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# Does attending an English private school benefit mental health and life satisfaction? From adolescence to adulthood

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## ABSTRACT

Previous research has shown that there is a small but significant cumulative private school advantage in terms of educational attainment in Britain. However, research on how school type influences non-educational outcomes is more scarcer. This paper aims to identify the extent to which school type influences satisfaction with life and mental health from adolescence to early adulthood. Using Next Steps, a longitudinal study of young people in England born in 1989/90, the authors use multiple variable regression analyses to address the research questions. They find that for this cohort there is no evidence of a difference for mental health and life satisfaction by school type for either men or women in adolescence or early adulthood.

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Private education;  
independent school; mental  
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## Introduction

Previous research has shown that there is a small but significant cumulative private school advantage in terms of educational attainment at all stages of schooling in Britain (e.g. Dearden, Ferri, & Meghir, 2002; Feinstein & Symons, 1999; Henderson, Anders, Green, & Henseke, 2019; Sullivan & Heath, 2003; Sullivan, Parsons, Wiggins, Heath, & Green, 2014). In all such studies, private schooling is found to be important even after including controls for social background and for prior attainment. This educational advantage delivers a subsequent premium in the labour market (Green, Machin, Murphy, & Zhu, 2011), supplemented by an additional residual advantage, which has sometimes been attributed to social networks or to non-academic outcomes from schooling, though there is little formal evidence on this (e.g. Ashley et al., 2014; Marcenaro-Guierrez, Micklewright, & Vignoles, 2014). More recently there has been an increase in interest in the non-academic outcomes of school type. Of particular relevance is the paper by Sullivan, Parsons, Ploubidis, Wiggins, and Green (2020), who found that a private school education does not provide wider mental health benefits for those born in 1970 in Britain for men. Against expectations they even found a heightened psychological distress among privately educated women. They conclude that private schools did not provide any protection against psychological distress for

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this cohort. However, since the 1980s private schools have greatly increased their amount of spending on children. Moreover, in recent years there has been an increase in focus on mental health and wellbeing among young people and in the wider culture, following an increase in psychological distress among the younger generations (for example, Patalay & Gage, 2019). It is quite possible, then, that the mix of benefits provided by private schooling in the twentieth century may have changed in the new century. Good mental health and life satisfaction are important for fostering a flourishing and prosperous society (Layard, 2013). Therefore, creating the conditions that promote good long-term mental health has increasingly become a focus of many policy makers and a priority for schools – so much so that parents may look at pastoral support as a consideration in selecting an appropriate school for their child.

The paper contributes to our understanding of schooling, mental health and wellbeing in two ways. First, we build on the evidence presented by Sullivan et al. by examining whether there are any benefits of private school attendance on mental health and life satisfaction for a younger cohort born in England in 1989–90, who attended secondary schools during the 2000s. Second, rather than mid-life we focus on an earlier period of adult life – at age 25 – when it is possible that any direct effects of schooling on mental health remain more noticeable. Overall, we contribute to general understanding about the optimal contexts for fostering good mental health and life satisfaction to enable policy makers to developing appropriate interventions to improve young people's future mental health prospects. The paper proceeds as follows: after a review of the existing literature and a description of the data, the findings will be presented before a discussion of the implications for policy and practice.

