

# **Has the mental health and wellbeing of teachers in England declined over time? New evidence from three datasets.**

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It has long been recognised that teaching is a challenging profession, one that involves working long hours and a dedication amongst staff. Yet there is also a view that teaching is becoming an increasingly difficult career, with increasing pressure from the accountability system, workload and lacking sufficient resource. This could in turn mean that teachers are suffering from greater levels of work-related stress now than previously, resulting in lower levels of wellbeing and greater incidence of mental ill-health. However, there is little existing evidence on how the mental health and wellbeing of teachers in England has changed over time. Are teachers suffering more now than ever before? Or is the happiness, anxiety and wellbeing of teachers largely unchanged? This paper presents the first empirical evidence on this issue. We find that, although there has been a recent rise in mental health problems reported by teachers in England, this is mirrored by workers in other professions – with little evidence of a simultaneous change in levels of personal wellbeing. Our conclusion is therefore that the mental health and personal wellbeing of teachers in England has remained broadly stable over the last 20 years, though this group may be more likely to report such problems now (and to have them treated) than previously.

Key Words: Teachers, wellbeing, stress, mental health.

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## 1. Introduction

The teaching profession in England is currently in the midst of a crisis. Although the number of school-aged children is rising year-upon-year (Department for Education 2019), the number of teachers available to educate these pupils is struggling to maintain pace (Department for Education 2018). On the one hand, it is becoming increasingly difficult to encourage appropriately qualified and skilled young people to enter the teaching profession (Foster 2019). On the other, retention of newly qualified teachers in England is low, with a third of new recruits leaving the job within the first five years (Foster 2019). This is creating a perfect storm for teacher supply in England, with many headteachers suggesting that a lack of suitably qualified staff is hindering the quality of instruction that their school can provide (Jerrim and Sims 2019).

One potential reason why England is struggling to recruit and retain enough teachers is due to the pressures of the job (Perryman and Calvert 2019). Teaching demands long working hours, particularly during term-time (Allen et al 2019), with teachers in England spending more time on lesson planning, marking and administration than teachers in most other countries across the world (Jerrim and Sims 2019). This may have significant negative implications for teachers' wellbeing, mental health and whether they choose to remain in the profession (Perryman and Calvert 2019). Indeed, recent qualitative research conducted on behalf of the Department for Education found that "*sleeping problems, panic attacks and anxiety issues contributed to their [teachers] decision to leave [the teaching profession]*" (Cooper-Gibson Research 2018:22). Finding out more about the wellbeing of teachers in England is hence a crucial issue, not only for important contemporary education policy issues, but also for the good of the wider education profession.

There has of course been previous investigations of the wellbeing and mental health of teachers in England, which have provided a number of valuable insights. Some recent research has suggested that teachers are more satisfied in their job than those working in other careers (Bryson, Stokes and Wilkinson 2019). This has, however, contradicted previous work by Rose (2003) and Johnson et al (2005), who suggested that professional workers in many other occupations have higher levels of job satisfaction than teachers. Similarly, Ofsted (the school inspectorate in England) has recently claimed that life satisfaction tends to be higher amongst the general population than it is for teachers (Ofsted 2019). This is consistent with the findings of Worth and Van den Brande (2019), who found teachers to be tenser and more worried about

their job than those employed in other occupations. There is some suggestion from the literature that this may be a long-running issue; Travers and Cooper (1993) found that teachers were more likely to be stressed than the general population (and workers in other occupational groups) using data from almost 30 years ago.

Despite the important contributions made by the aforementioned studies, some key gaps in the evidence base remain. For instance, all of the studies discussed above focus upon a single sample of teachers measured at one particular point in time. To our knowledge, no evidence currently exists as to whether the personal wellbeing and mental health of teachers in England has improved or declined compared to 20 years ago (and how this compares to other professional groups). In other words, in terms of wellbeing, are things now worse for teachers than they have ever been before? Or, despite recent education spending cuts, staffing pressures and increasing scrutiny due to accountability, has the mental health and wellbeing of teachers in England remained largely unchanged? Although anecdotal evidence suggests that the wellbeing of teachers in England may be worse now than previously (House of Commons 2018)<sup>1</sup>, there is currently no large scale, nationally representative quantitative evidence that exists on this important issue.

This is the gap in the literature that this paper attempts to fill. Using three, large-scale, long-running, nationally representative surveys (the Labour Force Survey, Annual Population Survey and Health Survey for England) it provides the first evidence on how the mental health and wellbeing of education professionals has changed in England over the last 20 years. This covers a period of great change to the education system in England, from Tony Blair's New Labour party putting education at the heart of its manifesto, through to education spending cuts during the Conservative party's era of austerity. Numerous changes have also been made to the accountability and qualification system over this period, including the recent changes made to England's high-stakes school-leaving GCSE examinations (which has, anecdotally, led to increased pressure upon both teaching staff and pupils – Baird et al 2019). At the same time, there has been increased attention paid to mental health problems amongst the general population over the same period. Hence, by examining a range of indicators drawn from

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<sup>1</sup> For instance, at a recent House of Commons committee meeting, a headteacher giving evidence stated: *'In terms of staff wellbeing at the moment, I have probably got the greatest concern that I have ever had. In terms of people's health, I have never known it as bad as it is at the moment'* (House of Commons 2018).

multiple surveys, this study provides the most comprehensive assessment of trends in the wellbeing and mental health of teachers in England to date.

To trail our key findings, evidence from the Labour Force Survey and Health Survey for England suggest that there have recently been increases in the percentage of teachers reporting a long-lasting mental health problem and who are taking antidepressants. Yet this upward trend is not mirrored by scores on widely used and validated measures of personal wellbeing and depressive symptoms – such as the General Health Questionnaire and the Office for National Statistics anxiety and happiness questions – which have remained broadly stable over time. Moreover, a similar increase in reported mental health problems and use of antidepressants has also occurred amongst other professional workers, suggesting that any trend is not specific to the education sector, and is part of a phenomenon affecting wider society. We therefore conclude that there is little evidence that the mental health and personal wellbeing of teachers in England has declined over the last 20 years. However, those working in this profession may be more likely to report such problems now (and to get such problems treated) than previously.

The paper now proceeds as follows. The Labour Force Survey (LFS), Annual Population Survey (APS) and Health Survey for England (HSE) datasets, along with our empirical methodology, are described in section 2. Results are then presented in section 3, with discussion and policy recommendations following in section 4.

## **2. Data and methods**

### Labour Force Survey (LFS)

The UK LFS is a household survey. A random sample of around 38,000 households has been contacted every quarter since 1992. There is a panel element to the LFS, with households remaining in the survey for five quarters when they are then replaced. Response rates at the household level remain reasonable, though they have declined over time. For instance, around 70 percent of sampled households participated in the LFS in the early 2000s compared to around 60 percent in more recent waves (<http://www.hse.gov.uk/statistics/lfs/about.htm>).

Respondents are asked a series of questions about their job, with the dataset providing four-digit occupation (SOC) and industry (SIC) codes. It is hence possible to identify primary and secondary teachers. For instance, the 2010 SOC codes used in the most recent waves allow us to identify the following groups:

- 2314 = Secondary education teaching professionals
- 2315 = Primary and nursery education teaching professionals
- 2316 = Special needs education teaching professionals
- 2317 = Senior professionals of educational establishments

We also restrict our definition of teachers to those individuals with a SIC code of 852 (primary education) or 853 (secondary education). The substantial number of households surveyed as part of the LFS means that there is a reasonable sample size for each of these groups in every quarter. For instance, in the July-September 2018 wave of the LFS, there were 602 secondary teachers, 626 primary teachers, 120 SEN teachers and 141 “senior professionals of educational establishments” (e.g. headteachers)<sup>2</sup>. These sample sizes are sufficient to provide a detailed picture of trends in aspects of teachers’ health over time.

The LFS contains several measures of teacher’s health. To begin, respondents were asked whether they had any long-lasting physical or mental health problem:

*“Do you have any physical or mental health conditions or illnesses lasting or expecting to last 12 months or more?”*

They were then provided with a list of 17 conditions<sup>3</sup> to which they were asked to indicate all that apply. The focus of this paper is the percentage of teachers who indicated that they had a long-lasting problem with either:

- Depression, bad nerves or anxiety
- Mental illness or suffer from phobias, panics or other nervous disorders

Respondents were also asked to indicate which of the 17 conditions listed represented their *main* health problem (given that individuals can have multiple long-lasting health problems at the same time). This data has been collected in a comparable format every quarter between 1997 and 2018, meaning we can investigate how the proportion of teachers with a long-lasting

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<sup>2</sup> Note that “senior professionals of educational establishments” (e.g. headteachers) was included as a separate category for the first time in the SOC2010 classification. In the SOC2000 and SOC1990 coding, used in earlier waves of the LFS, headteachers were included within codes 2314 or 2315 (primary/secondary education teaching professionals). Any changes pre/post 2010 in our results should hence be interpreted with care.

<sup>3</sup> These were problems or disabilities connected with (1) arms / hands (2) legs or feet (3) back or neck (4) difficulty in seeing (5) difficulty in hearing (6) speech impediment (7) severe disfigurements, skin conditions, allergies (8) chest or breathing problems, asthma, bronchitis (9) heart, blood pressure or blood circulation problems (10) stomach, liver, kidney or digestive problems (11) Diabetes (12) depression, bad nerves or anxiety (13) Epilepsy (14) severe or specific learning difficulties (15) mental illness or suffer from phobias, panics or other nervous disorders (16) progressive illness not included elsewhere (17) Other.

mental health problem has changed over the last 20 years. As a general population survey, we can also compare how this trend compares to other occupational groups (see the methodology section below for further details).

In more recent waves of the LFS, some further questions were asked about the health of respondents, focusing in particular about how it has been affected by their work. For instance, since 2004, one quarter<sup>4</sup> of the LFS included the question:

*“Within the last twelve months have you suffered from any illness, disability or other physical or mental problem that was caused or made worse by your job or by work you have done in the past?”*

For those that said yes, they were asked how many illnesses had been made worse and to select the type of illness out of 11 groups. In this paper, we are most interested in those who selected “*stress, depression or anxiety*”. We again intend to examine trends for teachers over time in response to these questions, and how this compares to the trend for other occupational groups.

#### Annual Population Survey (APS)

The APS is a continuous household survey conducted across the UK (Office for National Statistics 2016/2019). It is based upon two waves of the LFS, along with a local boost sample. A single stage sampling design is used, with addresses (households) randomly selected. All individuals within a household then participate within the study. The annual achieved sample size is around 320,000 respondents across the UK. Within our analysis, we use data gathered between 2011 to 2018, as these are the years (with data currently available) where measures of personal wellbeing were collected (see below for further details). All interviews with respondents are either conducted face-to-face (computer assisted personal interviews) or over the telephone (computer assisted telephone interviews). Further details about how the APS is conducted is available from ONS (2019). We use the same strategy to identify teachers as outlined above for the LFS, based upon respondents SOC and SIC codes for their main job. The final sample size for teachers in England is 16,426, with the annual breakdown provided in Table 1.

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<sup>4</sup> In 2004 and 2005 this was the winter quarter. It has then been the January to March quarter since 2006. The question was not asked in 2013.

**Table 1. Annual sample size of teachers in the APS analysis**

Year	Total	Primary	Secondary	Other
2011	1,481	652	631	198
2012	2,155	964	927	264
2013	2,255	996	975	284
2014	2,172	962	953	257
2015	2,107	934	931	242
2016	2,032	849	917	266
2017	1,948	815	854	279
2018	2,276	939	1,004	333

Notes: Figures refer to the number of teachers included in the analysis. The 'other' group will include SEN teachers and headteachers.

Since 2011, the APS has collected information on personal wellbeing. This has been measured as follows:

*Next I would like to ask you four questions about your feelings on aspects of your life. There are no right or wrong answers. For each of these questions I'd like you to give an answer on a scale of 0 to 10, where 0 is "not at all" and 10 is "completely".*

- Overall, how satisfied are you with your life nowadays? (Life-satisfaction)
- Overall, to what extent do you feel that the things you do in your life are worthwhile? (Worthwhile)
- Overall, how happy did you feel yesterday? (Happiness)
- On a scale where 0 is "not at all anxious" and 10 is "completely anxious", overall, how anxious did you feel yesterday? (Anxiety)

Based upon cognitive testing (see Office for National Statistics 2018 for further details) the ONS has assigned the following labels to different scores on the life-satisfaction, worthwhile and happiness scales:

- Low = Score of 0-4.
- Medium = Score of 5-6.
- High = Score of 7-8.
- Very high = Score of 9-10.

The labels attached for the anxiety scale are different, and are as follows:

- Very low anxiety = Score of 0-1.
- Low = Score of 2-3.
- Medium = Score of 4-5.

- High = Score of 6-10.

Responses to these wellbeing questions are only available for respondents who provided a personal interview; “proxy response” are not allowed for these four measures of well-being<sup>5</sup>. The APS well-being weight to adjust for non-response is applied throughout our analysis.

