic attainment explains most of the variance in this stratified higher education participation (around 60%) (Alcott, 2013). With the growth of an ‘Emerging Adulthood’ and an elongated stay within education, participation in education for the BCS cohort has seen the gap between disadvantaged and privileged social origins get wider (Bynner, 2005). These apparent returns to education are stratified according to social class origins, with the advantages offered by certain qualifications differing according to class origins (Bukodi and Goldthorpe, 2011; Parsons, Green and Wiggins, 2016).

**Sex**

The experience for women within the 1970 cohort saw a continuing weakening of gender differences in processes of occupational attainment – a similar trend seen within the 1958 cohort (Bukodi, 2009), though the strength of education in this process appears to remain the same across cohorts (Bukodi and Goldthorpe, 2009). The weakening of gender differences is seen both at the educational level and occupational level in the form of take home income (Bynner, 2005). However, whilst the BCS cohort experienced a decline in gender segregated occupational sorting (Lekfuangfu and Lordan, 2022), those occupations that have the highest share of males maintained relatively high levels of segregation. Whilst it has been emphasised that social class origins have had an impact upon the BCS youth, the changing nature of the labour market has also had ramifications for men and women with regards to their biographical agency and their ability to find routes to stability and security (Schoon, Martin and Ross, 2007).

**Conclusion**

The BCS cohort is one that can be characterised by choice. Comparative to previous generations, that choice was much more numerous in the options presented to the BCS youth on what to do next after mandatory education had finished. The ‘Emerging Adult’ could theoretically choose any number of these options; however, the reality is that many of these options constrained the individual either immediately or down their life course. If the desired route from education was to find stable employment, the NCDS cohort would find that simply entering employment itself would provide a viable route to success. For the BCS cohort however, this was not strictly the case. Labour market restructuring and technological innovation on top of a major recession provided a much more complex, elongated transition to a stable occupation (Martin, Schoon and Ross, 2008), resulting in a ‘winding road’ school-to-work transition (Leuze, 2010). Entering employment immediately after mandatory education had the potential to lead to periods of unemployment due to a lack of skills in a new economic landscape (Bynner, 2005). Entering a government training program like the YTS would provide for some equally unsatisfactory results (ibid). Unemployment was a route that was even more restrictive than earlier cohorts due to the cutting off young people from benefits. Thus, the BCS cohort can be characterised as one of an educational turn. Staying within education, to both weather the recession storm and to pick up relevant and sometimes required qualifications was most likely the best option to lead to a stable and successful occupational career. Unfortunately, education – particularly post-mandatory education – was highly stratified. This stratified nature impacted the most privileged – by giving them advantages in the labour market, and the least privileged – by incurring further disadvantage. It should be assumed that, with this context, those individuals that entered education as a route post-mandatory schooling would thus be from more privileged backgrounds, perhaps in an even more striking ‘haves and have nots’ fashion than previously seen post 1944 Education Act reform.

**Data and Methods**

Chapter two is a replication analysis of the models presented in chapter one using the NCDS. Therefore, similar to chapter one, the relationship between social origins and economic activity after mandatory schooling is examined used the large-scale, nationally representative data collected from the British Cohort Study. Educational attainment, housing tenure, sex, reading, and maths scores are also included in the model, as they were in the NCDS model. This is to assess choice and opportunity into different forms of economic activity: employment, education, training & apprenticeships, and unemployment & out of the labour force. BCS data is available using the UK Data Service.

Whilst this chapter has attempted its best to replicate the analysis in chapter one there are some substantive differences. Firstly, and most substantially, is that the outcome variable of economic activity after mandatory schooling in chapter two only has four categories to chapter ones five. Chapter two is missing a ‘post-education schooling’ category that encapsulates non-traditional forms of education that did not follow the traditional route of university. For the BCS cohort these non-traditional forms of education had decreased in popularity on top of not being appropriately recorded In the BCS survey. The second substantive change relates to the construction of social class measures (NS-SEC and RGSC) within chapter two. Whilst both chapter one and chapter two use occupational coding data from (Gregg, 2012), for the NCDS codes are only available for fathers of participants, for the BCS cohort both fathers and mothers are made available. Due to this both NS-SEC and RGSC are coded by using mothers’ occupational data to fill in any missing data entries from the father’s data. Other than these two differences, the model presented for analysis in chapter two is identical to that of chapter one. The reason for this is to start to build a historical picture of the changes and developments in choice and opportunities for different cohorts across different time periods.