## Background

Private school pupils account for 7% of the pupil population in England (Green, Anders, Henderson, & Henseke, 2020), but privately educated people's influence extends far more widely, including a disproportionate representation among high-status professional occupations, in political positions, and in high-paying industries (e.g. Kirby, 2016). The public policy discourse on private schools over the last decade has mainly concerned the schools' charitable status and the 'public benefit' obligations that this brings (e.g. Green et al., 2020; Wilde, Green, Taylor-Goodby, & Wiborg, 2016) and whether there is an educational advantage for those who attend these types of schools (e.g. Henderson et al., 2019). Arguably the main purpose of education is the academic development of students. However, the effects are potentially more wide-reaching, capturing aspects of safety, social development, physical and mental health. Winship (2021) documents the historical and current perspectives on mental health support in schooling in the UK and notes an increase in focus on wellbeing and mental health. This aligns with an increase in prevalence of common mental health difficulties such as depression and anxiety among adolescents (Bor, Dean, Najman, & Hayatbakhsh, 2014; Mojtabai, Olfson, & Han, 2016). Recent evidence shows a 50% increase in emotional disorders between 2003 and 2017 (NHS Digital, 2018). Therefore, we argue that measurement of school outcomes should extend beyond academic variables to include satisfaction with life and mental health and how these develop from adolescence to adulthood. This paper aims to broaden the discourse by focusing on the relationship between school type and measures of wellbeing.

The literature on wellbeing has focused on a number of outcomes, including life satisfaction and mental health. These terms require some unpacking for the present paper. Life satisfaction is the degree to which a person positively evaluates the overall quality of their life as a whole (Veenhoven, 1996). Much of the life satisfaction research examines the perceptions, mechanisms and dynamics involved in the relationships between reported wellbeing and situational circumstances (Diener, Suh, Lucas, & Smith, 1999). For example, ethnicity, sex, highest level of education achieved, income and employment have been shown to be significantly associated with life satisfaction (Keyes & Waterman, 2003). The interest in life satisfaction is well established among sociologists and economists as it is seen as a key index of social progress (e.g. Layard, Clark, Cornaglia, Powdthavee, & Vernoit, 2014) and has been shown to be correlated with income (both absolute and relative), employment status, marital status, health, personal characteristics (age, gender, and personality), and major life events (see Dolan, Peasgood, and White [2008] for a review).

Mental health is considered an important condition for achieving life satisfaction (Jones, 1942; Lombardo, Jones, Wang, Shen, & Goldner, 2018; Nelson, Lord, & Ochocka, 2001). Researchers have examined the relationship between an individual's mental health and life satisfaction and find that the presence of mental health issues is associated with lower levels of life satisfaction (Layard, Chisholm, Patel, & Saxena, 2013; Sun & Shek, 2012). Moreover, Layard et al. (2013) found that the biggest predictor of life satisfaction is mental health. Mental health measures tend to capture a range of diagnoses and symptoms capturing psychological condition, mental health problems, anxiety and depression (Layard et al., 2013). The specific measure used in the analysis for this paper is described in the Data and Methods section.

Previous research has shown that there is a relationship between childhood circumstances and life experiences in adulthood (Clark, Flèche, & Lekfuangfu, 2017; Frijters, Johnston, & Shields, 2014; Layard et al., 2014). It is important, therefore, to look at the effects of schooling longitudinally. There are a number of direct and indirect explanations as to why school type may influence both contemporary and future mental health and life satisfaction of students including: school resource and school composition (direct) and intellectual ability and educational attainment (indirect). A brief discussion of these follows:

### ***Direct: school resource***

Mental health and life satisfaction may be affected by the resource differential in schools. The private–state resource gap per pupil is large in Britain – of the order of three to one – and its private schools can spend much more money on resources and time for pastoral care, smaller class sizes, and better access to school counsellors and support staff who can more easily implement adolescent wellness programmes (e.g. Sahota et al., 2001). The resource differential may be even more salient for boarding school pupils (roughly 25% of pupils in the private sector, yet rare among state schools) (Green, Anders, Henderson, & Henseke, 2017). In a comparison between boarding school students and day school students in Australia, Martin and Dowson (2009) find that boarders have higher levels of wellbeing, which they attribute to better access to trained educators who could better meet the socio-emotional needs of students. Conversely, findings from a case-study

approach in the UK highlight the sometimes negative long-standing influence that attending boarding schools have on a person's life. Schaverien (2011, 2015) argues that some young people who are sent away to school at an early age may suffer from 'boarding school syndrome', which refers to the trauma of being separated from their family at a young age, trauma that may continue to distort relationships into adult life.