These four indicators of personal wellbeing have a number of strengths; they are widely used, have undergone thorough cognitive testing and have been included in a wide range of social surveys across the UK (Office for National Statistics 2018). Yet they also have some limitations. The most obvious for our purpose is that they have only been collected within the APS since 2011, meaning we can only consider the change in these measures over a relatively short (though interesting) period of time. Nevertheless, given the widespread use and interest in these questions, we believe that they provide an important and unique insight into recent changes in the personal wellbeing of teachers (and how this compares to the wider population).

#### Health Survey for England (HSE)

The Health Survey for England has been running since 1992. It collects a range of information about the mental and physical health of a cross-section of respondents. A two-stage sample design is used, with postcode areas first selected as the primary sampling unit and then households randomly selected from within. Within each household all individuals are eligible to take part. The final sample size in most years is around 8,000 adults, with response rates around 60%. A nurse visit is also conducted as part of HSE, where blood samples and information about prescribed medications are taken. Within our analysis we restrict the HSE sample to individuals aged between 20 and 60 and who are either in employment or on long-term sick leave. For each HSE survey year, there is typically around 150 to 200 individuals working as an ‘education professional’. The final analytic sample size is 4,415 education professionals and 27,030 other professionals spread across 23 survey years.

An important strength of the HSE data is the range of mental health and wellbeing measures it has collected over a long period of time. The key outcome variables we consider in this paper are:

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<sup>5</sup> Proxy respondents are individuals who respond to the survey on the behalf of another interview. For instance, within a household, a husband might provide details about their wife’s job (or vice-versa). In this situation, the husband would be the proxy respondent for their wife.

- The General Health Questionnaire. The GHQ detects psychiatric conditions within the general population, such as anxiety and depression. This scale includes 12 statements such as *‘have you recently felt constantly under strain’*, *‘have you recently felt you couldn’t overcome your difficulties’* and *‘have you recently been feeling unhappy or depressed’*. Each question is responded to using a four-point scale (*‘not at all’* to *‘much more than usual’*) and it has been used extensively in academic research (Gnambs and Staufenbiel 2018). Our focus is the percentage of respondents with a GHQ score of four and above, which has previously been used as evidence of a *‘probable psychological disturbance or mental ill health’* (NHS Digital 2017). This measure has been collected in HSE since 1992, though it has only been administered biannually in recent years.
- Warwick Edinburgh Mental Well-Being Scale (WEMWBS). This is a widely used measure of psychological functioning. Respondents are presented with 14 statements<sup>6</sup>, answered using a five-point scale (*‘none of the time’* to *‘all of the time’*) asking about experiences over the last two weeks. Our focus is upon the percentage of individuals with ‘low’ WEMWBS scores, with low defined as being in the bottom quintile. One limitation is that this data has only been collected within HSE since 2010.
- Prescription of antidepressants. As part of HSE, an interview took place between the respondent and a trained nurse. Within this interview, they were asked to provide the name of any drug that they are currently prescribed, and whether they are taking this drug. Up until 2012, this was recorded in the HSE dataset using British National Formulary (BNF) codes. Using this information, we code individuals as being prescribed antidepressants if they mentioned any drug in BNF group 40301 (tricyclic antidepressant drugs), 40302 (monoamine-oxidase inhibitors), 40303 (selective serotonin re-uptake inhibitors) or 40304 (other antidepressant drugs). From 2013, the HSE dataset no longer includes exact BNF codes, but rather contains a derived variable for whether the respondent has been prescribed an antidepressant drug instead<sup>7</sup>.
- Whether the respondent felt anxious today/yesterday. As part of the HSE questionnaire, respondents were asked to *‘indicate which statements best describe your own health state today’* across several dimensions (e.g. mobility, pain/discomfort). One of the areas asked about was anxiety/depression, with respondents asked to select one out of three

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<sup>6</sup> Examples include “I’ve been feeling good about myself”, “I’ve been feeling optimistic about the future” and “I’ve been feeling cheerful”.

<sup>7</sup> Those individuals who did not participate in the nurse interview have been excluded from this part of our analysis.

options: (1) I am not anxious or depressed; (2) I am moderately anxious or depressed; (3) I am extremely anxious or depressed. In our analysis we focus upon the percentage of respondents who selected one of the latter two options.

- Whether respondents have a long-lasting mental health problem. Within the HSE questionnaire, respondents were first asked ‘*do you have any have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?*’. They were then asked to list all the areas where they had a lasting problem, including the category of ‘mental health’. Within the analysis we use this information to investigate the percent of respondents who reported having a lasting mental health problem. This information is available annually from 1998.

The main limitation with the HSE dataset is that we are only able to consistently identify ‘educational professionals’ (based upon two or three-digit SOC codes) rather than teachers (which requires four-digit SOC codes) across the various waves<sup>8</sup>. Although the ‘educational professionals’ grouping is primarily made up of teachers, it also includes individuals working as university lecturers, school inspectors, tutors and the wider education sector. We investigate this issue in detail in Appendix A, where we use the LFS and APS to investigate the impact that this is likely to have upon our results. Specifically, as the LFS and APS contains detailed four-digit SOC codes, we can investigate how trends over time differ between teachers and the wider ‘educational professional’ group. We find that trends in mental health and wellbeing outcomes for education professionals (broadly defined) and teachers (specifically defined) are very similar. This therefore suggests that the estimates we produce for education professionals using the HSE data is likely to provide a good approximation for the trend in the mental health and wellbeing of teachers over time.

## Methodology

To begin, we restrict the sample within each survey to teachers or educational professionals (as defined above) and plot the trend for each outcome measure over time. This will either refer to an average score on a scale (e.g. average GHQ scale score) or the percentage of teachers with a given health problem (e.g. the percent of teachers reporting a long-lasting health problem in

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<sup>8</sup> For 1994, 1995, 1996 and 1999 it is not possible to identify either teachers or education professionals, as not sufficiently detailed SOC codes are available in the HSE dataset. Estimates are therefore not presented for these years.

our analysis of the LFS). Together, this will provide an initial visual overview of our key results.

Of course, changes over time in teacher mental health and wellbeing could be due to either (a) the changing nature of teaching, (b) the changing composition of the people who teach, (c) other factors (e.g. increasing mental health issues in general amongst the population). To try and rule out (b) as a potential explanation of our results, we estimate a series of propensity score matching models which attempt to control for potential changes in the demographic characteristics of the teaching profession over time. These models match teachers from the most recent survey year (e.g. 2018 in the LFS) to a demographically comparable teacher who completed the survey in each previous year, with the trend in outcomes then plotted using this matched sample. The variables included in the matching model are age, gender, marital status, ethnicity, whether born in the UK and whether the teacher works full-time or part-time. By matching upon these characteristics, we can rule out changes in the demographic composition of the teaching workforce from confounding our results.

Finally, the trend for each outcome over time for teachers will be compared to other occupational groups. In the LFS and APS this will include (a) all employed individuals; (b) those employed in lower professional or managerial occupations<sup>9</sup>; (c) all university graduates and, where possible, (d) those working in health-based occupations<sup>10</sup> and (e) those working in selected office jobs<sup>11</sup>. These comparators have been chosen as they have either previously been compared to teachers in the literature (Bryson and Forth 2017; Hilary, Andrade and Worth 2018; Sims 2019), represent other potentially stressful public sector occupations where women outnumber men (health workers) or represent a potential alternative career trajectory that many teachers could have chosen in the private sector (office jobs)<sup>12</sup>. Due to the smaller sample size in the HSE, we focus upon differences between education professionals and ‘all other professional workers’ (defined as those working in a non-teaching job with a SOC code between 2,000 and 3,999).

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<sup>9</sup> This is the same National Statistics Socio-economic Classification (NSSEC) group as teachers.

<sup>10</sup> This includes nurses, midwives, physios, occupational therapists, social workers, medical practitioners and paramedics.

<sup>11</sup> This includes accountants, management consultants, project managers, architects, town planners, surveyors, public relations, statisticians, human resource officer/manager and IT workers.

<sup>12</sup> It is only possible to compare teachers to health and office-job workers in the LFS and APS. It is not possible to make such comparisons using the HSE data due to the limited sample size and the coarse nature of the occupational data available.

### 3. Results

#### Labour Force Survey (LFS)

To begin, Figure 1 panel (a) illustrates the long-run trend in lasting limiting illnesses reported by teachers in the LFS since 1997. There has been a gradual increase over this 20-year period, from around 15% in 1998 up to around 25% in 2018. The pattern was very similar for primary and secondary teachers through to 2010, although after this the lines start to diverge. Some caution is needed, however, when interpreting this result, given that the SOC coding schema used to identify teachers (and some other professional groups) in the LFS also underwent some changes in 2010<sup>13</sup>. The final notable point of Figure 1 is that there has been little change in the proportion of teachers with long-term health problems in the recent past; the figure has remained around 25% between 2010 and 2018. In Appendix C we present an analogous graph (see Appendix Figure C1), where propensity score matching has been used to match teachers from the 2018 LFS to ‘comparable’ teachers from previous years<sup>14</sup>. The same broad upward trend is observed, suggesting that this result is not simply due to the changing demographic composition of the teaching labour force.

Figure 1 panel (b) provides further detail on this issue, illustrating how reports of selected major long-term health problems amongst teachers has changed since 1997<sup>15</sup>. The most prominent change has been the increase in long-term mental health issues reported by teachers (i.e. anxiety, depression, stress), albeit from a low base. Specifically, in the late 1990s and early 2000s, very few teachers in England reported having a lasting issue with their mental health ( $\approx 1\%$ ). This then started to gently rise in the late 2000s and early 2010s to around 2%. The trend has then noticeably picked up over the last five years, from around 2% in 2013 to around 5% in 2018 (see Figure 1b). Taken at face value, this result suggests that there has been a non-trivial increase in serious mental health problems reported by teachers in England over the last decade. Appendix C (see Figure C1) again presents propensity score matching estimates – accounting for potential changes in the demographic composition of the teacher labour force over time – producing similar substantive results.

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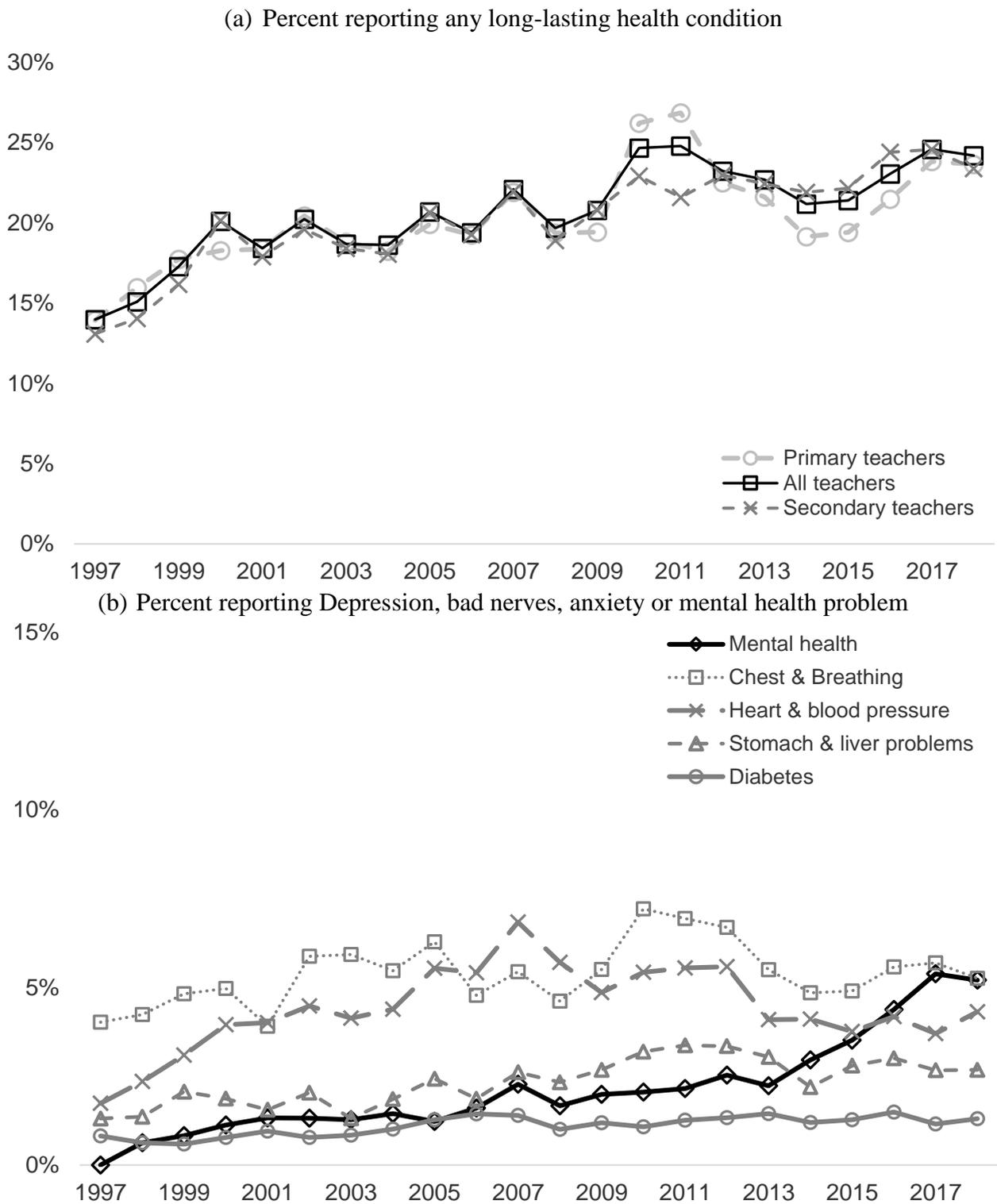
<sup>13</sup> See

<https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc2010> for further details.

