

# **Young carers in Inverclyde**

Dr Oonagh Robison

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This short report is part of a series around the health, wellbeing and future expectations of young carers in the NHS Greater Glasgow and Clyde Health Board area.

## **Contact**

Dr Oonagh Robison  
Public Health Research Specialist  
Email: [Oonagh.Robison@glasgow.ac.uk](mailto:Oonagh.Robison@glasgow.ac.uk)  
Web: [www.gcph.co.uk](http://www.gcph.co.uk)  
Twitter: [@theGCPH](https://twitter.com/theGCPH)

# **1 Methods and approach**

## **1.1 Background**

A 2017 GCPH report<sup>1</sup> looked at outcomes around health, wellbeing and future expectations for young carers in Glasgow City. This report is one of a series of follow up reports for three other local authorities – Inverclyde, East Dunbartonshire, and Renfrewshire – carrying out similar analyses.

The data used for analysis comes from the NHS Greater Glasgow and Clyde (NHS GGC) secondary schools health and wellbeing cross-sectional survey, which has been undertaken across local authorities within the GGC health board area. The survey aims to provide information for policy-makers, health practitioners, and planners about the lives and health of secondary school-age young people, and asks a wide variety of questions about their life, home circumstances, behaviours, health and emotional wellbeing, among other issues.

## **1.2 NHS GGC secondary schools health and wellbeing survey**

This report presents findings from the 2013 Inverclyde survey<sup>2</sup>. The survey data of 3,606 secondary school pupils was used to investigate the prevalence of young carers, the type of care provided, and any differences in terms of health, wellbeing and expectations after leaving school. Health was measured by the self-reported physical health conditions reported by the pupils, as well as by the emotional, behavioural or learning difficulties/disabilities reported. Mental health was measured using the Total Difficulties scale of the Strengths and Difficulties questionnaire, with pupils who had a borderline/cause for concern score being included in the medium/high score category. Expectations after leaving school were measured using pupil responses on their post-school expectations, for example further or higher education, work, or an apprenticeship.

## **1.3 Analysis**

Using the 2013 schools survey data, ‘young carers’ were identified by the following two-step process:

1. The pupil self-reported that someone in their family household had a disability, long-term illness, drug/alcohol problem or mental health problem.
2. The pupil self-reported that they looked after or cared for this person because of their disability, long-term illness, drug/alcohol problem or mental health problem.

The analysis was then carried out in two stages:

1. The prevalence of young carers in the data was explored along with the results for young carers versus non-young carers for a selection of responses.

2. Hierarchical multiple logistic regression analysis<sup>a</sup> to examine the effects of pupil background on: participants' mental health; post-school aspirations; emotional, behavioural or learning difficulties / disabilities; and physical health conditions. There were three steps to the modelling, controlling for:
  - I. the pupil's background – sex; age; deprivation (whether the pupil reported receiving free school meals); ethnicity; lone parent family
  - II. the pupil's carer status
  - III. the presence of illness in the family – disability; long-term illness; drug/alcohol problems; mental health issues.

Logistic regression is a statistical technique used to calculate the probability that a person will be in one of two groups – in this case, either having reported: one or more physical health conditions or not; a medium/high difficulties score or not; one or more emotional, behavioural or learning difficulties/disabilities or not; and the expectation of going on to further or higher education after school, or not. Further details on the analysis can be found in the original GCPH report<sup>1</sup>.

#### **1.4 Sampling**

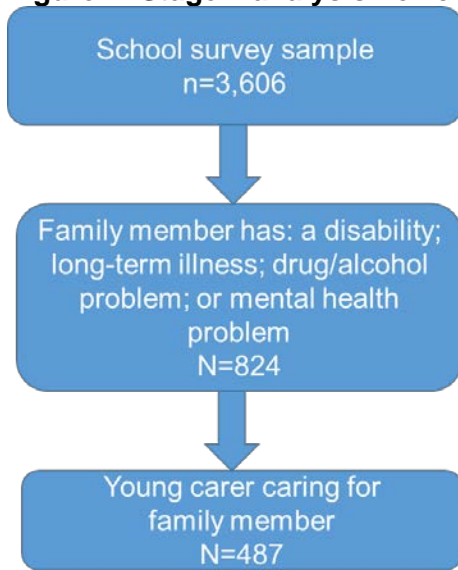
The Inverclyde survey involved the participation of first to sixth year pupils (age range 11-18) in all six mainstream secondary schools, with 3,606 pupils taking part – a response rate of approximately 83% of the known secondary-aged school roll (for more info on survey methodology please see the original Inverclyde survey report<sup>2</sup>).

In Stage 1 of the analysis the full pupil sample (3,606) was used (see Figure 1). Of the full sample, 824 had a family member with one or more conditions, and of these pupils, 487 provided care (13.5% overall).

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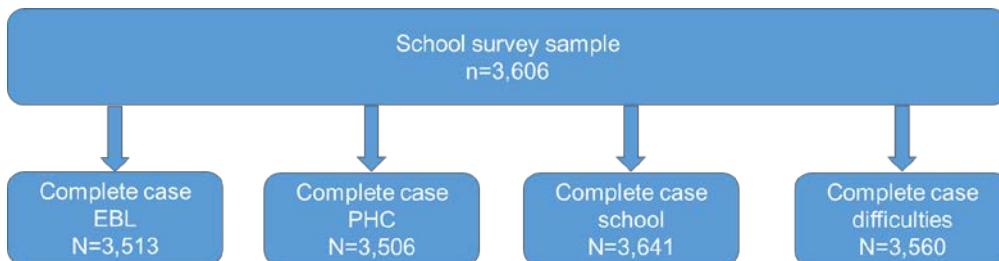
<sup>a</sup> The full tables for the second part of the analysis can be found in the Appendix.

**Figure 1: Stage 1 analysis flowchart.**



At Stage 2, a complete case analysis was conducted using a sample that excluded those pupils who were missing data in the variables used in the subsequent modelling of the four outcomes variables, leading to four different sample sizes (see Figure 2).

**Figure 2: Stage 2 analysis.**



## **2 Stage 1: How do young carers differ from their non-carer classmates?<sup>b</sup>**

### **2.1 Prevalence of young carers**

Overall, 13.5% (N=487) of the school pupils reported that they looked after or cared for a household family member. In terms of level of care, 39.8% looked after them 'every day'; 29.3% 'a couple of times a week'; and 30.9% looked after them 'once in a while'.

Over half of these carers (56.1%) cared for someone with a disability; one-third (33.3%) for someone with a long-term condition; over a quarter (26.3%) for someone with a mental health problem; and just over one-tenth (11.7%) for someone with a drug or alcohol problem<sup>c</sup>.

The survey question did not ask the pupils to specify the way(s) in which they provided care, however from the literature this could be any of a wide range of types of care, including household chores, personal care and emotional support. Comparing young carers with the overall survey sample revealed gender and ethnicity differences. Just over half of the young carers were female (54.4%) compared with 50.5% overall. Just under 3% (2.9%) of young carers were identified as Black and Minority Ethnic (BME), slightly higher than the overall BME percentage (2.1%) within the survey sample. A breakdown of the demographics of the carers versus the overall sample is shown in Table 1.

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<sup>b</sup> Please note that not all reports show the exact same findings, as surveys differed slightly.

<sup>c</sup> Please note these figures do not add up to 100% as more than one option could be chosen here, as illustrated in Table 1.

**Table 1. Demographic breakdown of pupils.**

Characteristic		Carer % (N=487)	Overall % (N=3,119)
Gender	Male	45.6	49.5
	Female	54.4	50.5
Ethnicity	BME	2.9	2.1
Free school meals	Registered	32.2	17.3
Lone parent family		32.9	25.2
Age	11	4.3	4.3
	12	16.8	18.8
	13	19.3	19.0
	14	18.9	18.6
	15	17.5	16.4
	16	17.2	15.5
	17	5.7	7.3
	18	0.2	0.2

As NHS GGC carries out similar schools surveys in other local authority areas operating across the health board area, the opportunity was provided to provisionally compare the prevalence of young carers. The surveys undertaken in Inverclyde have an identical question to those asked in East Dunbartonshire and Glasgow City. However, the Renfrewshire survey asks a slightly different question, and does not ask about frequency of care in the same way. Therefore, the results cannot be directly compared but are provided for information purposes only. Table 2 also shows the Scottish Index of Multiple Deprivation (SIMD) 2016 local share – the percentage of the area’s data zones that fall into Scotland’s 15% most deprived areas.