### ***Direct: school environment and composition***

Adolescents spend a large proportion of their days at school and so the school environment and composition are likely to play an important role in developing non-academic outcomes as well as academic outcomes. Young people's mental health may be related to the social stressors of schoolwork and the pressure to do well, which may be differentially experienced by school type. Previous evidence has shown the school culture to be important; for example, Sullivan, Joshi, and Leonard (2011) found higher levels of psychological distress in adulthood for men who had attended a single-sex school. More recently, Reynolds and Bamford (2016) found that the gender culture in school is important for mental health, reporting that a higher proportion of female students in a school is associated with fewer depressive symptoms among girls.

### ***Indirect: intellectual ability***

Secondary private schools select a student intake with higher average levels of prior attainment and school readiness (Anders, Green, Henderson, & Henseke, 2020). Therefore, any school difference we find on mental health outcomes in adulthood might derive from this selection on ability. There is evidence that those with high ability have a lower risk of having a psychiatric disorder, including depression (Der, Batty, & Deary, 2009; Feinstein & Bynner, 2004; Gale, Hatch, Batty, & Deary, 2009; Hatch et al., 2007; Koenen et al., 2009; Upmark, Lundberg, Sadigh, Allebeck, & Bigert, 1999). An explanation provided for this association is that those with higher ability are better equipped to cope with stressful life events (Koenen et al., 2009). There is, however, some contrary evidence that shows the opposite relationship between intellectual ability and mental health: whereby those with high levels of intellectual ability may be so acutely aware of their social environment, which allows them to be original and creative, but may also drive that same individual to be more liable to anxiety, hyper-reactivity and other psychological consequences (Karpinski, Kinase Kolb, Tetreault, & Borowski, 2017).

### ***Indirect: educational***

The highest level of education attained is associated with better mental health outcomes over the life course (Araya, Lewis, Rojas, & Fritsch, 2003; Hatch et al., 2007). Therefore, educational attainment may act as a protector against stresses (Pearlin, 1989); provide skills to access jobs with higher levels of income and higher status (Link & Phelan, 1995); and provide an environment and the resources for individuals to protect aspects of their health (Hatch et al., 2007). Moreover, higher levels of educational attainment has been shown to lead to higher socio-economic status and income (Feinstein & Bynner, 2004; Hatch et al., 2007). Through both the academic selectivity of private schools and the

private schools' own direct effects, those who attend private school have higher levels of educational attainment than those who do not. Thus, attendance at private school might also be associated indirectly, via educational attainment, with improved mental health and life satisfaction.

In light of this literature review and the available data, the following research questions will be addressed:

RQ1 Are privately educated students born in 1989/1990 in England less likely than state educated students to have symptoms of mental ill health during adolescence and early adulthood?

RQ2 Are privately educated students born in 1989/1990 in England less likely than state educated students to have higher levels of life satisfaction in early adulthood?

## Data and methods

### Data

Next Steps (formerly known as the Longitudinal Study of Young People in England (LSYPE)) began in 2004 when the sample members were aged between 13 and 14 years old. The participants (born in 1989/90) were followed annually by the Department for Education until they were aged 20, resulting in seven waves of data. The original sampling frame was a two-stage probability sample, adopted where schools were the primary sampling unit (including maintained, independent and pupil referral unit schools) with students born between 1 September 1989 and 31 August 1990, randomly selected within each school. Schools in deprived areas were oversampled and so too were ethnic minorities to achieve target numbers of 1,000 pupils in each group (Calderwood et al, 2021). In 2013 the UCL Centre for Longitudinal Studies (CLS) was funded by the Economic and Social Research Council (ESRC) to restart the study and follow up participants at age 25, with the plan to continue data collection throughout their adult lives. This plugs the data gap between the British Cohort Study (participants born in 1970) and Millennium Cohort Study (participants born in 2001) in England. The most recent Next Steps data collection took place in 2015 when the study members were aged 25.