<sup>14</sup> These models match teachers upon age, gender, marital status, nationality, whether of white ethnicity, whether the individual works full-time and whether working in public or private sector.

<sup>15</sup> Recall that LFS respondents could identify multiple lasting health problems, meaning the trends for the different conditions are not necessarily mutually exclusive.

**Figure 1. The percentage of teachers in England reporting a long-lasting limiting health condition. Trends between 1997 and 2018.**



Notes: Analysis based upon the Labour Force Survey (LFS). In panel (a) estimates are presented for teachers (as broadly defined) and for primary and secondary teachers separately. Figures refer to the percent of teachers reporting a *long-lasting* health problem (which has lasted, or they expect to last, for at least 12 months). Figures in panel (b) refer to results for all teachers.

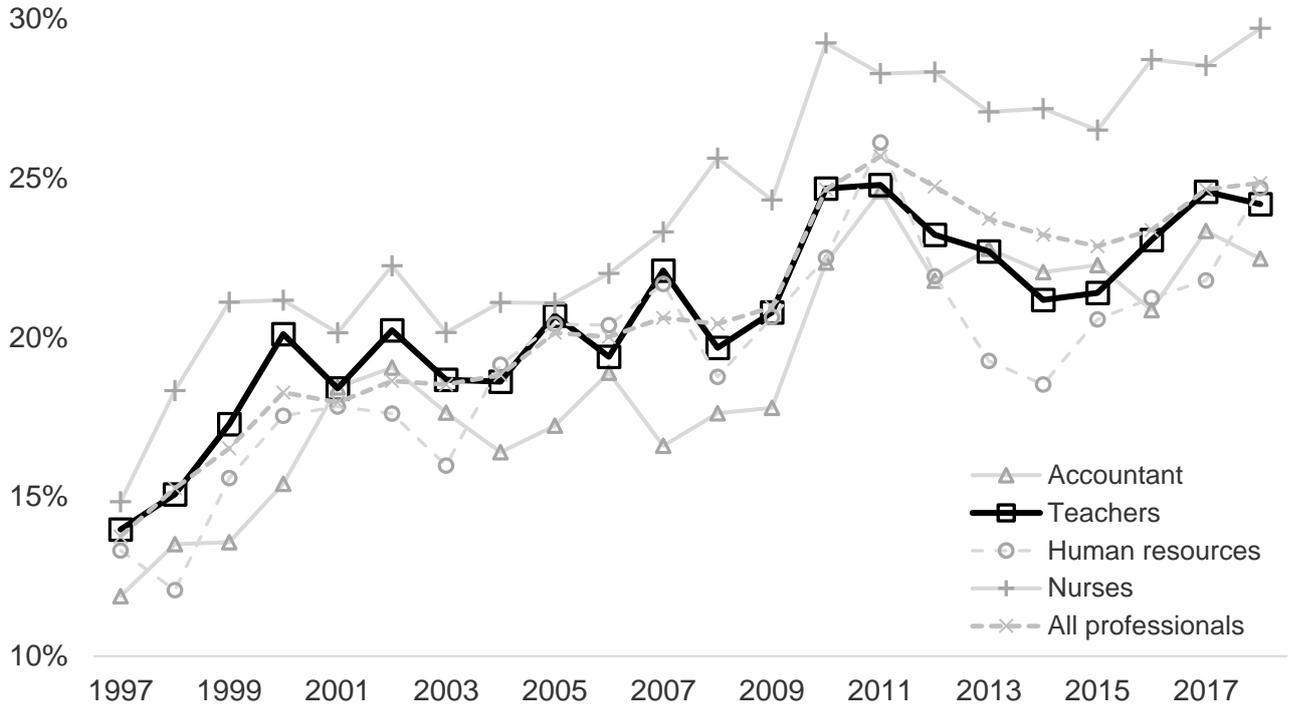
Interestingly, the trend for the other major health issues documented in Figure 1 panel (b) is reasonably flat, with any increases observed being relatively small. Roughly the same percentage of teachers in England reported a long-term problem with diabetes (1% in both 1997 and 2018), chest and breathing problems (4% versus 5%), heart and blood pressure (2% versus 5%) and stomach and liver problems (1% versus 3%) in 2018 as in 1997. The recent uplift in reported mental health issues amongst teachers therefore does not seem to generalise (or spill over into) analogous increases in problems with physical health.

Is there any evidence that this finding of increasing serious mental health problems is specific to teachers – or can it also be observed more generally amongst other occupational groups? This is important as it can provide clues as to whether the increase observed for teachers is likely to be due to the changing demands of the job, or if it is more likely to be due to other potential explanations that are also apparent in wider society (e.g. the impact of government austerity, an increasing willingness for doctors to diagnose – and for individuals to report – mental health problems).

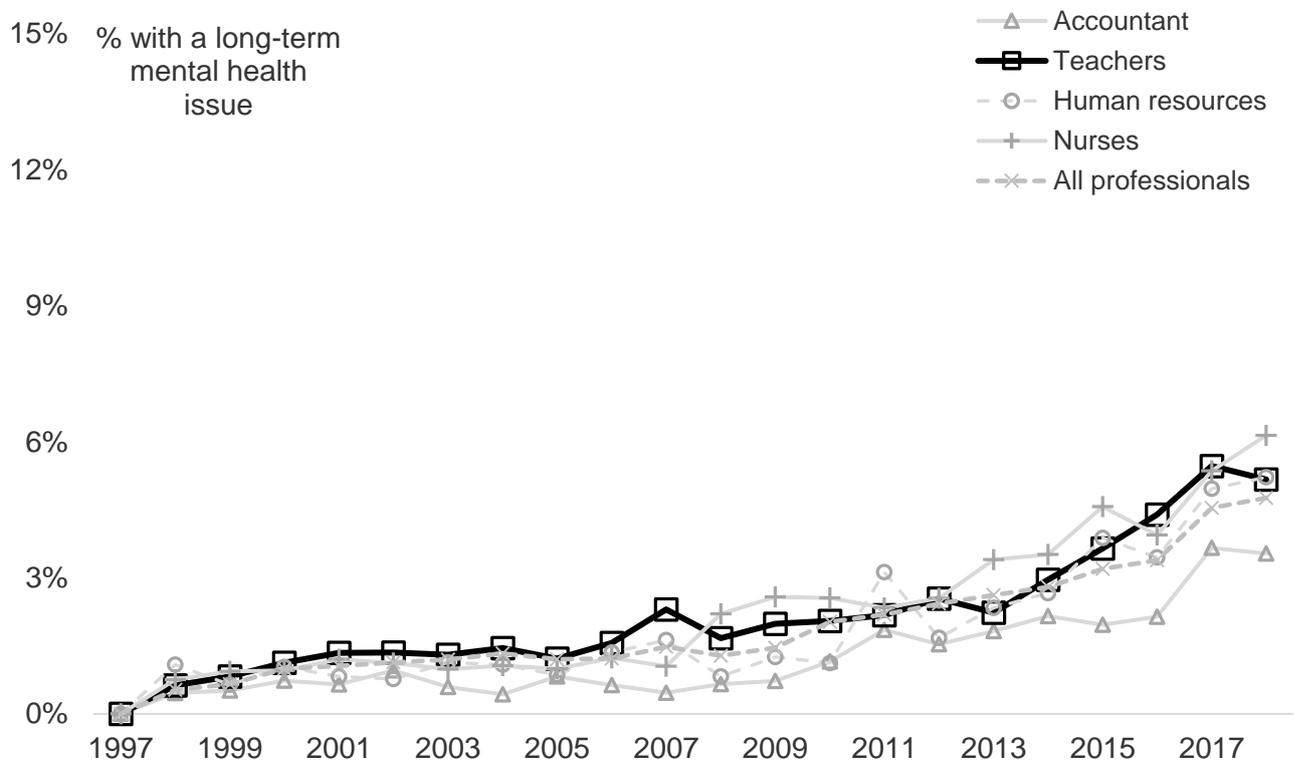
Figure 2 consequently compares the trend of long-term health problems amongst teachers to selected other occupational groups: accountants, nurses, human resource workers and all those working in professional jobs. Panel (a) provides results for the percentage of individuals with any lasting health problems, while panel (b) focuses specifically upon mental health (note that different scales are used on the vertical axis within these two panels). These graphs make it clear that the increasing prevalence of long-term illnesses is not unique to teachers; a similar pattern is also observed for those working in other professional occupations. Focusing upon the results presented in panel (b), the upsurge in serious mental health problems reported by teachers since 2010 can also be observed for accountants, nurses and human resource workers (as well as professional workers more generally). This suggests that the factor driving this change is unlikely to be occupation specific; an increasing willingness to diagnose and disclose mental health problems – or a wider societal problem – seems a more likely cause, rather than changes to the specific working conditions for teachers per se.

**Figure 2. Long-lasting limiting health conditions in England. Trends for teachers compared to other selected groups.**

(a) Percent reporting any long-lasting health condition

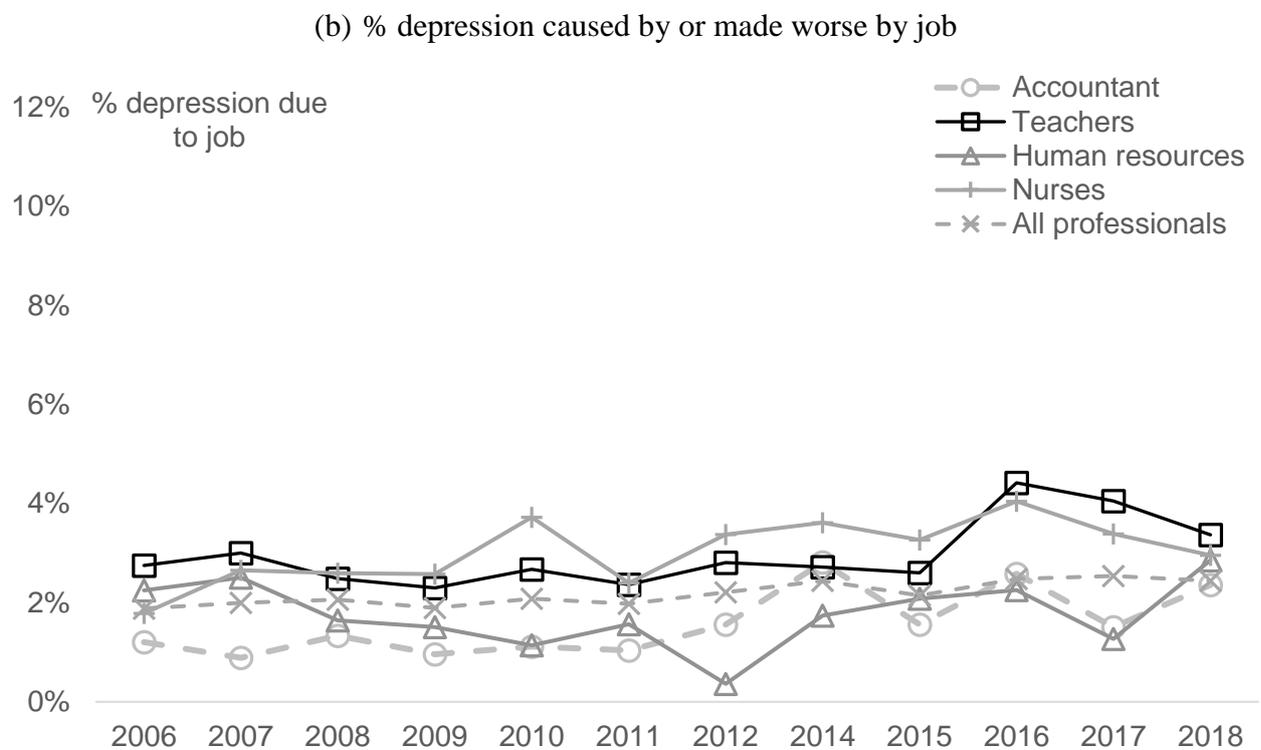
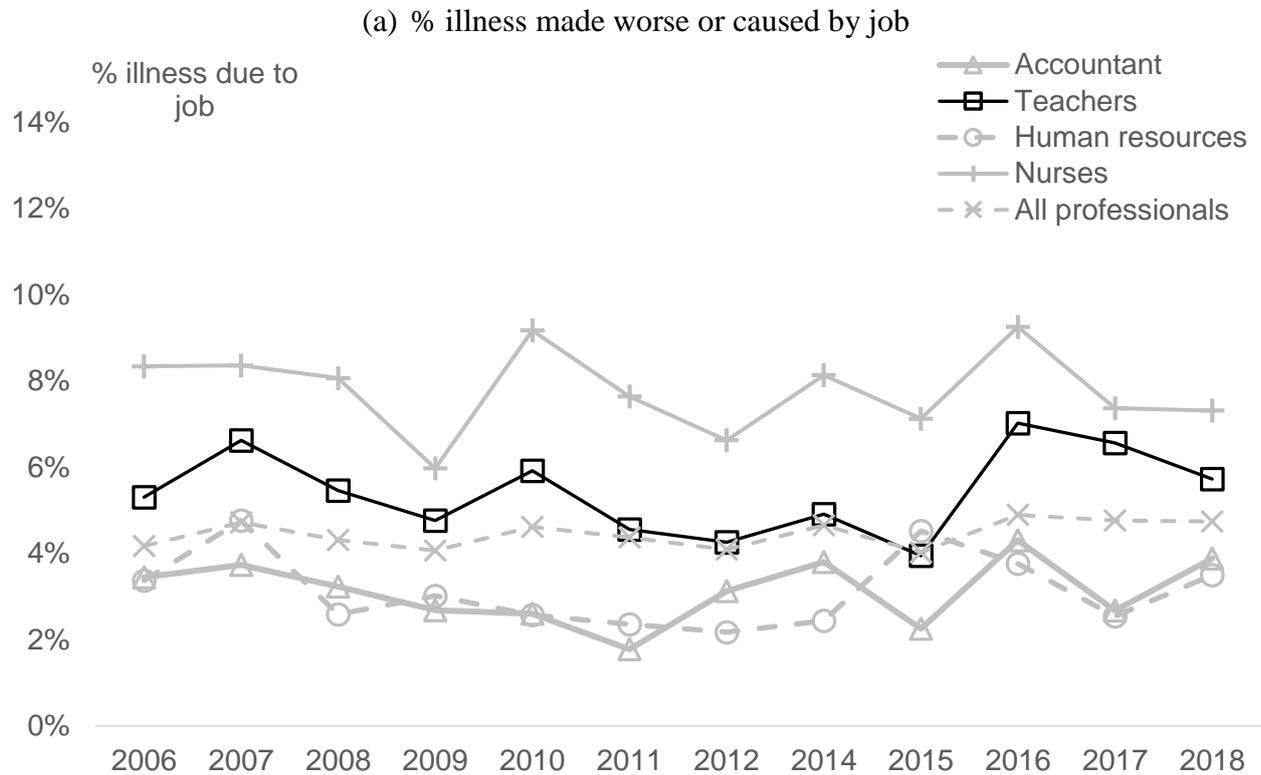