**Table 2. Carer figures from other local authorities across NHS GGC.**

Local authority	Pupils with any caring responsibilities %	Sample size	Year	SIMD 15% local share 2016 %
Glasgow	12	11,215	2014	42.9
East Dunbartonshire	9	2,907	2014	1.5
<b>Inverclyde</b>	<b>14</b>	<b>3,606</b>	<b>2013</b>	<b>35.0</b>
Renfrewshire	19	5,600	2013	20.9

## **2.2 Demographics, poverty and disadvantage**

Overall, young carers were more likely to be overrepresented in a range of standard measures that looked at poverty and disadvantage.

Young carers were more likely than non-carers to receive free school meals (32.2% and 14.9% respectively). Free school meal registration is often used as a proxy for individual and school level deprivation, and while not an ideal indicator, does give an indication of the level of deprivation in a given area.

Young carers were also more likely than their non-carer counterparts to live with just one parent (32.9% versus 24.0%).

Young carers were less likely than non-carers to have eaten breakfast on the morning of the survey (61.2% versus 71.4%). Eating breakfast is associated with being a healthy weight, and may benefit academic performance, whereas skipping breakfast is associated with those from poorer backgrounds.

## **2.3 Physical health**

There were striking differences in the reporting of physical health between carers and non-carers.

Almost a fifth of the young carers reported that they had a limiting illness or disability, more than double the level of non-carers (18.6% versus 8.7%).

As would be expected with more than double the number of carers reporting that they had a limiting illness or disability than non-carers, self-reported health was lower among carers. Self-reported health over the last year was rated as very good to very poor. In general, young carers felt slightly worse about their health over the last year than non-carers, with almost double the amount saying they felt their health over the last year was 'poor' or 'very poor' (13.0% versus 7.1%).

Again, consistent with the response to whether the pupils had a limiting illness or disability, in general young carers were more likely to report that they had any emotional, behavioural or learning difficulties/disabilities – one-and-a-half times more for dyslexia (15.1% versus 9.9%), more than double for ADHD (5.8% versus 2.8%), and mental health/emotional illness (8.9% versus 3.1%).

Young carers were also more likely than non-carers to report that they had certain physical health conditions, such as asthma (21.0% versus 14.9%), eczema or psoriasis (12.7% versus 9.2%), or stomach or digestion problems (5.8% versus 1.9%).

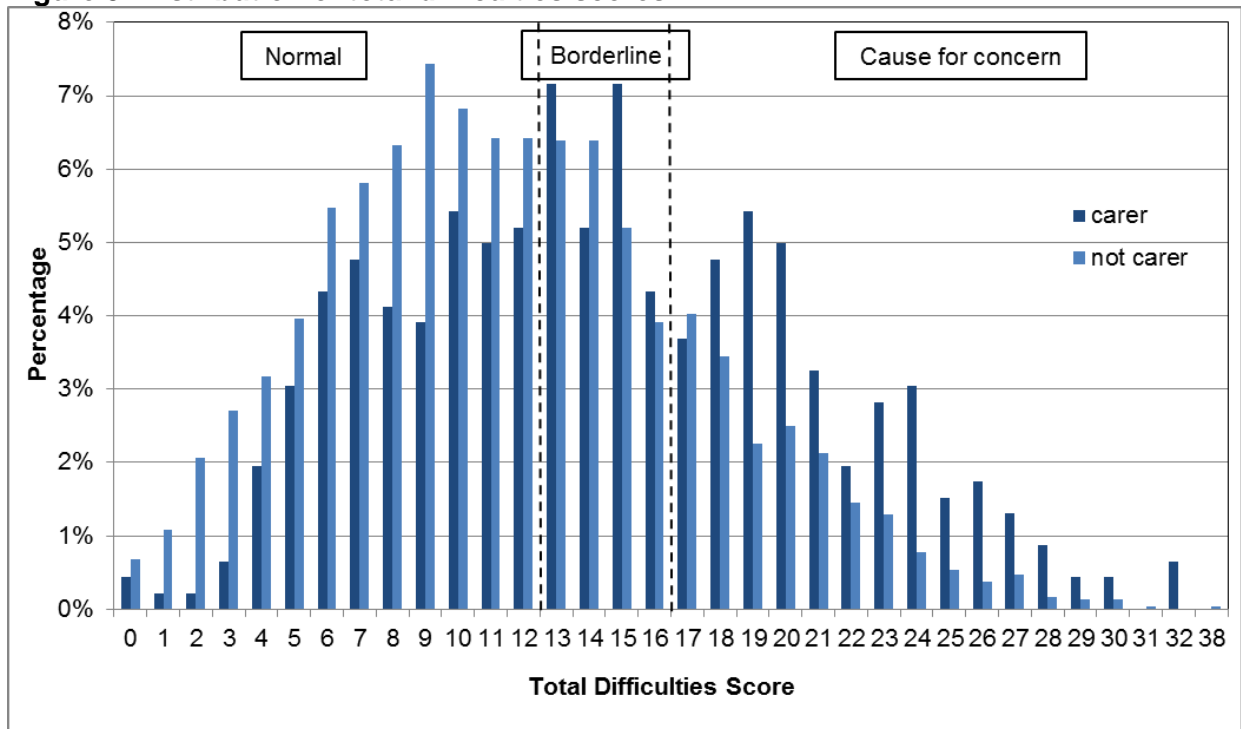


## 2.4 Mental health and wellbeing

As with physical health, carers were overrepresented in outcomes that examined the mental health and wellbeing of the pupils.

As can be seen below in Figure 4, the distribution of total difficulties scores shows that carers are more likely to be borderline or cause for concern.

**Figure 3: Distribution of total difficulties scores.**



Young carers were more likely than non-carers to worry about things, including relationships with friends (37.9% versus 27.9%), being bullied (21.2% versus 12.6%), and the way they look (48.7% versus 34.6%). Unsurprisingly they were more likely to be worried about caring for a family member.

Young carers were more likely than non-carers to report that they had been bullied. This was the case for bullying at school (30.1% versus 13.5%), somewhere else (11.1% versus 4.8%), and online (12.6% versus 5.1%).

## 2.5 Cultural and social activities

There were few differences between carers and non-carers in terms of the community services they had visited within the last year, with carers more likely to have visited a community centre (39.3% versus 28.5%).

Over the past year, young carers were more likely to have done voluntary work (29.0% versus 22.1%), taken part in a charity event (33.8% versus 27.7%), taken part in a drama/acting/singing group (22.6% versus 17.7%), and slightly less likely to

have taken part in an out of school sporting activity (56.2% versus 61.2%) or participated in organisations such as Scouts/Guides (21.6% versus 17.4%).

## **2.6 Education and employment**

Carers were less likely than non-carers to think that they would be going on to university after leaving school (54.0% versus 59.7%), with carers thinking they were more likely to be working 16.2% versus 13.2%), or at further education college (11.3% versus 7.4%).

## **2.7 Views on caring**

Those who identified as a carer were asked two follow-up questions on how their caring responsibilities had affected them.

Over half of the young carers said that “it makes me feel good to be able to help” (57.1%), and almost a third said that they had learned new skills through caring (32.7%). However almost a quarter said that it makes them tired (22.6%) and just over a fifth reported that it meant they were sometimes unable to do their homework (22.8%).

### 3 Stage 2: Do differences between young carers and their counterparts persist?

#### 3.1 Physical health conditions

As we saw in the first findings section, there were differences between carers and non-carers in terms of reporting a physical health condition<sup>d</sup>. A binary variable for physical health conditions was constructed with two categories – pupils either indicated that they had one or more of the conditions, or they did not.