This paper makes full use of the eight sweeps of data. Our main variable of interest is private school attendance versus state funded schooling, which is measured at each sweep within Next Steps. As a result of using this binary measure (private–state) state schools may include sixth-form colleges, further education colleges, and selective grammar schools. For the purpose of this paper, we derive a measure which captures whether the respondent ever attended a private school throughout secondary schooling, and when we are modelling age 14 outcomes, we use a disaggregated measure of this variable.

One of our main outcomes of interest is the response to the short-form versions of the General Health Questionnaire (GHQ-12), a screening device for identifying minor psychiatric disorders in the general population and within non-psychiatric clinical settings (e.g. primary care or out-patient care) (Goldberg & Williams, 1988). It concentrates on psychological ill-health, as well as general levels of happiness, depression and self-confidence. This is a validated tool that is suitable for all ages from adolescence

upwards (Werneke, Goldberg, Yalcin, & Ustun, 2000). It is a battery of 12 statements that assesses the respondent's current state and asks if that differs from his or her usual state. Because of this design, one of the limitations is that it is sensitive to short-term psychiatric disorders, but not to long-standing characteristics of the respondent. The self-administered items focus on two areas: the ability to function normally and the appearance of new phenomena. Cohort members were given a list of 12 questions:

'Have you: been able to concentrate on what you are doing; lost sleep over worry; been playing a useful part in things; been capable of making decisions; been constantly under strain; been unable to overcome difficulties; enjoyed day-to-day activities; been able to face up to problems; been unhappy or depressed; been losing confidence in self; been thinking of yourself as a worthless person; been reasonably happy?'

They were asked to rate how often they experienced each symptom on a four-point scale to indicate if they are at present: 'not at all' 'no more than usual' - 'rather more than usual'; or 'much more than usual'. Those who said they experienced a symptom 'not at all' or 'no more than usual' were given a score of zero. Those who said they experienced a symptom more or much more than usual were given a score of one. Cohort members were grouped into two categories, those with no evidence of psychological disturbance or mental ill health (a score of 0–3 out of 12); and those showing signs of probable psychological disturbance or mental ill-health (a score 4 or more). Goldberg, Oldehinkel, and Ormel (1998) suggest that the mean GHQ-12 score in the population should act as the threshold of identifying 'cases' of mental illness (probable psychiatric illness). However, this threshold is quite low in Next Steps (mean = 2.21), which may lead to a high level of false positives. Therefore, we use the '4 or more' threshold, which is the same as the threshold used on surveys among similar populations to enable comparability (e.g. Health Survey for England, 2016). GHQ-12 is captured at age 14, 16 and age 25 in Next Steps.

We also use the report of the participants' life satisfaction at age 20 and at age 25, which is captured by the question: 'how dissatisfied or satisfied you are about the way your life has turned out so far?' The respondents are given five response categories: very satisfied; fairly satisfied; neither satisfied nor dissatisfied; fairly dissatisfied; or very dissatisfied. We create a binary measure where those who are very or fairly satisfied is coded as one and the other categories are zero.

In addition to school type, self-reported mental health and self-reported life satisfaction, we make use of family background and individual characteristics from Next Steps from ages 13–16 in order to control for possible confounding variables which have been captured prior to the outcomes of interest. These covariates include:

- Parental social class measured by taking the highest class category from either parent mentioned from age 13–16. It is measured using the National Statistics Socio Economic Classification (NS-SEC), which uses occupational types to capture dimensions of social class (Rose & Pevalin, 2003). We make use of the three-category NS-SEC, which consists of: Higher Managerial, administrative and professional occupations; Intermediate occupations; Routine and manual occupations.