(b) Percent reporting Depression, bad nerves, anxiety or mental health problem



Notes: Analysis based upon the Labour Force Survey (LFS). Figures refer to the percent of teachers reporting a *long-lasting* health problem (which has lasted, or they expect to last, for at least 12 months).

**Figure 3. Percent of workers in selected jobs reporting that they have an illness or injury that has been caused or made worse by their job. Trends between 2004 and 2018.**



Notes: Analysis based upon the Labour Force Survey (LFS). Estimates presented for teachers (as broadly defined). Question not asked in 2013.

We attempt to corroborate this argument in Figure 3 This plots the trend for the percentage of teachers in England who reported that their job had led them to develop an illness (or had made a pre-existing illness worse) over the last year. Note that the sample size is much smaller for this part of our analysis, given that this question was only asked in one specific LFS quarter per year. The results nevertheless do little to suggest that there has been a substantial increase since 2006 in the proportion of teachers reporting that their job has made them ill or made an existing health problem worse. This holds true both in general (panel a) and specifically for depression (panel b). Focusing on the latter, between 2006 and 2015 around 2-3% of teachers in England reported that their job had caused them to have a problem with depression, anxiety or stress. There was an increase in the figure to around 4% in 2016 and 2017, though one should not overinterpret this small change, particularly given the limited sample size. A broadly stable trend over time can also be observed for each of the other comparator occupations. Put in the context of previous findings, although there has been an increase in reported mental health problems amongst teachers (and workers in other occupations) recently, there has been little change in the proportion who suggest that this has been caused or aggravated by their job. We again believe that this is consistent with our interpretation that the recent rise in mental health issues observed in the LFS is likely to be due to previously undiagnosed or unrecognised mental health problems that are now being reported.

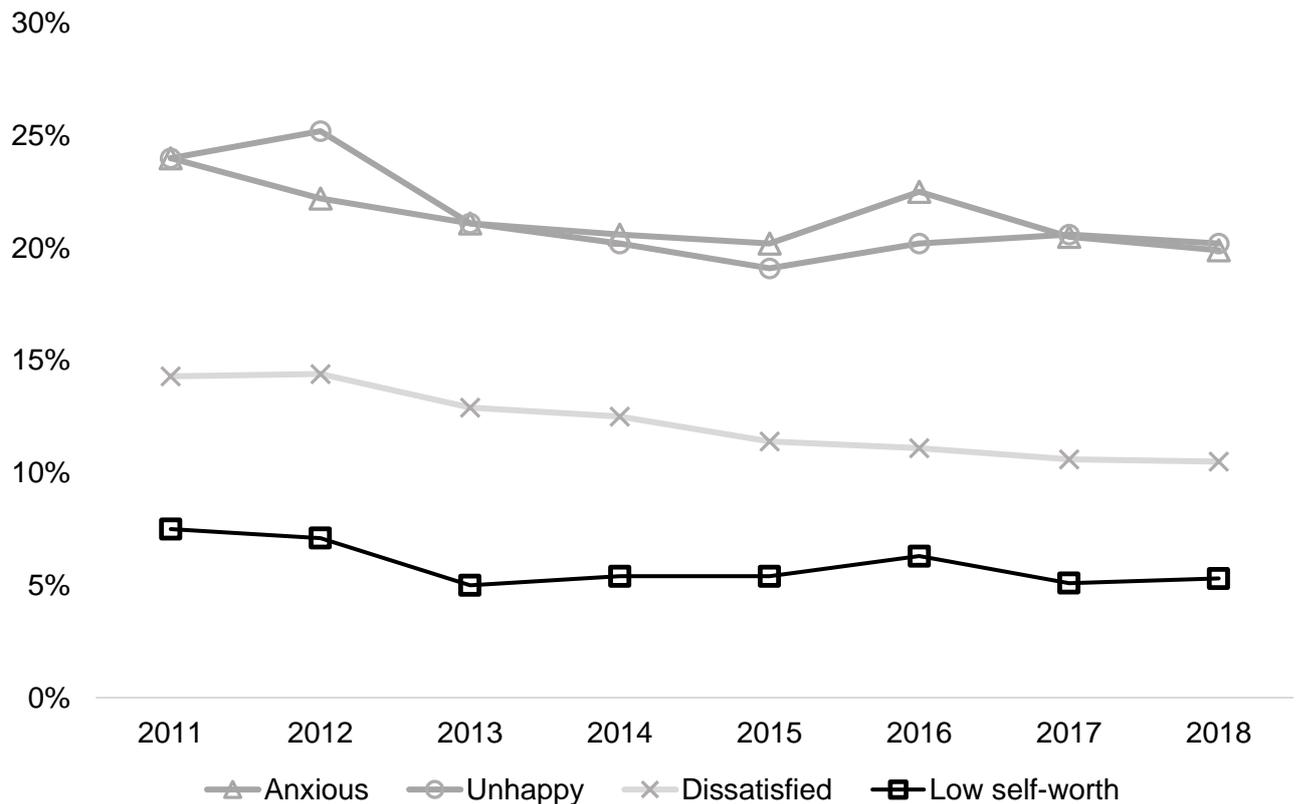
#### Annual Population Survey (APS)

Given the recent rise in reported mental health problems by teachers in the LFS, it is important we look at the period since 2010 in more detail. The APS allows us to establish whether there has also been a decline in the personal wellbeing of teachers (and other occupational groups) over this period. These results are presented in Figure 4, documenting how the percentage of teachers with high levels of anxiety and unhappiness, and low levels of life-satisfaction and self-worth, changed between 2011 and 2018 (i.e. over the same period when reported mental health issues in the LFS rose).

In contrast to the results from the LFS, there has been no substantive change over time in the percentage of teachers in England reporting low levels of personal wellbeing. Each of the four trend lines plotted in Figure 4 are essentially flat, with no clear evidence of an increase or decrease over time. Similar results emerge from our analysis of average scores on the 11-point wellbeing scale (see Appendix D) and when we use matching or regression to account for potential changes in the demographic background characteristics of teachers over time (see

Appendix C; Figure C3). Again, we also find that the trend over time for teachers is similar to the trend observed for other professional workers (see Appendix B). It is hence not the case that the personal wellbeing of teachers has remained stable, while for others the situation has improved.

**Figure 4. The percentage of teachers in England with poor personal wellbeing. Trends between 2011 - 2018**



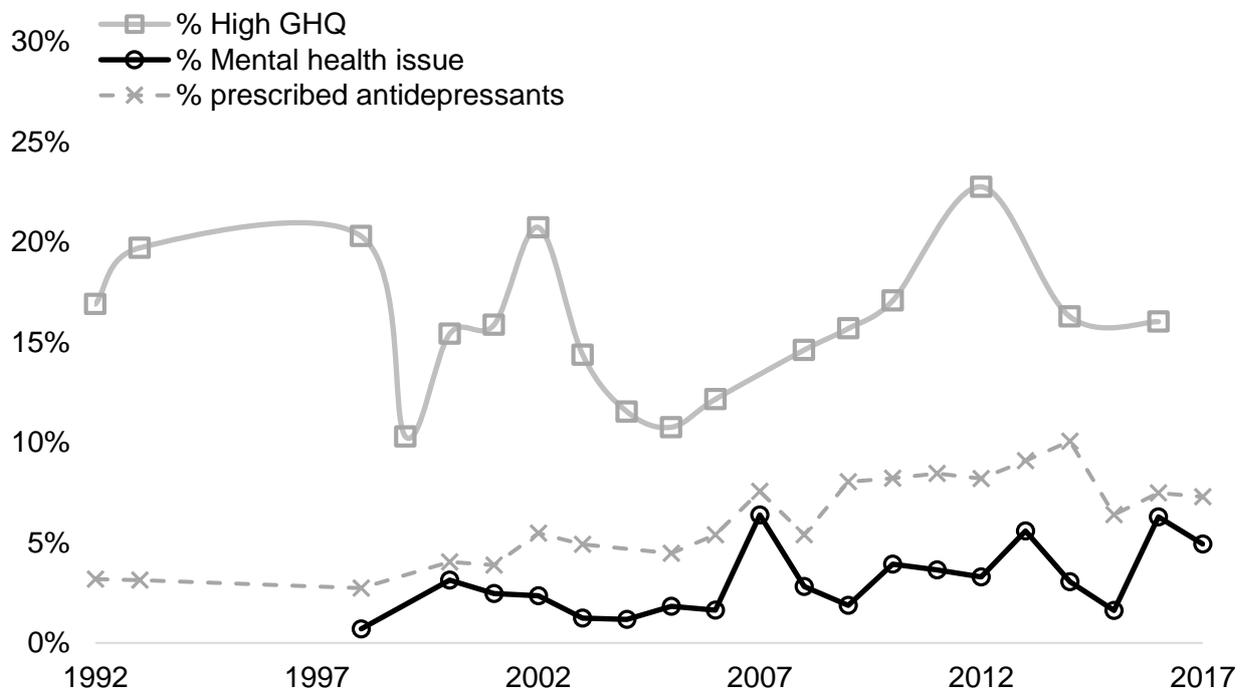
Notes: Figures refer to the percentage of teachers with high levels of anxiety, low levels of happiness, low levels of life satisfaction and low levels of self-worth. Analysis based upon the Annual Population Survey (APS).

Our overall interpretation of these results is that it points towards changing attitudes and acceptance of mental health problems in England. More people (both teachers and other professionals) are reporting long-run mental health problems than ever before. Yet, at the same time, there has been no simultaneous increase in the proportion of people who are anxious, unhappy, unsatisfied in life and feeling of little worth. This indicates that, although underlying levels of personal wellbeing are largely unchanged, people (including teachers) are more likely to recognise and report that they have a mental health problem. It could also be that health professionals are more likely to screen and diagnose mental health issues now than previously.

## Health Survey for England (HSE)

Figure 5 begins by plotting results for three of the HSE mental health and wellbeing measures that are available over a long period of time. Although there is some year-to-year fluctuation due to the small annual sample size<sup>16</sup> there is no clear trend in the percentage of education professionals with high GHQ scores (i.e. who are at risk of anxiety or depressive disorders). In the early 1990s, between 15 and 20 percent of education professionals had elevated GHQ scores. A similar figure could be observed in the early 2000s, with little suggestion this has changed up to today (2018).