In order to look at whether these differences persist when the pupil's background and the presence of family illness in the household were controlled for, a regression model was constructed. The results can be seen below. As this was a binary outcome, a logistic regression analysis was carried out. The output can be interpreted as the odds ratio for each variable – for example, if the output for 'male' was 1.5, we could say that male pupils were 1.5 times, or 50%, more likely to report they had one or more conditions as opposed to female pupils.

The graphs show the odds ratio on the vertical y-axis, with bars for each variable included. Bars with a score less than 1 indicate a negative association, and bars with a score more than 1 indicate a positive association.

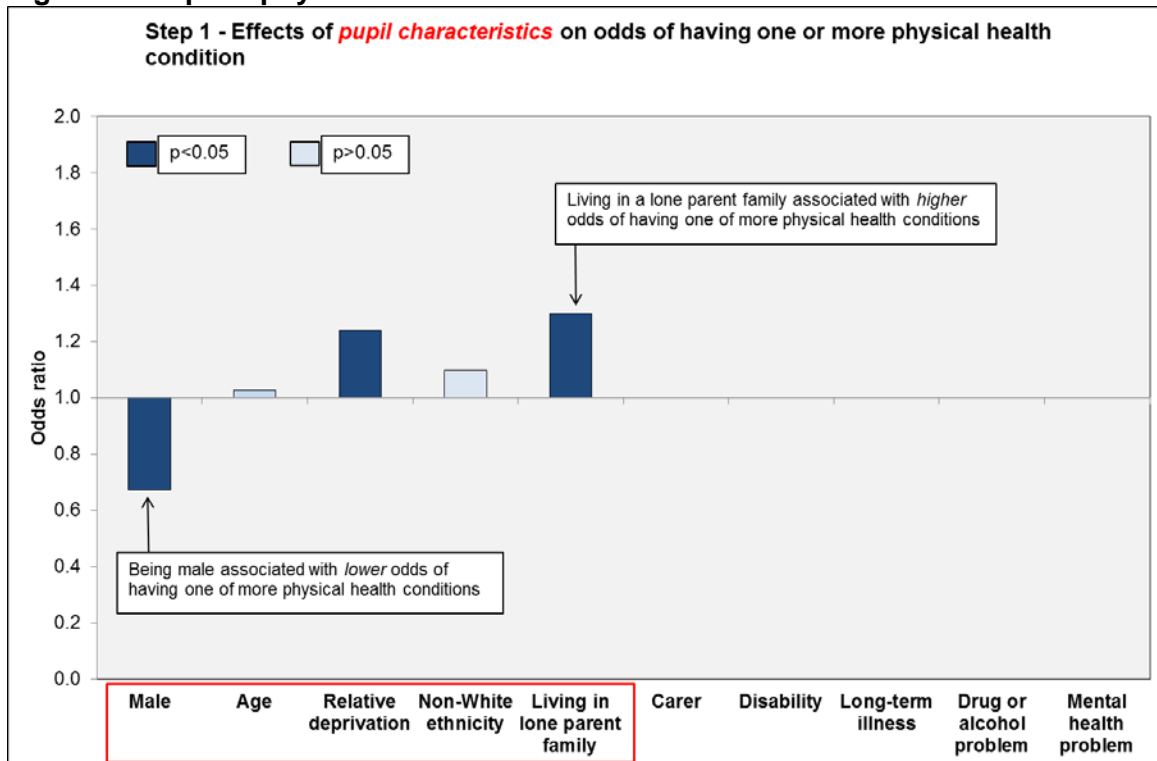
Significance was assessed by looking at *p* values – the level of confidence we can have that the finding is statistically different from zero. A value of greater than 0.05 ( $p > 0.05$ ) suggests we cannot have confidence that the finding is statistically significant; a *p* value of under 0.05 ( $p < 0.05$ ) suggests we can be 95% certain that the finding is statistically significant. In the graphs, pale blue indicates the result is not statistically significant ( $p > 0.05$ ), and dark blue that the result is significant ( $p < 0.05$ ). The full tables, including confidence intervals, can be found in the Appendix.

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<sup>d</sup> The conditions were: asthma; diabetes; eczema/psoriasis; epilepsy; arthritis/painful joints; cystic fibrosis; stomach/digestion, constipation or bowel problem; urinary/bladder problems (wetting); hearing impairment; visual impairment; or other physical illness or disability.

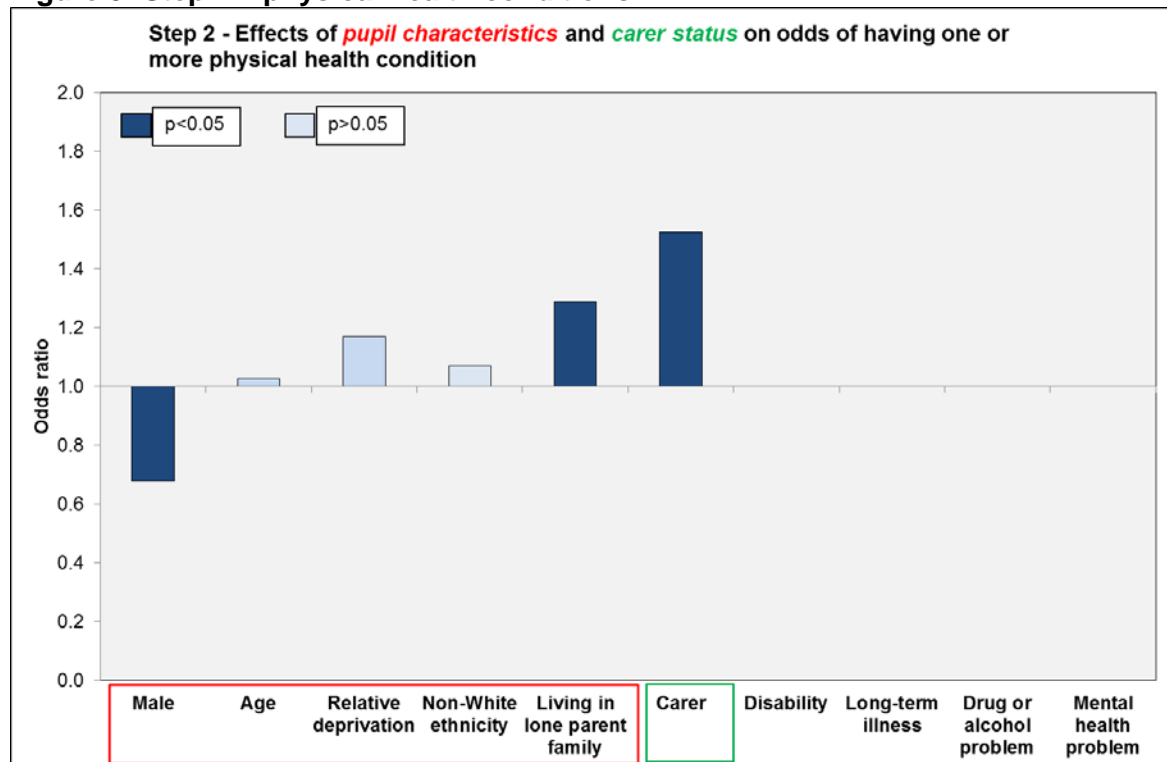
In step 1, as can be seen in Figure 5, pupils' gender, relative deprivation status (as measured by whether the pupil received free school meals), and living in a lone parent family were all significantly associated with the reporting of a physical health condition. Males were less likely to report a physical health condition, while those receiving free school meals, and those in lone parent families were more likely to report a physical health condition.