- Equivalised permanent income: we take an average of the household income over the first four waves and divide by the square root of household size to provide a measure of equivalised permanent income. This has been shown to have a larger effect on young people's educational outcomes than transitory income (Jenkins & Schluter, 2002).
- Housing tenure: measured by taking the most secure household tenure reported at age 13 and 14: this includes whether they rent their home, have a mortgage or own the house outright, capturing aspects of household resource.
- Highest parental education: this is measured by taking the highest qualification by either mother or father when the young person was aged between 13–16.
- Ethnicity: this is self-identified by the cohort member using a 16-category prompt (White British; White Irish; any other White; White and Black Caribbean; White and Black African; White and Asian; Any other mixed background; Indian; Pakistani; Bangladeshi; Any other Asian background; Caribbean; African; Any other Black background; Chinese; any other). These groups are aggregated to enable large enough categories for analysis.
- Gender; this information was captured at age 13, and if it was missing for any reason, it was captured at age 14 or 15.
- Region: this was captured when the sample member was aged 13, and is high-level regional information including; North East; North West; Yorkshire and The Humber; East Midlands; West Midlands; East of England; London; South East; and South West. Region is important as private schools are not equally distributed across the country (Table 2, Green et al., 2017).
- Prior attainment: captured by key stage 2 results, which are test scores taken at age 11.

### ***Methods and missing data strategy***

Regression analyses were used to address the research questions about school type and life satisfaction and school type and mental health. For the binary outcomes for mental health and life satisfaction, we run linear probability models and report the marginal effect on probability with statistical significance, which represent the marginal probability associated with a one-unit increase in the independent variable. We include school type only in the first model and then additively adjust for variables in order to understand the mechanisms for any association we identify. More specifically, for the analysis, we run the models in an additive way. Model 1 includes only the school type variable, Model 2 then adds the variable capturing whether it is a single-sex school to the private/state school variable. Model 3 then adds the following variables: parental social class; equivalised permanent income; housing tenure; highest parental education; ethnicity and gender in order to capture measures of home experience and individual characteristics. Moreover, it may be that private school attendance (and indeed levels of life satisfaction and mental health) is clustered in certain areas of the country; Therefore, including location variables in the model is important, which we do in Model 3. In Model 4 we add in a control for key stage 2 results to control for aspects of prior attainment (a proxy for ability), this aims to account for school selection in order to better isolate the 'effect' of



private school attendance on mental health and life satisfaction. In Model 5 we add any prior mental health measures to Model 4. When we look at the life satisfaction and mental health measures at age 20/25 (Model 6), we also adjust for adult outcomes in order to identify if any private school association operates through degree attainment by age 25, whether they are in a partnership at age 25 and their current labour market activity.

In terms of sampling, we restrict the main analytical sample to only those students who respond to the main outcomes of interest (school type, mental health at age 14, 16 and 25 and life satisfaction at 20 and 25). To reduce potential bias from item-missing data, we used multiple imputation procedures (Johnson & Young, 2011) in Stata 15 to create 20 complete datasets using chained regressions to impute values for missing data on the predictor variables at each wave. Then, following Rubin (1987), the estimates were combined across the 20 imputed datasets, and all estimates were weighted following the recommendations of Piesse and Kalton (2009) to account for the sampling structure.

Descriptive statistics of background characteristics by state and private school are presented in Table 1. Looking at the main outcomes of interest, we see that the proportion reporting symptoms of mental ill health for men and women are similar at ages 14 and 16, regardless of school type attended. At age 25 we see that for both men and women in state school there is a slightly higher proportion experiencing mental ill health compared to those who attended a private school, a two percentage point difference for men and almost a four percentage point difference for women. For those who attended a private school, we see a higher proportion of those who reported being very or fairly satisfied with life, a difference of between 6.45–8.86 percentage points compared to those who attended a state school.