**Figure 5. Trends in the mental health and wellbeing outcomes of education professionals. Evidence from Health Survey for England.**



Notes: Figures refer to the percent of education professionals with high GHQ scores (squares), have had a mental health issue diagnosed (circles) and have been prescribed anti-depressants (crosses). For 1994, 1995, 1996 and 1999 it is not possible to identify either teachers or education professionals, as not sufficiently detailed SOC codes are available in the HSE dataset. Estimates are therefore not presented for these years. Markers indicate the years where data is available.

The OLS regression results presented in Table 2 confirm this broadly stable picture for the trend in GHQ scores (which measures psychiatric disorders such as anxiety and depression) of education professionals over time. For instance panel (b) – which includes demographic

<sup>16</sup> Recall that there are only around 100-200 education professionals in the HSE dataset each year.

controls – suggests that a ten-year change in time is associated with less than a one percentage-point fall in the proportion of education professionals at risk of anxiety/depressive disorders (as measured by a GHQ score of four and above). Interestingly, there has also been little change in the WEMWBS mental wellbeing scores of education professionals over the last ten-years<sup>17</sup>. Together, these results are consistent with our findings using the APS; there is no evidence that the wellbeing of education professionals – or the incidence of mental health symptoms – has changed significantly over time.

**Table 2. Regression estimates of the change in mental health and wellbeing outcomes over time. Evidence from Health Survey for England**

(a) No controls

	Education		Other professional	
	10-year change	SE	10-year change	SE
% High GHQ	-1.1%	1.0%	-0.9%*	0.4%
% Low WEMWBS	-4.0%	5.4%	2.3%	2.1%
% Mental health issue	1.8%*	0.5%	2.2%*	0.2%
% prescribed antidepressants	2.7%*	0.5%	2.5%*	0.2%
% Felt anxious yesterday	-3.5%	2.0%	-1.9%*	0.7%

(b) With demographic background controls

	Education		Other professional	
	10-year change	SE	10-year change	SE
% High GHQ	-0.6%	1.1%	-0.8%	0.4%
% Low WEMWBS	-4.8%	5.3%	3.4%	2.1%
% Mental health issue	2.0%*	0.5%	2.3%*	0.2%
% prescribed antidepressants	3.2%*	0.5%	2.6%*	0.2%
% Felt anxious yesterday	-2.2%	2.0%	-1.8%*	0.7%

Notes: Linear probability models estimated using OLS regression. Controls included for age, survey year, gender, whether hold a degree, whether married, whether working full-time and whether of white ethnicity. Standard errors clustered by area and survey year. A star (\*) indicates the change is statistically significantly different from zero at the five percent level.

Returning to Figure 5, there is however some suggestion that there has been an increase in the proportion of education professionals diagnosed with a mental health condition and who have been prescribed with antidepressant medication<sup>18</sup>. In the early 1990s, we estimate that around

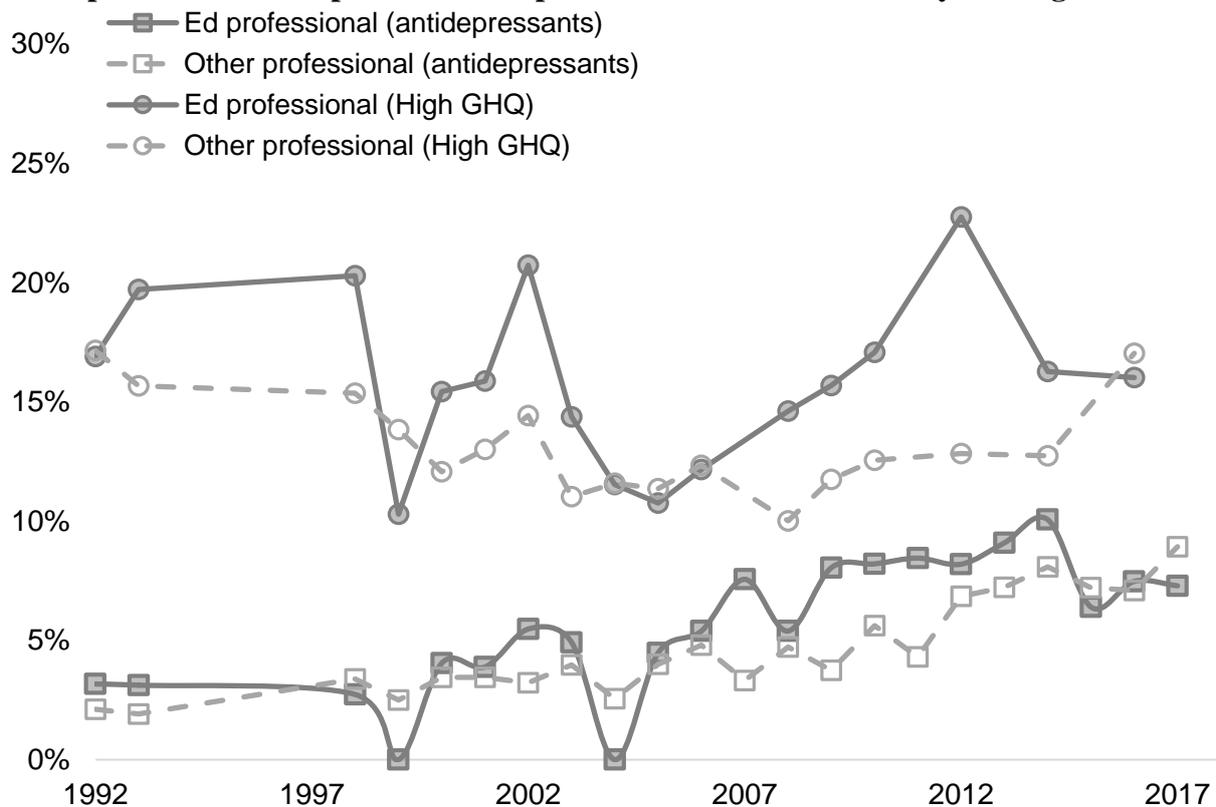
<sup>17</sup> Recall that the WEMWBS asks respondents to be asked how they have felt over the last two weeks in responses to statements such as “I’ve been feeling good about myself” and “I’ve been feeling relaxed”.

<sup>18</sup> In Figure 5, the percentage of respondents who report taking antidepressants is slightly higher than the percentage who report suffering from a long-lasting mental health condition. This is likely to be due to the wording of the question, which specifically asks respondents whether they have a condition lasting to expected to last for 12 months or more.

three percent of education professionals were prescribed antidepressants, which rose to around five percent by the mid-2000s. Over the last decade this has risen further, to reach around seven to eight percent of the education profession today. This finding is confirmed by Table 2, with our regression models indicating that there has been around a three-percentage point rise in the prescription of antidepressant medication to education professionals for each ten-year change in time. A similar, though slightly less pronounced, pattern can also be observed in long-lasting mental health problems reported by education professionals over this period. This is consistent with results from the LFS, where we observed an increase in the percent of teachers reporting long-lasting mental health problems (particularly in recent years).

Is this increasing use of antidepressants specific to education professionals? Or can a similar pattern also be observed amongst other professional groups? The answer can be found in Figure 6, where the trend in GHQ scores and prescription of antidepressant medications is compared between education and other professionals.

**Figure 6. The trend in GHQ scores and prescription of antidepressants. Education professionals compared to other professionals in Health Survey for England.**



Notes: Education professionals indicated with solid grey lines and filled markers; other professionals indicated with dashed lines and hollow markers. Results presented for anti-depressants (squares) and for high GHQ scores (circles). For 1994, 1995, 1996 and 1999 it is not possible to identify either teachers or education professionals, as not sufficiently detailed SOC codes are available in the HSE dataset. Estimates are therefore not presented for these years. Markers indicate the years where data is available.

The increasing use of antidepressants amongst education professionals over the last 30 years broadly mirrors that for other professional groups; the lines with square markers in Figure 6 have a similar upward trend and sit close to each other. This is supported by the figures in the right-hand column of Table 2; there has been a 2.6 percentage point increase in antidepressant use (on average) every ten years amongst all professionals compared to 3.2 percentage point increase for education professionals – with the difference in these figures small (just 0.6 percentage points) and statistically insignificant. Similar findings again emerge with respect to the other mental health and wellbeing outcomes collected in HSE, including GHQ scores (as illustrated in Figure 6), WEMWBS mental wellbeing scores and the percent of individuals diagnosed with a mental health issue. In each instance – and as per our results using the LFS and APS – the change over time observed for education professionals is similar to the change for other occupational groups. There is hence little evidence to suggest that individuals working in education have been particularly affected by an increase in mental health and wellbeing problems over recent years.

#### **4. Conclusions**

Teaching is widely regarded as a stressful profession. Not only do teachers have to manage often disruptive classrooms, but there is ever-increasing pressure to achieve performance targets under the watchful eye of the school accountability system. At the same time, teaching can also be an immensely rewarding job, with the ability to contribute to society and aid the development of children key reasons why many choose to work in the profession (Jerrim and Sims 2019).

Yet teachers in England are currently leaving the profession at a record pace, with one-in-three choosing to quit for another job within five years of their initial teacher training (Foster 2019). Although there are likely to be many factors driving this issue, increasing workloads, pressure from accountability systems and – consequently – increased stress and pressure from the job are all thought to be key. Indeed, job satisfaction amongst the teaching profession in England is low by international standards (Zieger, Sims and Jerrim 2019) and has declined rapidly over the last five years (Jerrim and Sims 2019). The same has also been claimed about the mental health and wellbeing of teachers, with the situation now thought by some to be worse than ever before. For instance, at a recent Education Select Committee hearing, one headteacher reflected that *“In terms of staff wellbeing at the moment, I have probably got the greatest concern that I*

*have ever had. In terms of people's health, I have never known it as bad as it is at the moment"* (House of Commons 2018).

But is this really true? Despite widespread discussion of this issue, very little existing evidence is available on trends in teacher mental health and wellbeing over time (either in England, or internationally). Consequently, this paper presents one of the first long-run investigations of the mental health and wellbeing of teachers using nationally representative data anywhere in the world. It hence illustrates for the first time whether the mental health and wellbeing of teachers in England is really in decline.

We find that there has been an increase in the prevalence of long-lasting mental health problems reported by teachers, particularly over the last decade. This has been accompanied by a recent rise in the percentage of education professionals who are taking prescribed antidepressant medication. At the same time, a range of widely used and validated instruments designed to measure personal wellbeing and depressive symptoms has remained broadly stable for teachers over the last 30 years. Moreover, the recent increase in mental health issues reported (and being treated) amongst teachers can also be observed for other professional groups. We consequently conclude that, although teachers are more likely to report mental health issues now and to get them treated, there is little evidence to suggest that actual levels of wellbeing and mental health amongst this group has declined - or that any trend is specific to those working in the education sector.

These findings should of course be interpreted in light of the limitations of the study, the data available and the ongoing need for future work. The following issues stand out.

First, all of the measures used in this paper rely to a certain extent upon self-reported information. Although a strength of our analysis is that we have considered trends in some more objective measures (e.g. prescription of antidepressant medication) as well as subjective responses to questionnaires (e.g. 'how happy were you yesterday') both could be subject to some reporting issues due to continuing stigma surrounding mental ill-health. Ideally, future data collections would include other objective information about the wellbeing of teachers, such as biomarkers linked to stress (e.g. Cortisol) or additional data on medical treatments received from independent data sources (e.g. primary care and hospital administrative records). Second, we have only been able to consider trends in wellbeing and mental health back to the 1990s, and even then, only with a subset of the available measures. This unfortunately means that we can not compare the wellbeing of teachers in England before many aspects of school

accountability – such as Ofsted inspections and school league tables – were put in place. Third, our analysis of the Health Survey for England dataset has focused upon ‘education professionals’ rather than teachers per se. Although this is unlikely to affect our substantive results (see Appendix A for further evidence on this issue) being able to identify teachers more precisely in this dataset would have been preferable. Finally, although our findings continue to hold after controlling for potential demographic changes to the teaching workforce over time, we can not rule out some potential confounding from changing patterns of occupational selection. For instance, if individuals with previous incidence of mental health issues are now less likely to choose to become teachers now than previously (or are now more likely to leave the profession early), then the broadly stable trends that we find might be more problematic than they first perhaps appear.

Based upon the above, what are our key recommendations for education policymakers in England? In our view, the most pressing issue is for the Department for Education to make a commitment to monitor the mental health and wellbeing of the teaching profession – similar to the commitment it has made to monitoring teachers’ workloads over time. This could be achieved through a combination of enhancing existing data collections and by creating new links between education and health administrative records. With regards to the former, the biennial Teacher Workload Survey could include an additional battery of questions designed to measure teachers’ mental health. The measures analysed in this paper (e.g. the GHQ or the ONS personal wellbeing questions) would be obvious candidates, with it then possible to also triangulate the evidence against other routinely collected secondary data sources (e.g. data gathered within the Annual Population Survey). In terms of administrative records, data from England’s Teacher Workforce Census could be linked to Hospital Episode Statistics and/or primary care records, both of which contain information about medical treatments received for mental ill-health. This would facilitate a more robust picture of the proportion of teachers who suffer from serious mental health issues and potentially enabling more efficient targeting of resources to support those at greatest risk of suffering problems. Together, this would represent a step-change in the evidence available, providing important new insights that this important area of research desperately needs.