**Figure 4: Step 1 – physical health conditions.**



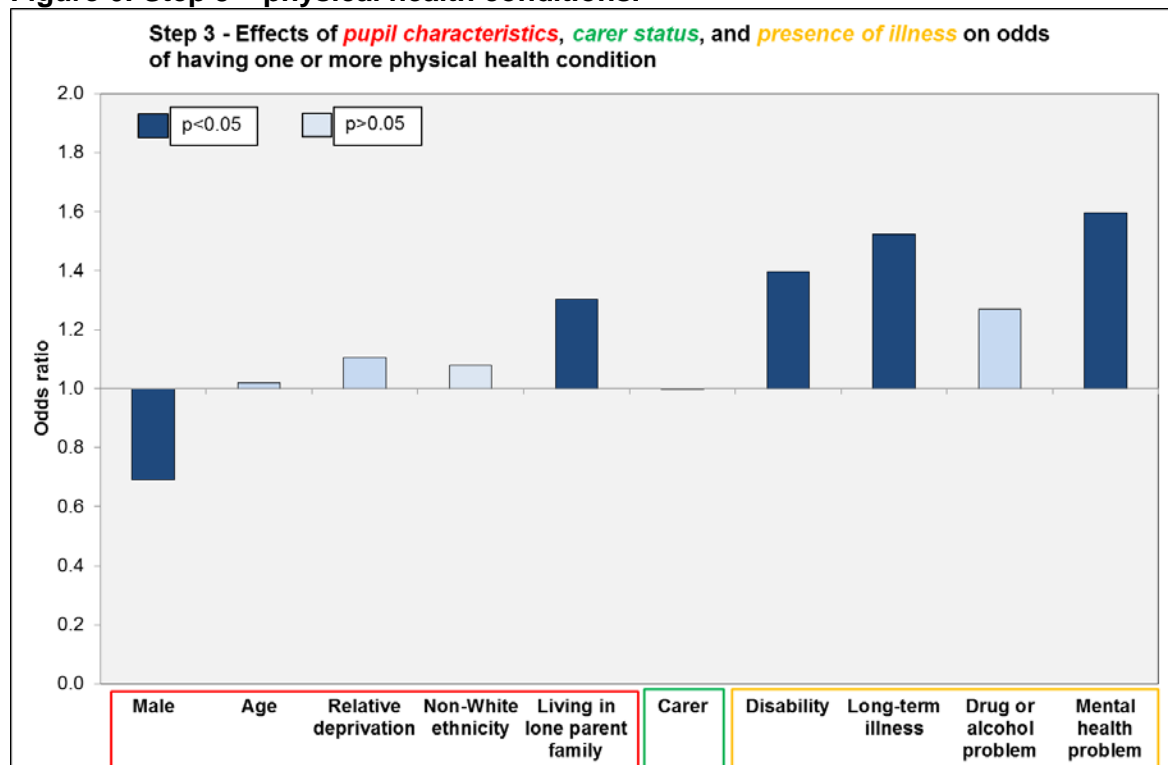
As can be seen in Figure 6, some of the pupils' background factors (gender, lone parent family) remained significant with the introduction of carer status in the second model. Being a carer had a strong and significant association with reporting one or more physical health conditions, with an odds ratio of 1.50 – carers were 50% more likely to report one or more physical health conditions than non-carers, even after accounting for background factors.

**Figure 5: Step 2 – physical health conditions.**



In the third step, the four variables covering the presence of illness in the family are introduced. As can be seen in Figure 7, when they were introduced, carer status became insignificant. Of the presence of illness variables, all were significant with the exception of drug or alcohol problem. In other words, those living with a family member with a disability, long-term illness, or mental health problem were all more likely to report physical health conditions, over and above background factors.

**Figure 6: Step 3 – physical health conditions.**



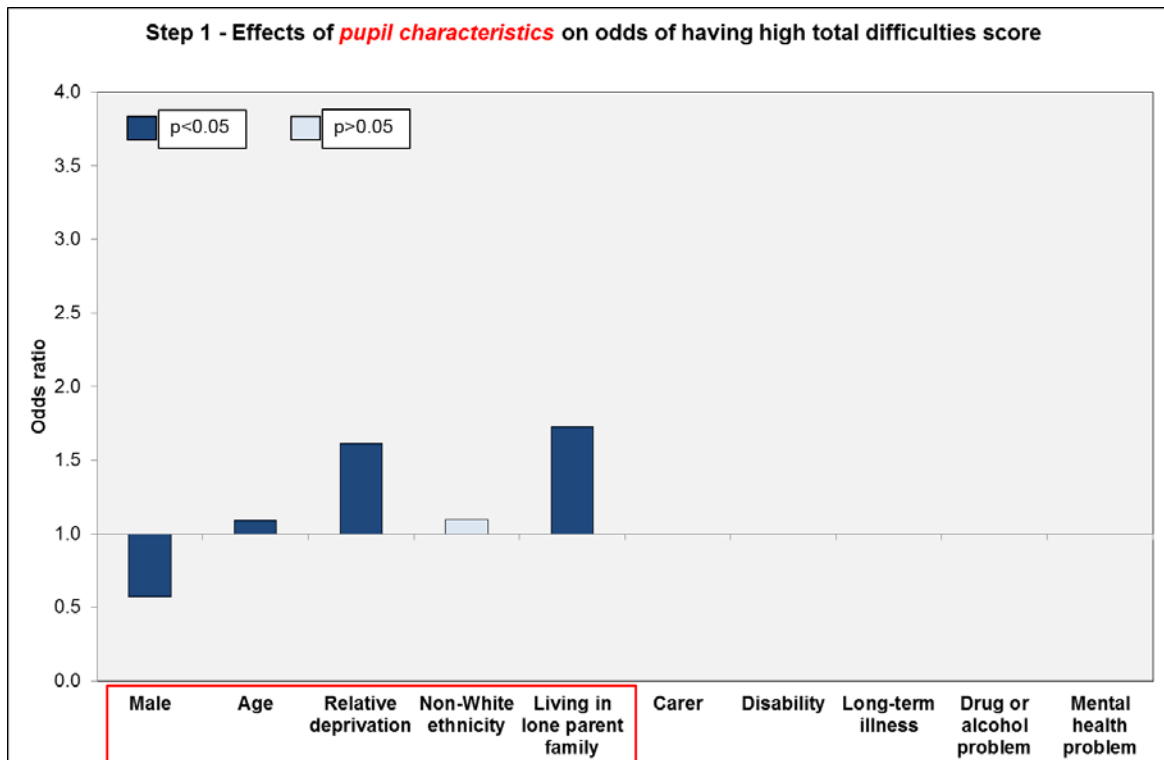
These findings suggest that the reporting of one or more physical conditions is associated with the presence of illness in the household.

### 3.2 Mental health and wellbeing

In the first section of the findings we found that the distributions of total difficulties scores for carers and non-carers differed, with carers tending to have a higher score, suggesting that young carers have poorer mental health and wellbeing than non-carers.