As with chapter one, after an initial exploration of descriptive statistics multinominal logistic regression will be used to understand the choice and opportunities of BCS youth when it comes to economic activity post-mandatory schooling. After this initial model, a sensitivity analysis of social stratification measures will be employed to assess the most appropriate measure. Finally, an analysis of missing data involving multiple imputation will be conducted to assess the impact of missingness on the substantive findings of the model.

**Introduction to the BCS data**

This chapter will use data from the British Cohort Study (University College London, 2022). The BCS70 began in 1970 with data originally collected on 17,198 babies born in England, Scotland, Wales, and Northern Ireland in the week of 5-11th April. This chapter will use data from participants up to the age of 30. Full cohort sweeps were gathered when participants were aged 5, 10, 16, 26, and 30 – with a subsample taken at 21 (Bynner, 2017). Originally, the data was collected by a mixture of medical records, and mother’s input. As the cohort member got older however they started to actively participate in answering some survey questions. Age 26 was the first time the cohort member took direct control of answering the survey itself. This was also a period of transition for the BCS, it typically relied on school records to keep in contact with its cohort members through their registered addresses but after the age 16 sweep when most left mandatory education a large amount of respondents were lost when it came time to contact them for the age 26 sweep (Elliott and Shepherd, 2006).

Alongside the standard sweeps that are detailed in the table below, two other aspects of the BCS are the 21-year-old sub-sample sweep and the BCS economic activity dataset. Both were considered supplementary to the full sample sweeps. The former consisted of a sub-sample of 10 per cent of the participants in the full sample and covered aspects such as economic activity since age 16. The BCS economic activity datasets sole focus was on creating a monthly economic activity record of participants since they left mandatory schooling up to 2016. The economic activity dataset was constructed using activity related data from sweeps 5-10 (Hancock and Peters, 2021). Barring the 21-subsample sweep, economic activity history on the type of activity individuals did post-mandatory schooling at age 16 was not collected until participants were aged 30 in sweep 6. The content covered in the age 30 sweep and the economic activity dataset for the time period of this analysis is virtually identical. The 21 subsample however does provide additional data that is missing in both the economic activity dataset and the sweep 6 dataset. Data was thus merged with the sweep 6 and the subsample to boost the overall sample size of the outcome variable of interest.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total cohort | Dead | Permanent Emigrants | Non-Response | Other[[1]](#footnote-1) | Participants | (% of eligible sample)[[2]](#footnote-2) | Data Collected From |
| Birth – 1970 | 17287 | 0 | 0 | 716 | 0 | 16571 | 96 | Mother and Medical Records |
| Age 5 – 1975 | 16720 | 567 | 0 | 2812 | 360 | 12981 | 79 | Parents, medical records, cohort members |
| Age 10 – 1980 | 16700 | 587 | 0 | 1108 | 655 | 14350[[3]](#footnote-3) | 89 | Parents, school, tests, medical exam, cohort member |
| Age 16 – 1986 | 16690 | 597 | 0 | 3293 | 1594 | 11206 | 70 | Parents, school, tests, medical exam, cohort member |
| Age 26 – 1996[[4]](#footnote-4) | 16545 | 697 | 45 | 4765 | 2384 | 8654 | 55 | Cohort member |
| Age 30 – 2000 | 16253 | 747 | 287 | 1833 | 2553 | 10833 | 70 | Cohort member |

One of the first things to mention about the above table is that information on permanent emigrants prior to sweep 4 was not recorded, some have attempted to estimate this number in prior sweeps (Plewis, 2004) but it remains an estimation. Another to mention is that unlike the NCDS cohort where the number of participants has a steady decline as the sweeps go by, for the BCS there is a much more tumultuous story. The BCS went through many states of management and many states of how the data was exactly collected, this combined with the rather large period of 10 years from age 16 to age 26 has meant that attrition has been less that steady for the BCS cohort. This, even prior to analysis, suggests that missing data may present itself as a problem for the models to come.

**Introduction to measures for subsequent analysis**

The following section provides an overview of key variables used for subsequent multivariate analysis. Variable selection was a process that involved a combination of using the CLOSER search platform, digital codebooks, and manual searching of the individual BCS databases. This search was made much easier in chapter two compared to chapter one as the analytical variables in question were already chosen in chapter one – thus the goal of variable selection in chapter two was attempting to find the most appropriate similar measurements used in the BCS.