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## **Appendix A. Comparing results for ‘education professionals’ (broadly defined) to those for teachers (narrowly defined)**

One of the limitations with the Health Survey for England (HSE) data is that, in some years, it is only possible to identify ‘educational professionals’ rather than ‘teachers’ per se. The former is based upon two-digit SOC codes and includes higher education staff, further education staff, school inspectors and other occupations related to education (e.g. tutors) within the group. On the other hand, in the LFS and APS, we are able to identify ‘teachers’ more precisely – using a combination of four-digit SOC and SIC codes.

Table A1 below illustrates the difference between the ‘education professionals’ and ‘teacher’ groupings using Labour Force Survey (LFS) data from between 2010 and 2018<sup>19</sup>. As this table illustrates, teachers (primary, secondary and SEN) and headteachers form about 60% of the education professionals group.

**Appendix Table A1. The distribution of different occupations within the education professional group**

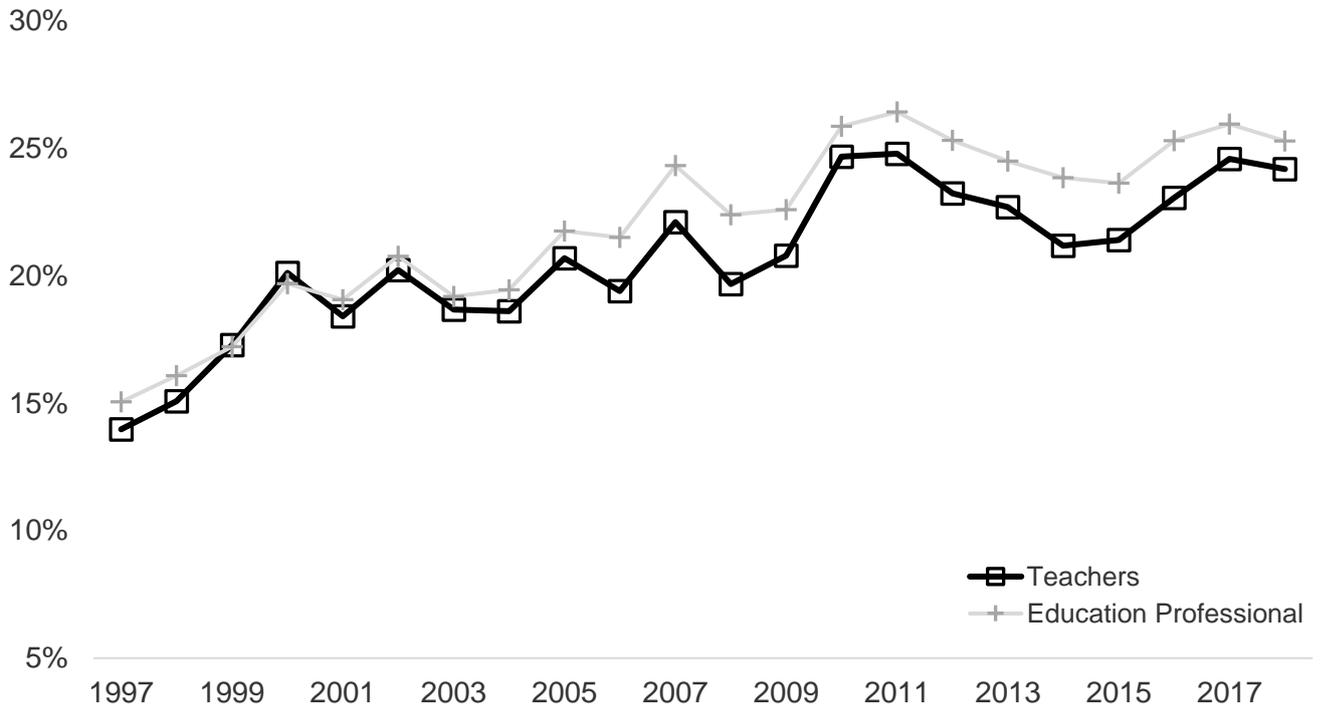
<b>Education professionals</b>	<b>% of 'education professionals' group</b>
<b>Teachers</b>	
Secondary teachers	27%
Primary teachers	26%
SEN teachers	5%
School leaders	4%
<b>Non-teachers</b>	
Other teachers not elsewhere classified	18%
Higher education staff	10%
Further education staff	8%
Advisors and inspectors	2%

Using the LFS and APS, we are also able to compare how trends in our outcomes of interest over time compare between education professionals (broadly defined) and teachers (specifically defined). The more similar the trends observed, the more confidence we have that our results using the HSE data based upon educational professionals are likely to also by-and-large reflect the results for teachers. These comparisons are presented in Figures A1-A4. In all instances, the trend observed for education professionals very closely follows the trend for teachers. Our substantive conclusion is that this is likely to mean that the trends we observe for the mental health and wellbeing outcomes of education professionals in HSE are likely to provide a very good approximation of the trend over time for teachers.

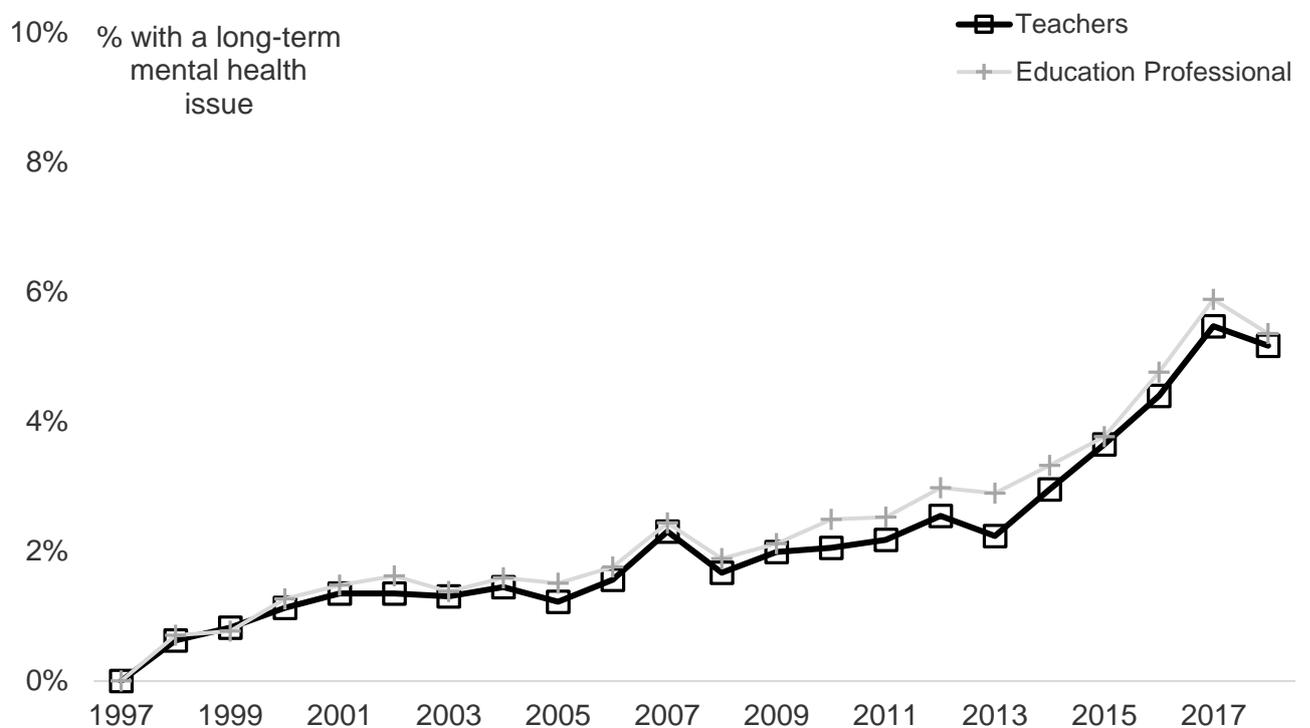
<sup>19</sup> We do not use waves prior to 2010 for this purpose, given the change in SOC codes in this year.

**Figure A1. Long-lasting limiting health conditions in England. Trends for teachers and education professionals**

(a) Percent reporting any long-lasting health condition



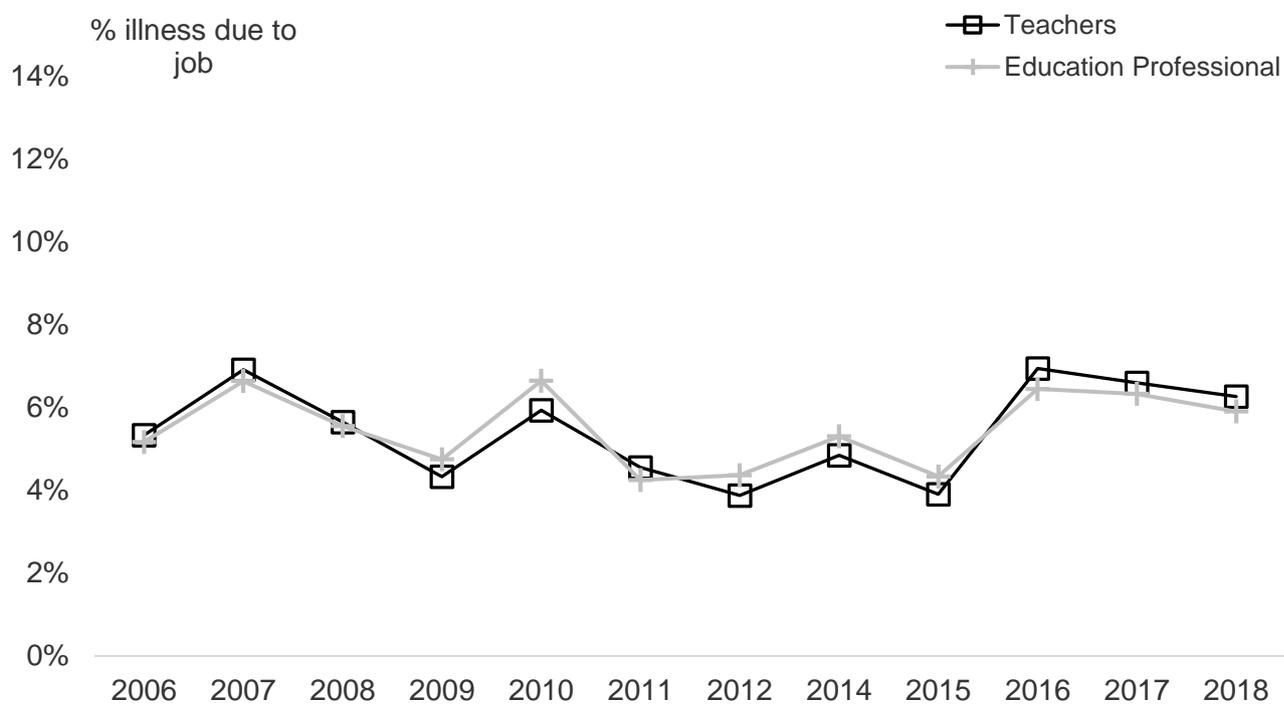
(b) Percent reporting Depression, bad nerves, anxiety or mental health problem



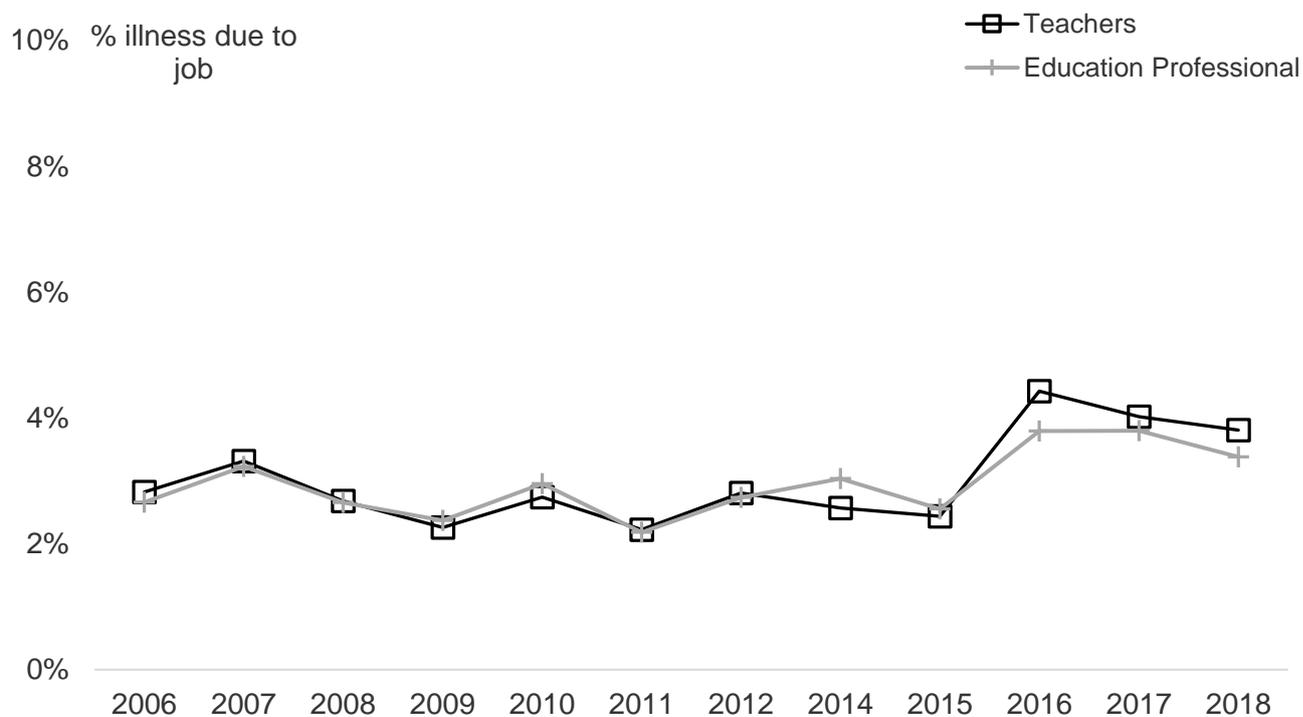
Notes: Analysis based upon the Labour Force Survey (LFS). Figures refer to the percent of teachers reporting a *long-lasting* health problem (which has lasted, or they expect to last, for at least 12 months).