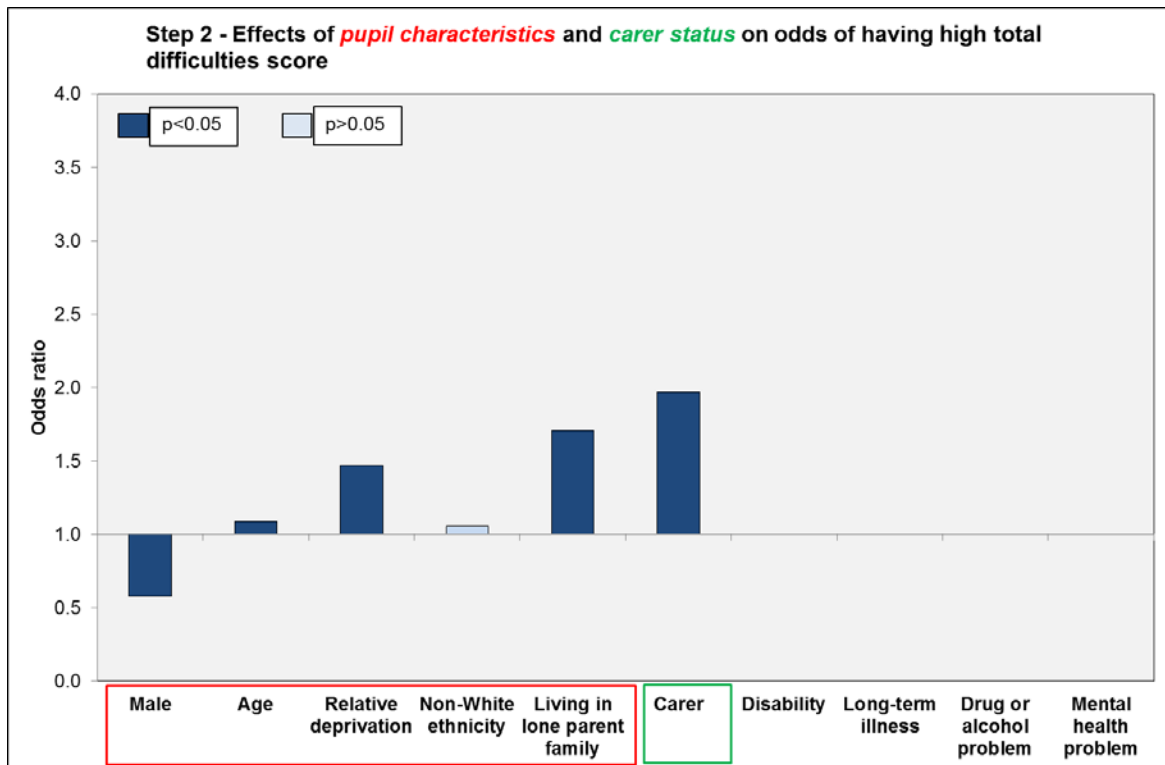
As can be seen in Figure 8, the first step of the model showed that gender, age, deprivation and lone parent status all had a significant impact on whether a pupil had a high difficulties score. Not having a medium/high difficulties score was associated with being male, while having a medium/high difficulties score was associated with age, being registered for free school meals, and living in a lone parent family.

Figure 7: Step 1 – mental health and wellbeing.



The next step was to add the young carer status into the model. As can be seen in Figure 9, this also had a significant association with whether a pupil had a medium/high difficulties score. It showed that those who were carers were more likely to have a medium/high difficulties score than those who were not carers, over and above background characteristics.

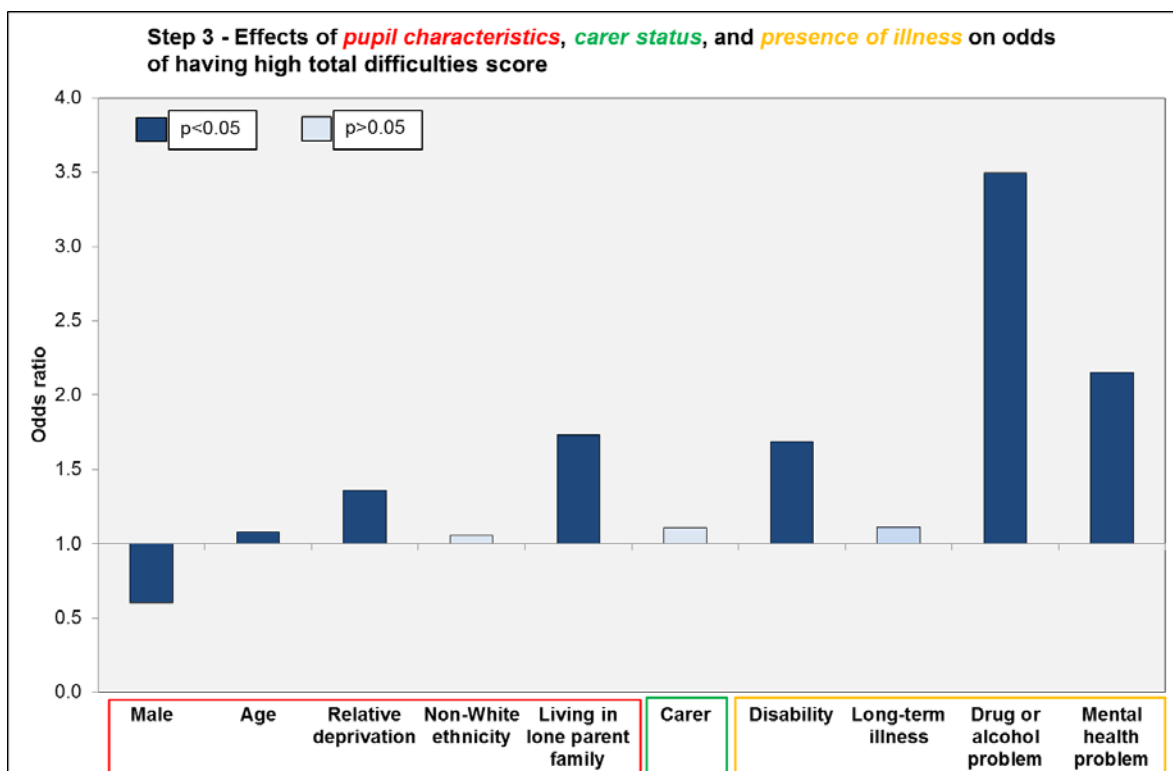
**Figure 8: Step 2 – mental health and wellbeing.**





The third step of the model introduced whether the pupil had a family member in the household with an illness or long-term condition. In the presence of the four illness variables, caring status becomes insignificant, as can be seen in Figure 10. However, three of the four of the types of illness/condition are significantly associated with a having a medium/high difficulties score, indicating that presence of illness is associated with poorer mental health over and above background factors and carer status. In particular, having a family member with a drug or alcohol problem or a mental health condition had the strongest association with having a medium/high total difficulties score.

**Figure 9: Step 3 – mental health and wellbeing.**



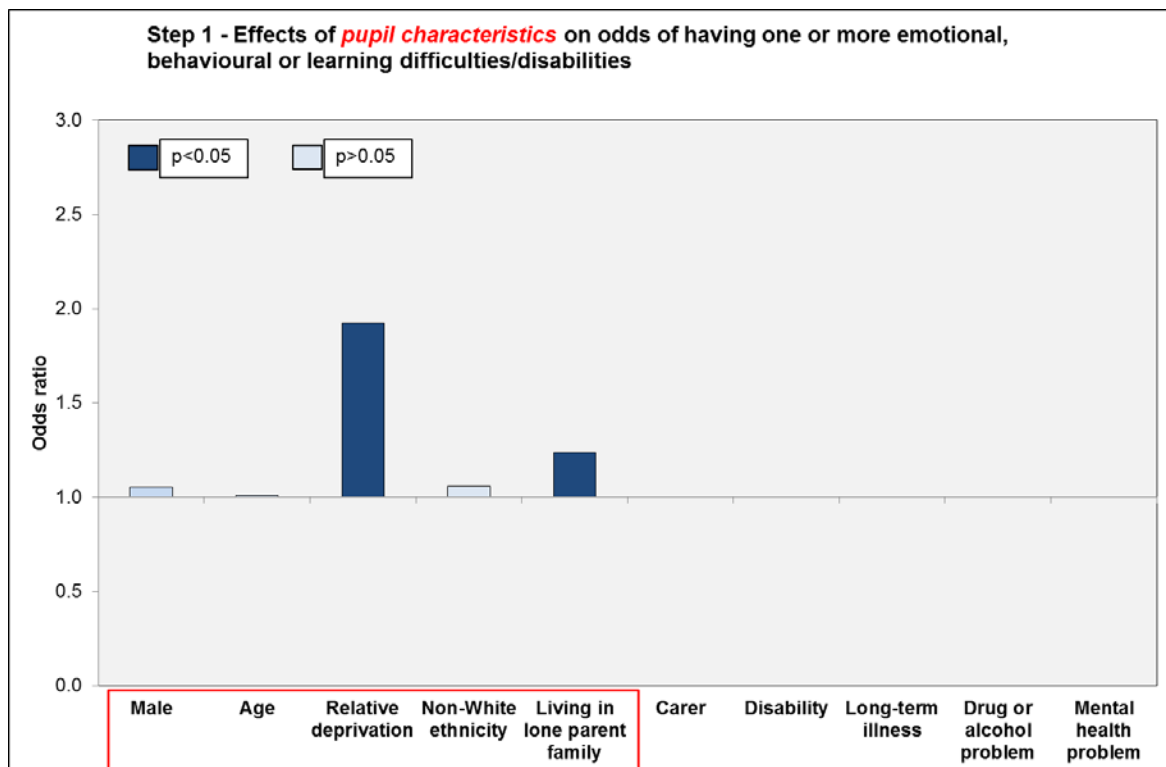
In terms of the young carer’s mental health and wellbeing, it seems that although being a carer does impact on having a medium/high difficulties score, the presence of illness, particularly having a family member with a drug or alcohol problem or a mental health condition, has the biggest association with having a medium/high difficulties score.