## Results

The results in Table 2 show the association between private school attendance and mental health symptoms at age 14, 16 and 25 for the whole sample and for men and women separately. The results indicate that there is no evidence of a strong, statistically significant private school advantage (or disadvantage) regarding the reporting of mental ill health symptoms at age 14, 16 or 25 for either men or women. These results hold whether or not controls are included in the model. Looking at the coefficients in more detail, in Model 5 at age 16, we see a small (–0.06) negative point estimate of the association between private school attendance and symptoms of mental ill health for women. However; but this result is significant only at the ten percent level ( $p < 0.10$ ), and, although this is indicative that there is a small protective element for privately educated women at age 16 compared to state educated women, we cannot have complete confidence in this result.

Turning now to life satisfaction, we examine the long-term effects of private schooling on the cognitive appraisal of quality of life measured at age 20 and age 25, these are shown in Table 3. The results of Model 1 (with no control variables) yielded positively and statistically significant results for the whole sample, and for men and women separately. This indicates that on the face of it, those who attended private school were more likely to report being satisfied at age 20 and 25. However, when the individual characteristics and socio-economic background are included in

**Table 1.** Descriptive statistics.

	Male		Female		N
	State	Private	State	Private	
<b>Outcomes of Interest</b>					
Symptoms of mental ill health at age 14	11.52	10.99	24.24	24.05	12,142
Symptoms of mental ill health at age 16	16.01	15.73	29.32	27.73	10,519
Symptoms of mental ill health at age 25	21.38	19.38	27.11	23.33	7,184
Very or fairly satisfied with life at age 20	78.17	85.10	81.23	87.68	8,230
Very or fairly satisfied with life at age 25	70.53	77.50	75.58	84.44	7,175
<b>Home Environment</b>					
High parental class	21.04	52.60	22.06	54.76	
Intermediate parental class	26.72	23.38	24.19	23.13	
Routine parental class	52.25	24.03	53.75	22.11	14,833
Equivalised household income 13–16	13,554.36	30,811.06	13,320.55	32,637.51	13,958
Mortgage/Owns	65.50	89.91	64.53	93.05	
Rent/Other	34.50	10.09	35.47	6.95	15,378
Parental ed: Degree or higher	15.17	47.00	14.89	46.56	
Parental ed: Vocational or professional degree	10.74	11.99	10.78	12.46	
Parental ed: A level	8.18	11.04	8.40	8.85	
Parental ed: GCSE or equivalent	30.47	11.36	30.45	11.48	
Parental ed: Level 1	3.09	0.32	2.85	1.31	
Parental ed: No qualification	13.78	4.10	14.45	2.30	
Parental ed: Other	18.57	14.20	18.19	17.05	15,467
<b>Individual Characteristics</b>					
White	66.64	86.75	64.31	85.25	
Mixed	4.89	1.58	5.17	3.93	
Indian	6.20	2.84	6.21	3.93	
Pakistani	6.52	1.26	6.65	1.97	
Bangladeshi	4.35	1.26	5.66	1.31	
Black Caribbean	3.70	0.32	4.09	0.33	
Black African	3.92	0.95	4.37	0.33	
Other	3.79	5.05	3.54	2.95	15,107
Key stage 2	26.72	29.18	26.99	28.99	13,881
Single-sex school	0.38	0.34	3.07	3.86	12,640
<b>Age 25 Measures</b>					
Higher/Professional/Managerial	20.84	35.93	22.25	35.71	
Intermediate occupations	29.79	31.74	24.93	27.47	
Routine non-manual	22.73	13.77	24.85	11.54	
Self employed	11.21	5.99	4.67	7.69	
Unpaid/Voluntary work	1.28	1.80	0.98	1.65	
Unemployed	6.18	4.19	4.88	0.55	
Education	5.88	5.99	7.30	7.69	
Apprenticeship/Gov. training	0.30	0.00	0.16	0.55	
Sick or disabled	0.71	0.00	8.71	4.95	
Stay at home/Family carer	0.98	0.60	1.22	1.10	7,236
Attended university	43.39	72.78	48.27	74.73	7,444
Partner at age 25	31.08	33.14	40.69	43.55	7,415

the models (Model 3–6), the results are attenuated and lose their statistical significance. The initial life satisfaction effects are driven by individual characteristics and socio-economic background characteristics, including: ethnicity, household tenure and equivalised household income during adolescence, parental social class, parental education; and region.