**Figure A2. The percentage of teachers and education professionals in England reporting that they have an illness or injury that has been caused or made worse by their job.**

(a) % illness made worse or caused by job



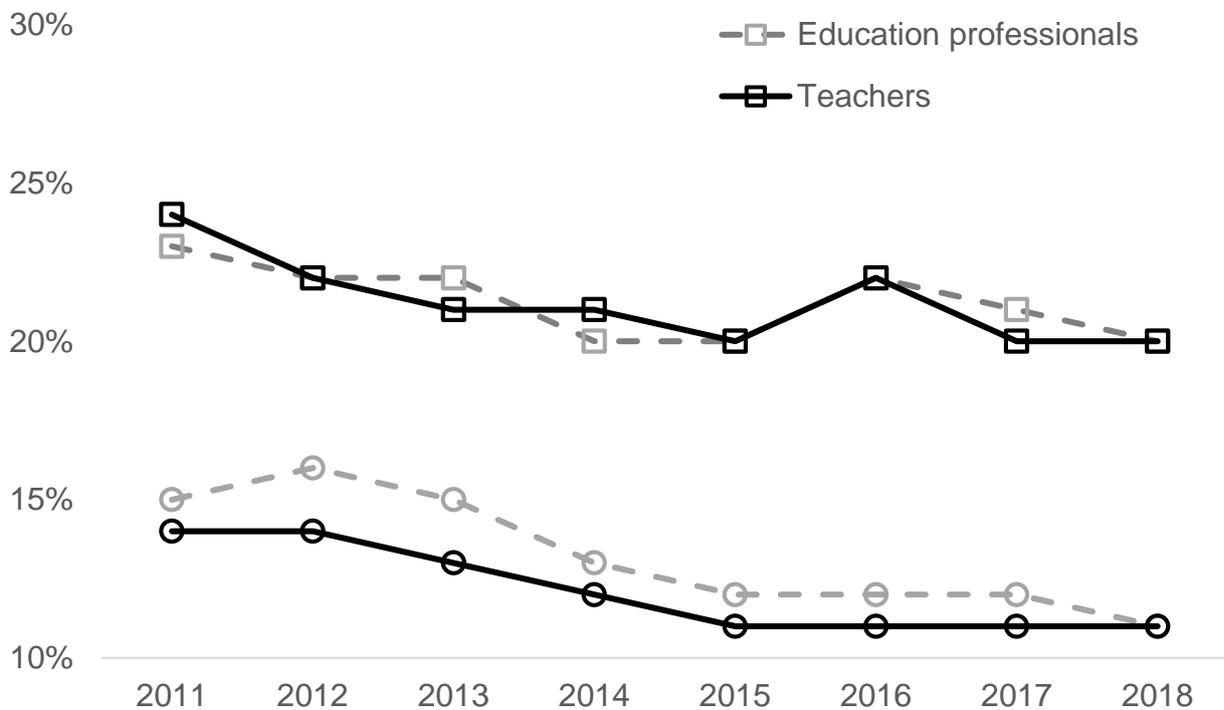
(b) % depression caused by or made worse by job



Notes: Analysis based upon the Labour Force Survey (LFS). Estimates presented for teachers (as broadly defined). Question not asked in 2013.

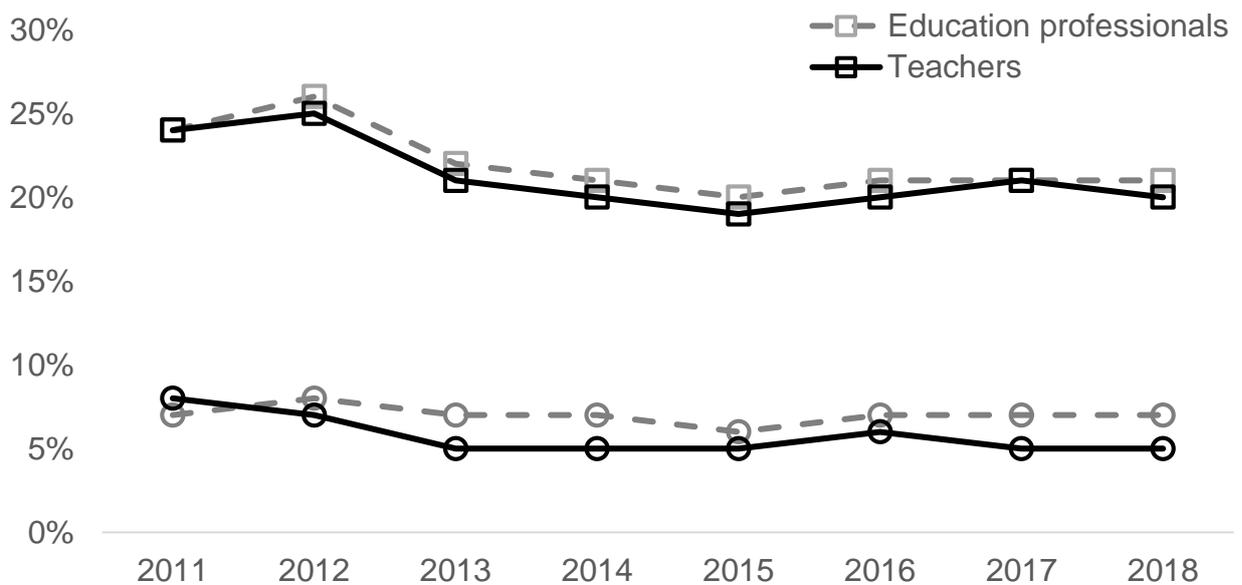
**Figure A4. The percentage of teachers and education professionals in England with poor personal wellbeing. Trends between 2011 – 2018.**

(a) Anxiety and life-satisfaction



Notes: Square markers refer to the results for anxiety and the circular markers the results for life-satisfaction. Solid black line = teachers; dashed grey line = education professionals.

(b) Happiness and self-worth

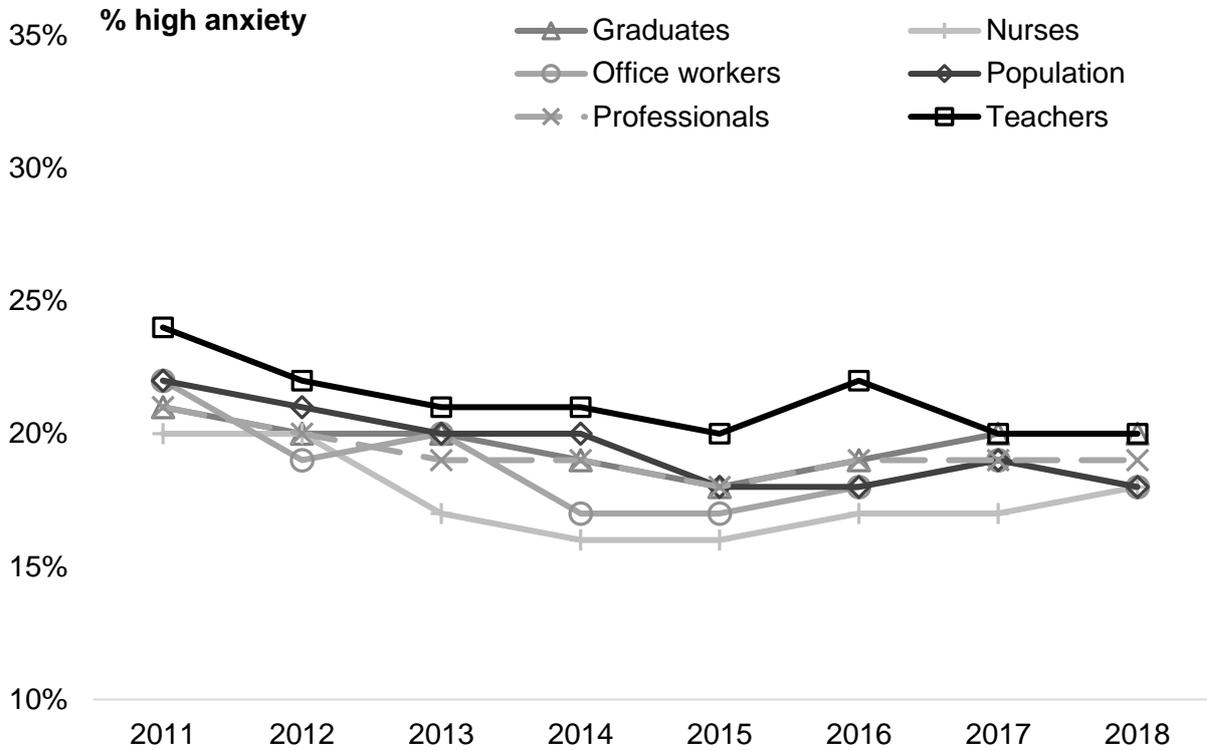


Notes: Square markers refer to the results for the percent of teachers who are not happy and the circular markers the results for low self-worth. Solid black line = teachers; dashed grey line = education professionals.

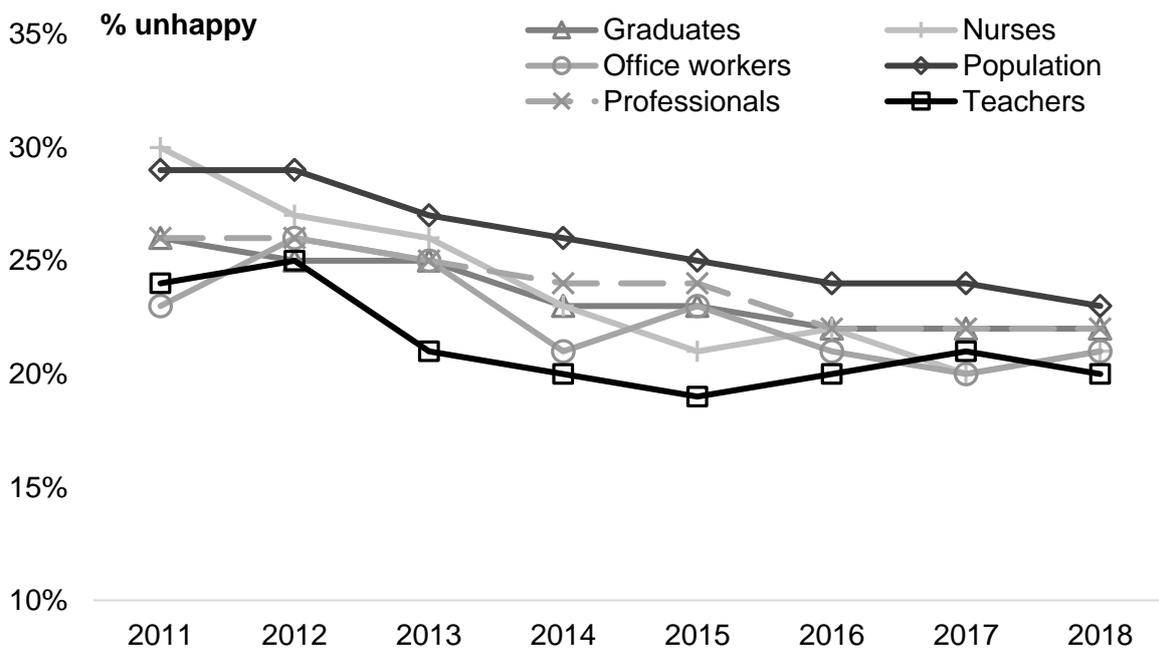
**Appendix B. Trends in personal wellbeing in England between 2011 and 2018.**