### 3.3 Emotional, behavioural or learning difficulties/disabilities

The first section showed that there were differences between carers and non-carers in self-reporting a range of emotional, behavioural and learning (EBL) disabilities<sup>e</sup>. A binary variable, EBL, was constructed where pupils were in one of two categories: they had indicated they had one or more of the conditions, or they had not reported any.

As can be seen in Figure 11, some pupil background factors have a significant association with EBL. Those pupils who were registered for free school meals were more likely to report emotional, behavioural or learning difficulties/disabilities, as were those in lone parent families.

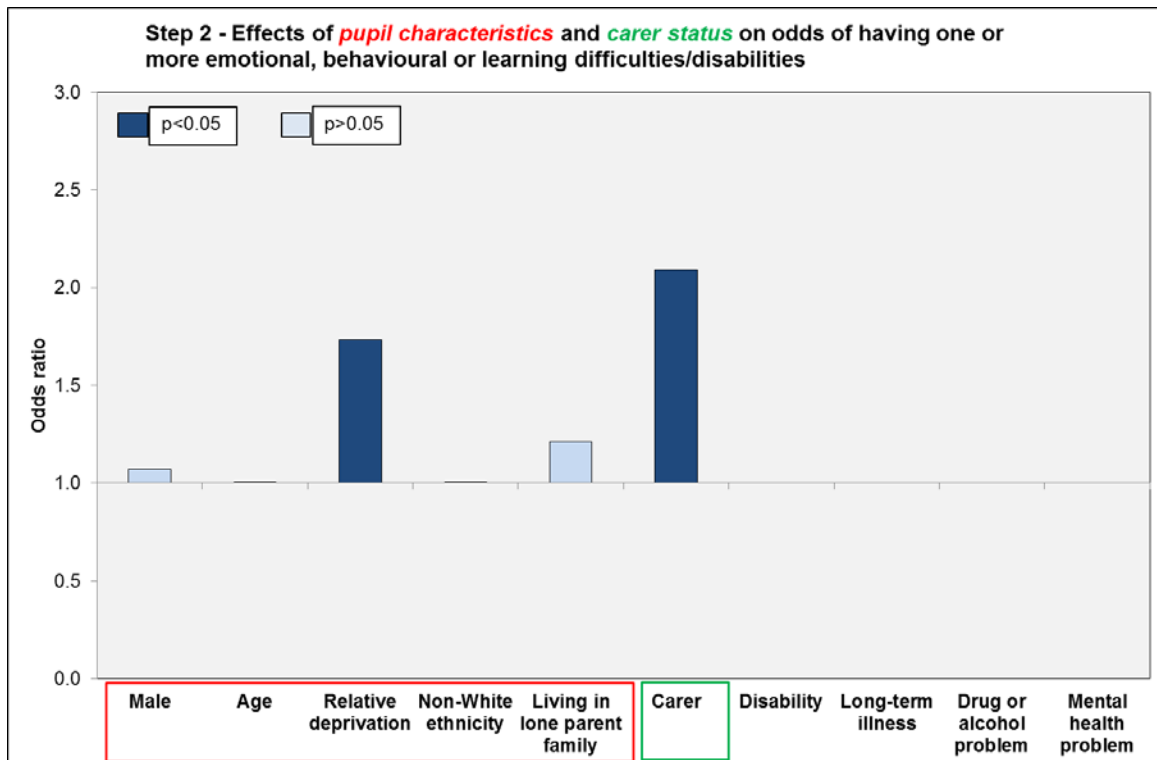
Figure 10: Step 1 – emotional, behavioural and learning disabilities.



<sup>e</sup> The conditions were: dyslexia; attention deficit hyperactivity disorder; autism spectrum disorder/Asperger's; mental health/emotional illness; or other emotional, behavioural or learning disability/difficulty.

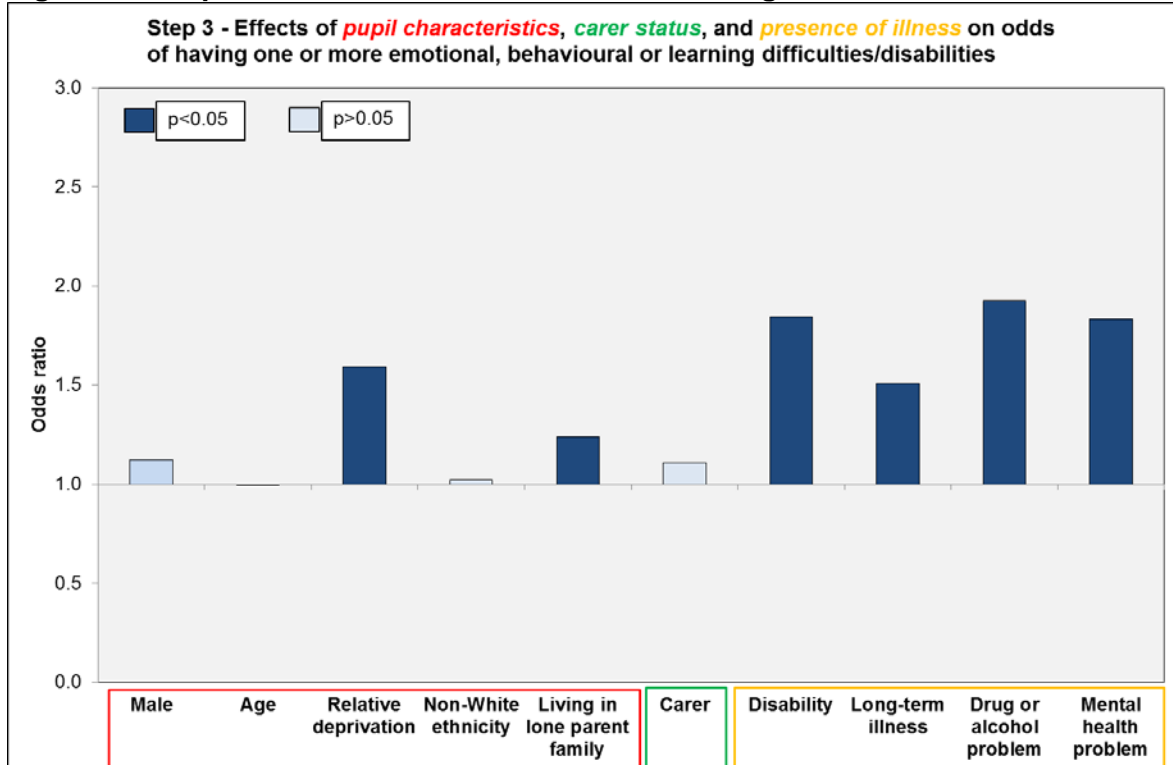
When carer status was added in at step 2, it was strong and significantly associated with the reporting of EBL, as can be seen in Figure 12. Carers were more than twice as likely as non-carers to report emotional, behavioural or learning difficulties/disabilities.

**Figure 11: Step 2 – emotional, behavioural and learning disabilities.**



At step 3, when all four illness variables were added into the model, carers' status became insignificant, as can be seen in Figure 13. All four of the 'presence of illness' variables were significant.