**Table 2.** Association between private school attendance and symptoms of mental ill health at age 14, 16 and 25.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Age 14</b>						
Symptoms of mental ill health (all)	-0.00	-0.00	-0.02	-0.02		
N = 12,142	(0.02)	(0.02)	(0.02)	(0.02)		
Symptoms of mental ill health (men)	-0.01	-0.01	-0.01	-0.02		
N = 6087	(0.02)	(0.02)	(0.02)	(0.02)		
Symptoms of mental ill health (women)	0.01	0.01	-0.02	-0.03		
N = 6055	(0.03)	(0.03)	(0.03)	(0.03)		
<b>Age 16</b>						
Symptoms of mental ill health (all)	-0.01	-0.01	-0.03	-0.04+	-0.04+	
N = 10,519	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	
Symptoms of mental ill health (men)	-0.01	-0.01	-0.01	-0.02	-0.02	
N = 5241	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	
Symptoms of mental ill health (women)	-0.02	-0.02	-0.05	-0.05+	-0.06+	
N = 5226	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	
<b>Age 25</b>						
Symptoms of mental ill health (all)	-0.03	-0.03	-0.01	-0.01	0.00	-0.00
N = 7184	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Symptoms of mental ill health (men)	-0.02	-0.02	-0.00	-0.00	0.01	0.01
N = 3200	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
Symptoms of mental ill health (women)	-0.04	-0.04	-0.02	-0.02	-0.00	-0.01
N = 3984	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.10$

Notes: Model 1 is the raw estimation with no controls; Model 2 is Model 1 + single-sex school status; Model 3 is the same as Model 2 with the addition of ethnicity, household tenure, parental social class, parental education; region; and equivalised household income; (gender is included in models for the whole sample); Model 4 is the same as Model 3 with the addition of prior attainment; Model 5 includes prior mental health measures on top of the controls for Model 4; Model 6 examines the for mental health measures at age 25 and therefore we add degree attainment, relationship status and current labour market activity to the variables in Model 5. When modelling age 14 outcomes, we use private school attendance between 13–15; when modelling age 16, 20, 25 outcomes, we use private school attendance at any time during secondary schooling.

**Table 3.** Association between private school attendance and life satisfaction at age 20 and 25.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<b>Age 20</b>						
Life satisfaction (all)	0.07***	0.07***	0.02	0.02	0.01	
N = 8230	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	
Life satisfaction (men)	0.07*	0.07*	0.02	0.02	0.03	
N = 3953	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	
Life satisfaction (women)	0.07*	0.07*	0.03	0.03	0.00	
N = 4277	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	
<b>Age 25</b>						
Life satisfaction (all)	0.07**	0.08**	0.02	0.01	0.01	0.01
N = 7175	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Life satisfaction (men)	0.07+	0.07+	0.00	0.00	0.00	-0.01
N = 3191	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Life satisfaction (women)	0.09**	0.09**	0.03	0.03	0.02	0.02
N = 3984	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.10$

Notes: Model 1 is the raw estimation with no controls; Model 2 adds single-sex school status to Model 1; Model 3 adds ethnicity, household tenure, parental social class, parental education; region; and equivalised household income; (gender is included in models for the whole sample) to Model 2; Model 4 adds prior attainment to Model 3; Model 5 adds prior mental health measures to Model 4; Model 6 examines the for mental health measures at age 25 and therefore we add degree attainment, relationship status and current labour market activity to the variables in Model 5. When modelling age 14 outcomes, we use private school attendance between 13–15; when modelling age 16, 20, 25 outcomes, we use private school attendance at any time during secondary schooling.