**Comparison between teachers and selected other groups**

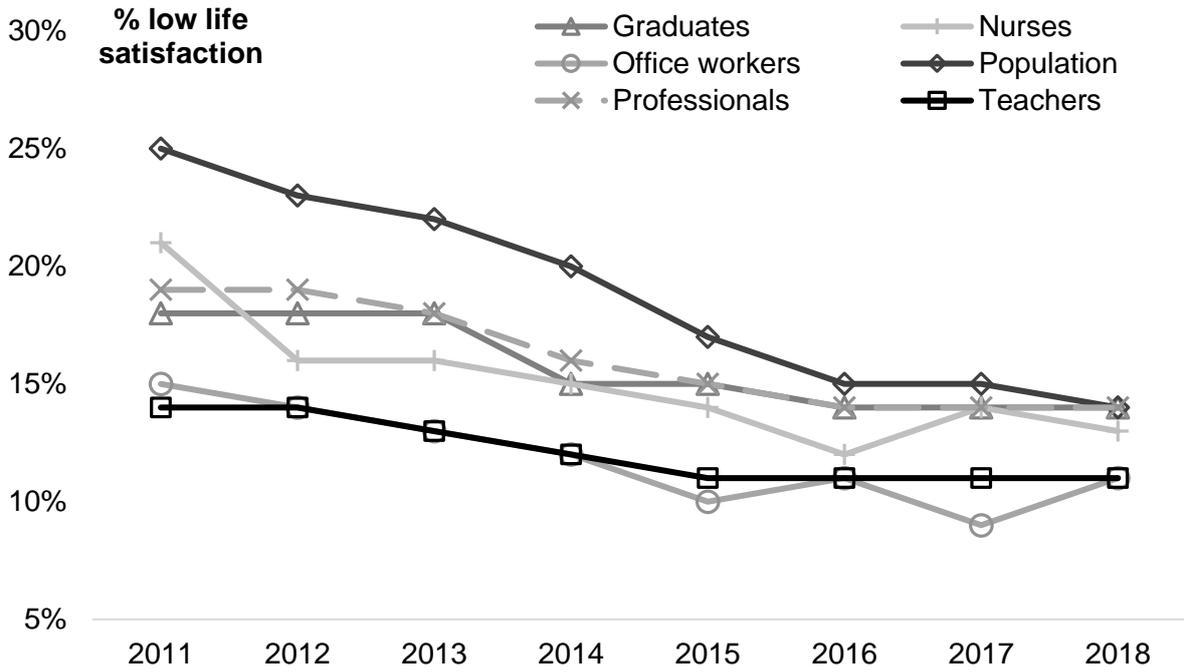
(a) Percent with high anxiety



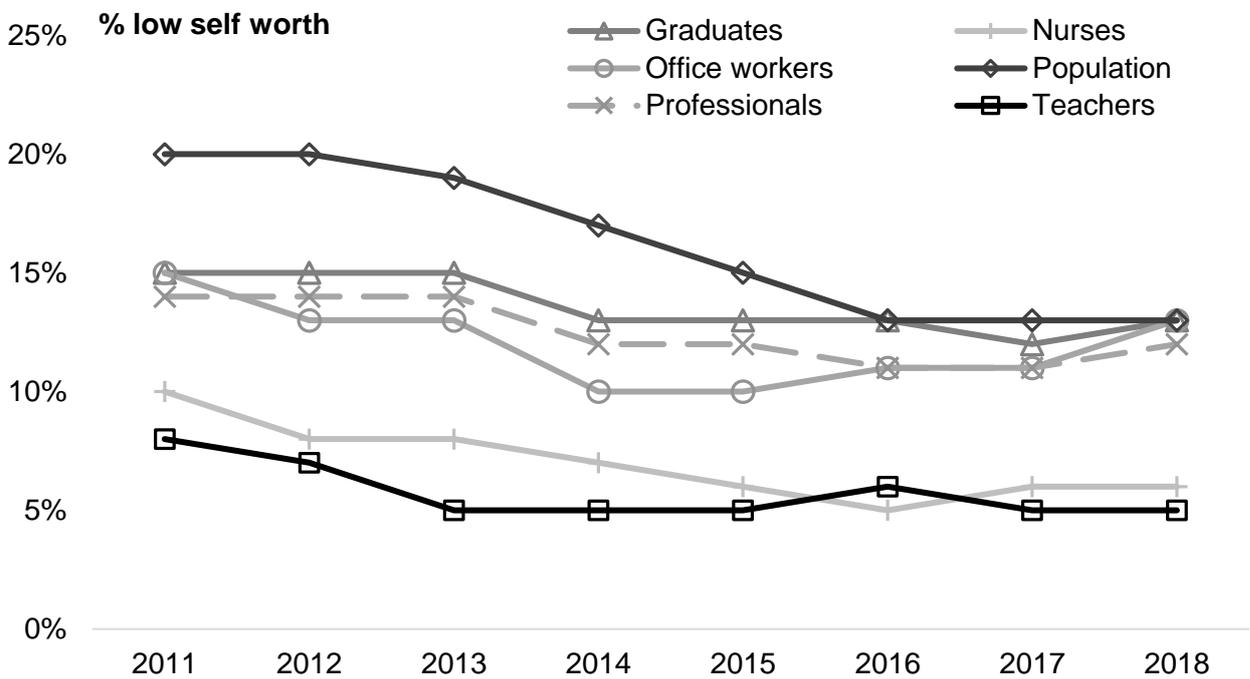
(b) Percent of teachers who are not happy



(c) Percent with low life-satisfaction

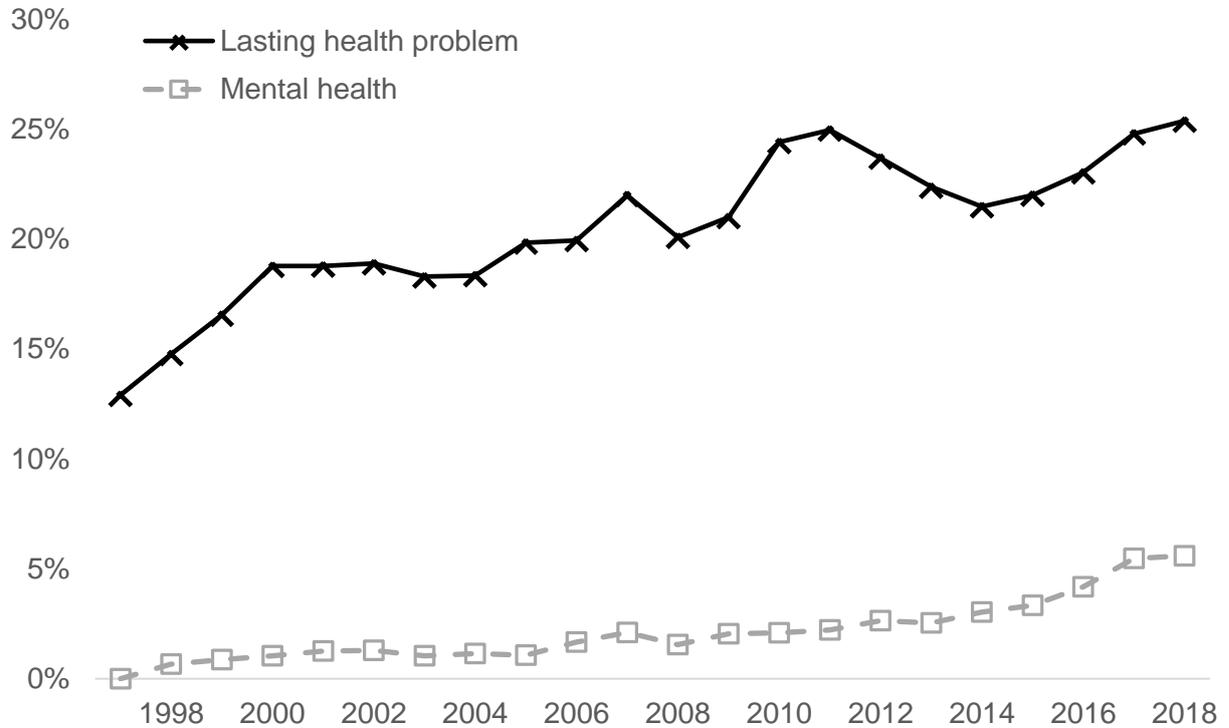


(d) Percent with low self-worth



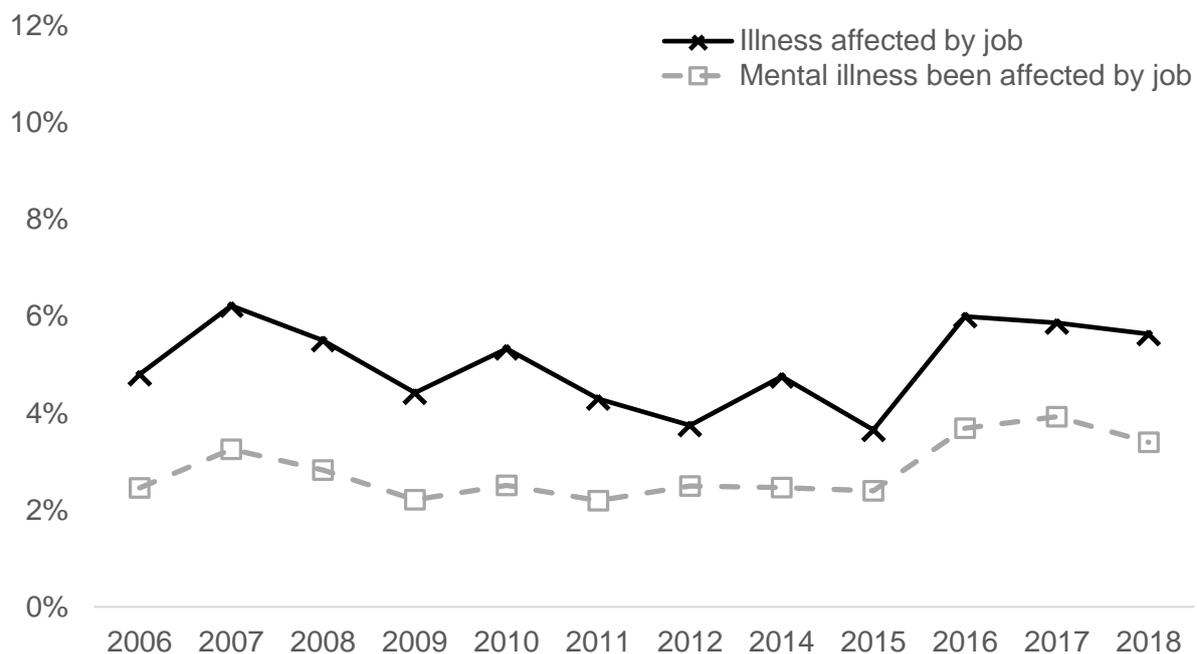
**Appendix C. Propensity score matching estimates for the trends in teachers mental health and personal wellbeing.**

**Figure C1. The percentage of teachers in England reporting a long-lasting limiting health condition. Trends between 1997 and 2018.**



Notes: Analysis based upon the Labour Force Survey (LFS). In panel (a) estimates are presented for teachers (as broadly defined) and for primary and secondary teachers separately. Figures refer to the percent of teachers reporting a *long-lasting* health problem (which has lasted, or they expect to last, for at least 12 months). Figures in panel (b) refer to results for all teachers.

**Figure C2. The percentage of teachers in England reporting that they have an illness or injury that has been caused or made worse by their job. Trends between 2004 and 2018.**



Notes: Analysis based upon the Labour Force Survey (LFS). Estimates presented for teachers (as broadly defined). Question not asked in 2013.

**Figure C3. The percentage of teachers in England with poor personal wellbeing in the APS. Trends between 2011 - 2018**

<b>Year</b>	<b>Anxious</b>	<b>Unhappy</b>	<b>Dissatisfied</b>	<b>Not worthwhile</b>	<b>N</b>
2011	24%	22%	13%	7%	1481
2012	22%	24%	15%	8%	2155
2013	21%	21%	12%	5%	2256
2014	22%	20%	12%	6%	2173
2015	22%	19%	12%	5%	2106
2016	22%	19%	11%	6%	2032
2017	22%	19%	11%	5%	1948
2018	20%	20%	11%	5%	2276

Notes: Matched upon sex, age, marital status, nationality, white ethnicity, whether born in UK, whether primary/secondary/SEN/headteacher. Figures refer to the percentage of teachers with high levels of anxiety, low levels of happiness, low levels of life satisfaction and low levels of self-worth. Analysis based upon the Annual Population Survey (APS).

**Appendix D. Average scores on the 11-point personal wellbeing scale for teachers in  
England. Trends between 2011 - 2018**

<b>Year</b>	<b>Anxious</b>	<b>Happy</b>	<b>Satisfied</b>	<b>Worthwhile</b>	<b>N</b>
2011	3.39	7.53	7.79	8.25	1481
2012	3.25	7.47	7.75	8.30	2155
2013	3.15	7.58	7.85	8.37	2256
2014	3.02	7.69	7.90	8.35	2173
2015	3.06	7.67	7.90	8.37	2106
2016	3.20	7.64	7.85	8.32	2032
2017	3.12	7.64	7.93	8.35	1948
2018	3.06	7.68	7.91	8.43	2276

Notes: Figures refer to the average scores on the 11-point wellbeing scales. Analysis based upon the Annual Population Survey (APS).