**Figure 12: Step 3 – emotional, behavioural and learning disabilities.**



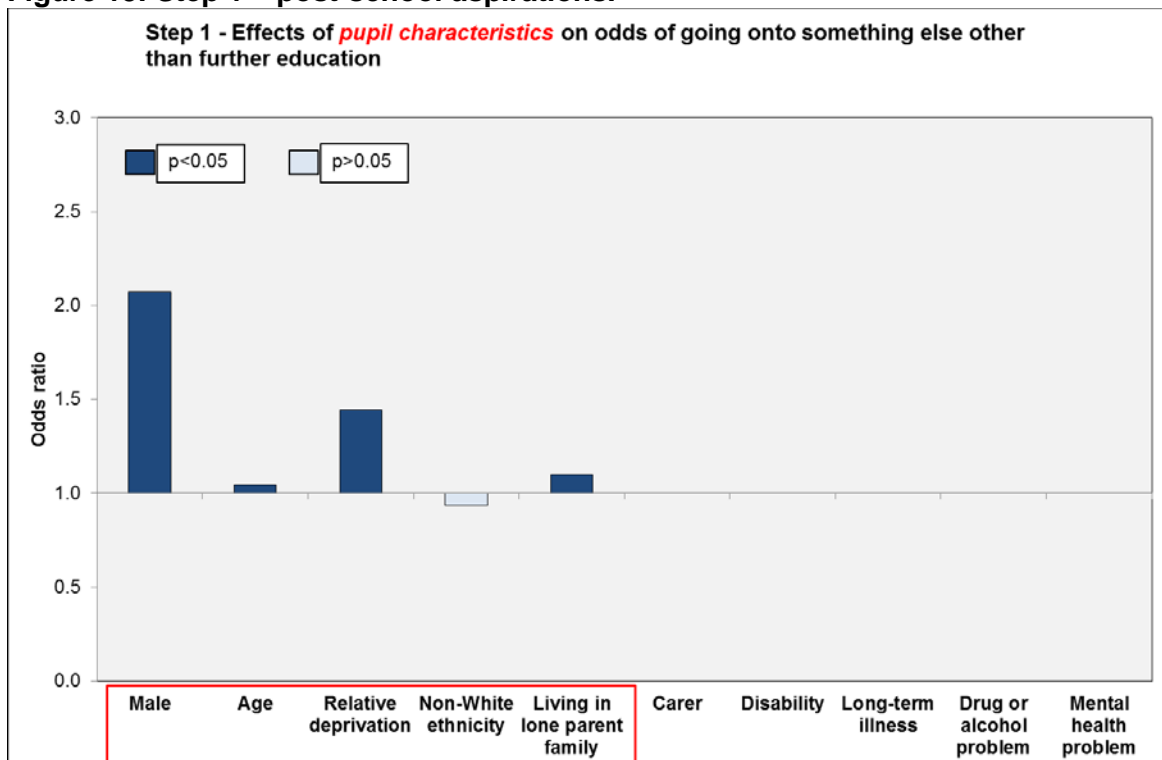
These findings suggest that the reporting of emotional, behavioural or learning difficulties/disabilities is associated with the presence of family illness, over and above background factors.

### 3.4 Post-school aspirations

The first section of the findings also showed that there were differences between carers and non-carers in terms of what they thought they would do once they left school. The ten options offered to pupils in the school survey question<sup>f</sup> were collapsed into two options. The two collapsed options ('further or higher education' and 'something else') were constructed into an outcome variable to support further analyses.

The first step in this model controlled only for background factors. It shows that most of the factors had a significant association with future aspiration – for example boys were more than twice as likely as girls to think they would be doing 'something else', as can be seen in Figure 14. Those receiving free school meals and living in a lone parent family were also significantly more likely to think they would be doing 'something else'.

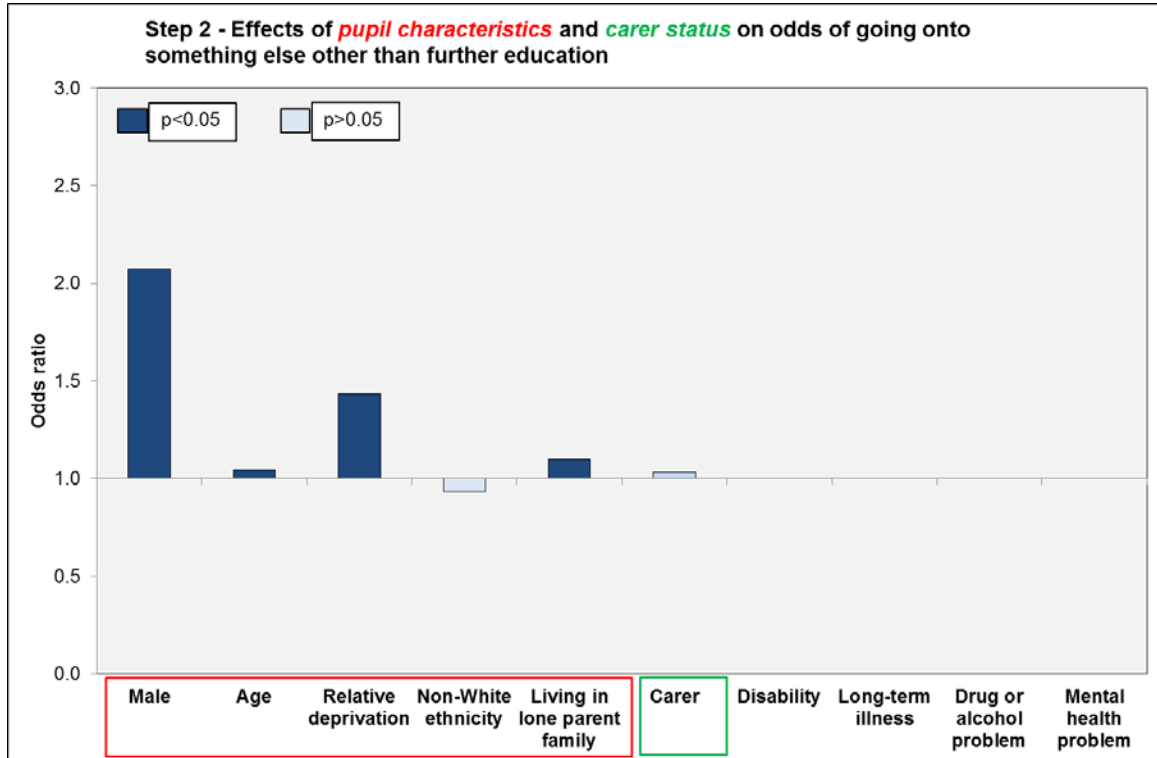
**Figure 13: Step 1 – post-school aspirations.**



<sup>f</sup> The ten options in the original question are: working; trade or modern apprenticeship; university; further education college; take a gap year; volunteering; setting up a business; training programme; don't know; and other.