**Economic Activity**

As the main purpose of this chapter is to replicate the analysis of chapter one with a different cohort from a different period of time, the economic activity outcome variable has been selected in much the same way it was for chapter one. The variable of interest was economic activity data for individuals of month 201 – in other words when participants were 16 in September. As the BCS cohort’s mandatory schooling period ended when participants were 16, this was a natural month selection to measure economic activity. The month of September gives enough time for O-level results to be received and have any potential impact upon an individual’s economic activity circumstances.

Economic activity was recorded retrospectively in different sweeps. The first-time economic activity was recorded was in the 21-year-old sub-sweep that contained 10% of participants in the sample. Following this, economic activity was also recorded at age 30, as well as a special dedicated economic activity dataset that holds monthly economic activity data on participants up to present age – though this dataset does have a large amount of missingness on certain months. The economic activity variable is a combined outcome variable of the 21-sub-sample sweep and the age 30 sweep, to enhance responses. In areas that the two datasets overlap with differing values, priority is given to the 21-sub-sample sweep under the assumption that at age 21, someone would be more likely to accurately recall their economic activity in September when they were 16 compared to when they would be 30 years old.

The original economic activity variable in both the 21 sub-sample sweep and the 30-year-old sweep are very similar but have some slight variation. Below is a table providing descriptive statistics of each. Some recoding was required for both. In total, the economic activity variable has four outcomes: employment, education, training & apprenticeships, and unemployment & out of the labour force.

**Educational Attainment**

The BCS cohort were the last group to experience the O-level/CSE split system (XXXX). By virtue of being the last cohort to experience this, the variable dictated as educational attainment is directly replicated from chapter one. The variable itself is a binary variable of number of O-level passes.

**Sex**

Sex is a variable taken from the birth sweep to ensure the largest possible number of responses. Sex measures the sex of the respondent in a binary male/female format.

**Housing Tenure**

Housing tenure was taken from when respondents were aged 10. There was information on tenure when respondents were aged 16 although the responses were scattered across a number of binary variables that overall had a low level of responses. The age 10 variable on housing tenure was a multiple category variable that has few overall missing cases.

**RGSC**

**NS-SEC**

**CAMSIS**

**Reading and Maths Scores**

**Descriptive Statistics**

|  |  |  |
| --- | --- | --- |
|  | n | % |
| Economic Activity |  |  |
| *Employment* | 682 | 32.12% |
| *Education* | 950 | 44.75% |
| *Training/Apprenticeships* | 434 | 20.44% |
| *Unemployment and OLF* | 57 | 2.68% |
| Educational Attainment |  |  |
| *<5 O-Levels* | 670 | 31.56% |
| *5 or more O-Levels* | 1453 | 68.44% |
| Sex |  |  |
| *Female* | 999 | 47.06% |
| *Male* | 1124 | 52.94% |
| Housing Tenure |  |  |
| *Own Home* | 1437 | 67.69% |
| *Don't Own Home* | 686 | 32.31% |
| NS-SEC |  |  |
| *Higher managerial, administrative and professional occupations* | 411 | 19.36% |
| *Lower managerial, administrative and professional occupations* | 311 | 14.65% |
| *Intermediate occupations* | 36 | 1.70% |
| *Small employers and own account workers* | 222 | 10.46% |
| *Lower supervisory and technical occupations* | 376 | 17.71% |
| *Semi-routine occupations* | 325 | 15.31% |
| *Routine occupations* | 442 | 20.82% |
| RGSC |  |  |
| *Professional* | 93 | 4.38% |
| *Managerial and Technical* | 507 | 23.88% |
| *Skilled non-manual* | 184 | 8.67% |
| *Skilled manual* | 949 | 44.70% |
| *Partly skilled* | 269 | 12.67% |
| *Unskilled* | 121 | 5.70% |
|  |  |  |
|  | Mean | SD |
| CAMSIS | 4.54 | 1.34 |
| Reading Score | 41.04 | 11.77 |
| Maths Score | 44.35 | 11.34 |
|  |  |  |
| n | 2123 | |
| Data Source: BCS | | |

1. Other includes those respondents that cannot be accurately traced through any of the aforementioned categories. [↑](#footnote-ref-1)
2. Percentages are based on the participants divided by total cohort. [↑](#footnote-ref-2)
3. The reason sweep 3 has higher participant numbers than sweep 2 etc is due to the way tracking and sampling was handled. Across the BCS, difference organisations took control over this aspect of the survey. [↑](#footnote-ref-3)
4. Age 26 was the first time the cohort member themselves were in complete control of answering the survey itself [↑](#footnote-ref-4)