## Discussion

This paper aims to address the question of whether school type influences mental health and wellbeing from adolescence to early adulthood. Previous research has suggested that any positive difference by school type may operate through intellectual ability or educational attainment; school resource, where private schools are better able to meet the socio-emotional needs of students; or providing a peer environment that is good for students (e.g. safe space; supportive; or single-sex schooling). Alternatively, the reverse may be true, whereby through separation and pressure to do well, private schools may negatively affect mental health and life satisfaction. Prior to controlling for ethnicity, household tenure, equalised household income in adolescence, parental social class, parental education and region there is some evidence that both women and men who are privately school educated have, higher levels of life satisfaction. However, the results from this paper suggest that in the final [and preferred] models there is no evidence of a difference by school type for mental health at age 14 and 25 and life satisfaction for either men or women at age 20 and age 25. For women at age 16 there is a small negative coefficient which indicates that private school is protective of mental ill health, but this is significant only at the ten percent level. Taken together we argue that there is very little evidence that school type influences mental health and life satisfaction in England for the cohort born in 1989/90. This finding repeats the conclusion of Sullivan et al. (2020), who found that private schooling confers no wider benefits in terms of mental health using a cohort of people born in 1970.

A key strength of the present study is the ability to include both mental health and life satisfaction measures examined in the same sample. The survey sample is a longitudinal, nationally representative sample of thousands of adults in England, enabling generalisability and an examination of life course effects. A limitation, however, is that Next Steps, like most longitudinal studies, suffers from attrition. We have taken steps to address the missing data problem including the use of multiple imputation, but there is a possibility that we are underestimating the differential effects of school type or that some bias remains. The study enables us to isolate the 'effect' of private schooling by controlling for many of the variables which influence private school attendance, such as prior attainment, family income and other important background characteristics. We view our results as not truly causal, but rather as capturing conditional relationships between social background and private school attendance, and between private school attendance and mental health and life satisfaction. While these methods do not prove causality, the absence of significant positive effects implies that there is no evidence that parents' who decided to pay for private schooling were gaining mental health and life satisfaction advantages for their children.

Null effects are sometimes hard to interpret. It is possible that this lack of effect derives from the counteracting forces, such as the direct and indirect explanations noted in the 'Background' section, balancing out. Alternatively, it may be the focus on acute spells of mental ill-health and deviations from life as expected are too high a threshold for school type to have any impact. It could also be that the focus on mental health and well-being in schools had not been given sufficient attention and resource in private schools to make a notable difference at the time: our findings apply to children in England at school during 2002 to 2009. The recent increase in focus on mental health and wellbeing in

schools reflects the value placed on promoting the conditions that promote good long-term mental health. It is reported in 'Independent School Parent' that private schools have been devoting considerably more resources to enhancing pastoral support for the mental health of their pupils (Independent School Parent, 2019). Meanwhile, in response to a rise in the numbers of young people reporting mental ill health (Patalay & Gage, 2019), the current government reports that it is committed to improving children and young people's mental health. A consultation Green Paper – 'Transforming children and young people's mental health' – was published in 2017. In a subsequent public consultation, a set of proposals followed (Department of Health and Social Care and the Department for Education, 2018). A manifesto was outlined which would commit funds to improve mental health services for children and young people. As part of that commitment it was proposed to build a more joined-up service approach between schools and health services, including training for teachers, Mental Health Support Teams and specialist and targeted services appropriate for these age groups.

This paper contributes to the evidence base on private schooling's non-academic outcomes. Our findings indicate that there is no additional advantage of private schooling with respect to mental health and life satisfaction for a cohort born in 1989/90. However in light of the increased prevalence of mental health difficulties among adolescents and the mental health challenges raised due to the COVID-19 pandemic, where nearly two-fifths of the population experienced elevated levels of distress (Ellwardt & Präg, 2021), one might expect the private–state school mental health gap to have opened up for current students. As a result, this area of research seems ripe for future research.

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