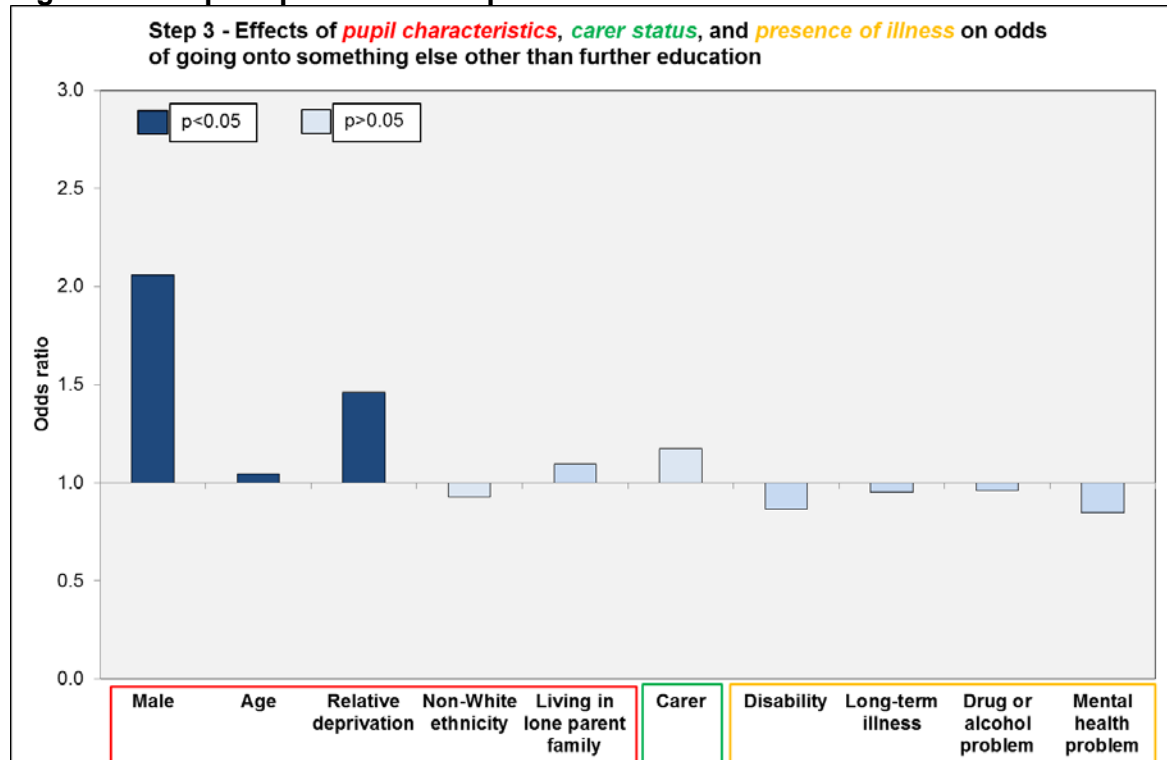
As can be seen in Figure 15, the addition of carer status had little impact on the background variables, and was not significant.

**Figure 14: Step 2 – post-school aspirations.**



The addition of all four categories of family illness had little impact on either the background or carer variables, as can be seen in Figure 16. The 'presence of illness' coefficients were themselves not significant, suggesting that the presence of illness does not have an association with post-school aspirations.

**Figure 15: Step 3 – post-school aspirations.**



In terms of aspirational outcomes, this suggests that it is background factors, especially gender and free school meal status that has an association with future aspirations.

## 4 Summary

In Inverclyde, 13.5% of the pupils surveyed in the 2013 schools survey reported that they provided care, with almost 40% of them saying that they provided care every day. This figure is higher than previous estimates for Scotland<sup>3</sup>, and higher than comparable figures from Glasgow City and East Dunbartonshire<sup>1</sup>.

Many of the findings in this report add evidence to previous research around young carers – for example that they tend to be from deprived households, and are more likely to live in lone parent families.

The young carers in this report were more likely to report physical, emotional and behavioural conditions, as well as a higher total difficulties score. They were also less likely to think they would be going on to higher education after leaving school. However, once all factors were adjusted for it seemed that the presence of illness in the household had more of an association with physical and mental health, as well as emotional, behavioural and learning disabilities, than being a carer. For post-school hopes, background had the strongest association.



## References

- 1 Robison O, Inglis G, Egan J. *Young carers in Glasgow: health, wellbeing and future expectations*. Glasgow: GCPH; 2017. Available at: [http://www.gcph.co.uk/publications/721\\_young\\_carers\\_in\\_glasgow\\_health\\_wellbeing\\_and\\_future\\_expectations](http://www.gcph.co.uk/publications/721_young_carers_in_glasgow_health_wellbeing_and_future_expectations)
- 2 Traci Leven Research. *Inverclyde child and youth health and wellbeing survey 2013 main report (final version 2)*. Glasgow: NHS GGC, Inverclyde Council; 2014. Available at: <http://www.stor.scot.nhs.uk/ggc/handle/11289/579771>
- 3 Scottish Government. *Young carers: Review of research and data*. Edinburgh: The Scottish Government; 2017. Available at: <https://www.gov.scot/Publications/2017/03/2478>

## Appendix

Table A1. Physical health conditions full tables.

Physical health conditions	Step 1		Step 2		Step 3	
	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>
Male	0.67	0.58, 0.78	0.68	0.59, 0.78	0.69	0.60, 0.80
Age	1.03	0.98, 1.07	1.02	0.98, 1.07	1.02	0.98, 1.07
Relative deprivation	1.24	1.03, 1.50	1.17	0.97, 1.41	1.11	0.91, 1.34
Non-White ethnicity	1.10	0.68, 1.78	1.07	0.66, 1.74	1.08	0.66, 1.76
Living in lone parent family	1.30	1.10, 1.53	1.29	1.09, 1.52	1.30	1.10, 1.53
Carer			1.52	1.25, 1.86	1.00	0.75, 1.33
Disability in household					1.40	1.06, 1.83
Long-term illness in household					1.52	1.13, 2.05
Drug or alcohol problem in household					1.27	0.84, 1.91
Mental health problem in household					1.60	1.17, 2.17

**Table A2. Total difficulties full tables.**

	Step 1		Step 2		Step 3	
	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>
Medium/high difficulties						
Male	0.58	0.50, 0.67	0.58	0.50, 0.67	0.60	0.52, 0.70
Age	1.09	1.04, 1.14	1.09	1.04, 1.14	1.08	1.03, 1.13
Relative deprivation	1.61	1.34, 1.95	1.47	1.21, 1.78	1.36	1.11, 1.65
Non-White ethnicity	1.10	0.66, 1.82	1.06	0.63, 1.76	1.06	0.63, 1.77
Living in lone parent family	1.73	1.46, 2.04	1.71	1.44, 2.01	1.73	1.46, 2.05
Carer			1.97	1.61, 2.41	1.10	0.82, 1.48
Disability in household					1.69	1.27, 2.23
Long-term illness in household					1.11	0.81, 1.52
Drug or alcohol problem in household					3.49	2.26, 5.39
Mental health problem in household					2.15	1.57, 2.95

**Table A3. Emotional, behavioural or learning difficulty/disability tables.**

EBL	Step 1		Step 2		Step 3	
	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>
Male	1.05	0.89, 1.25	1.07	0.90, 1.27	1.12	0.94, 1.33
Age	1.01	0.96, 1.06	1.01	0.96, 1.06	1.00	0.95, 1.05
Relative deprivation	1.92	1.56, 2.36	1.73	1.40, 2.14	1.59	1.28, 1.97
Non-White ethnicity	1.06	0.59, 1.88	1.01	0.56, 1.80	1.02	0.57, 1.83
Living in lone parent family	1.24	1.02, 1.50	1.21	1.00, 1.47	1.24	1.02, 1.50
Carer			2.09	1.68, 2.60	1.11	0.81, 1.51
Disability in household					1.85	1.38, 2.47
Long-term illness in household					1.51	1.09, 2.09
Drug or alcohol problem in household					1.93	1.26, 2.96
Mental health problem in household					1.83	1.32, 2.54

**Table A4. Post-school expectations tables.**

'Something else' after school	Step 1		Step 2		Step 3	
	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>	<i>Exp(B)</i>	<i>95% CI</i>
Male	2.07	1.79, 2.4	2.07	1.79, 2.40	2.06	1.78, 2.39
Age	1.04	1.00, 1.09	1.04	1.00, 1.09	1.05	1.00, 1.09
Relative deprivation	1.44	1.19, 1.75	1.44	1.18, 1.75	1.46	1.20, 1.78
Non-White ethnicity	0.93	0.57, 1.54	0.93	0.57, 1.54	0.93	0.56, 1.54
Living in lone parent family	1.10	0.93, 1.30	1.10	0.93, 1.30	1.10	0.92, 1.30
Carer			1.03	0.83, 1.28	1.17	0.87, 1.59
Disability in household					0.86	0.65, 1.16
Long-term illness in household					0.95	0.69, 1.31
Drug or alcohol problem in household					0.96	0.61, 1.50
Mental health problem in household					0.85	0.61, 1.19