

Young carers in East Dunbartonshire

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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.

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1 Methods and approach

1.1 Background

A 2017 GCPH report¹ 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 – East Dunbartonshire, Renfrewshire, and Inverclyde – 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 2014 East Dunbartonshire survey². The survey data from 2,907 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 2014 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^a 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 report¹.

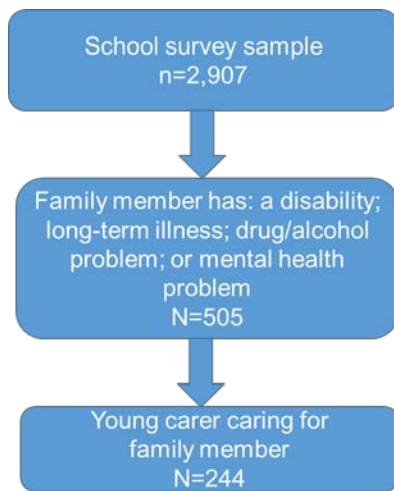
1.4 Sampling

The survey involved the participation of first to sixth year pupils (age range 11-18) from across East Dunbartonshire schools, with 2,907 pupils taking part – nearly 50% of the S1-S6 roll from the participating schools (for more detailed methodology please see the original East Dunbartonshire report²).

In Stage 1 of the analysis the full pupil sample (2,907) was used (see Figure 1). Of the full sample, 505 had a family member with one or more conditions, and of these pupils, 244 provided care (8.4% overall).

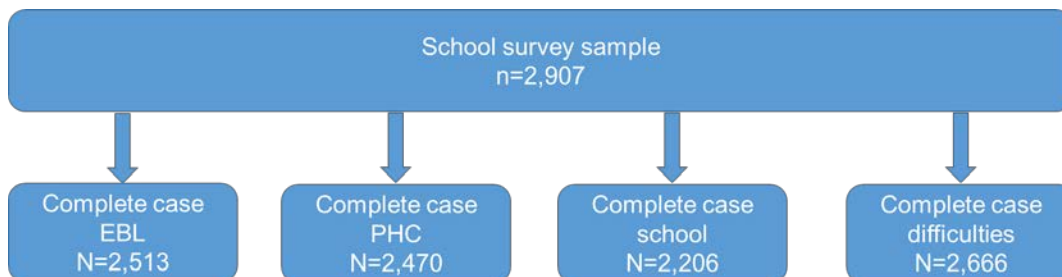
^a The full tables for the second part of the analysis can be found in the Appendix.

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?^b

2.1 Prevalence of young carers

Overall, 8.4% (N=244) of the school pupils reported that they looked after or cared for a household family member. In terms of level of care, 35.4% looked after them 'every day'; 33.8% 'a couple of times a week'; and 30.8% looked after them 'once in a while'.

Just under half of these carers (47.7%) cared for someone with a disability; around two-fifths (39.2%) for someone with a long-term condition; over a quarter (27.8%) for someone with a mental health problem; and just over a seventh (14.8%) for someone with a drug or alcohol problem^c.

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 several differences. Just over half of the young carers were female (55.3%) compared with 48.3% overall. Just under a tenth (9.8%) of young carers were identified as Black and Minority Ethnic (BME), slightly higher than the overall BME percentage (8.9%) within the survey sample. A breakdown of the demographics of the carers versus the overall sample is shown in Table 1.

^b Please note that not all reports show the exact same findings, as surveys differed slightly.

^c 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=244)	Overall % (N=2,907)
Gender	Male	44.7	51.7
	Female	55.3	48.3
Ethnicity	BME	9.8	8.9
Free school meals	Registered	14.3	5.8
Lone parent family		28.3	20.9
Age	11	2.9	3.8
	12	11.5	16.8
	13	15.2	17.2
	14	18.1	17.5
	15	23.9	17.7
	16	14.8	16.0
	17	13.2	10.9
	18	0.4	0.1

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 East Dunbartonshire have an identical question to those asked in Inverclyde 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
Inverclyde	14	3,606	2013	35.0
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 (14.3% and 5.0% 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 (28.3% versus 20.3%).

Young carers were less likely than non-carers to have eaten breakfast on the morning of the survey (57.0% versus 77.4%). 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.

Just over a seventh of the young carers reported that they had a limiting illness or disability, higher than the level of non-carers (14.8% versus 9.1%).

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 – dyslexia (7.9% versus 5.3%), attention deficit hyperactivity disorder (3.1% versus 0.8%), and slightly higher for mental health / emotional illness (3.1% versus 2.5%).

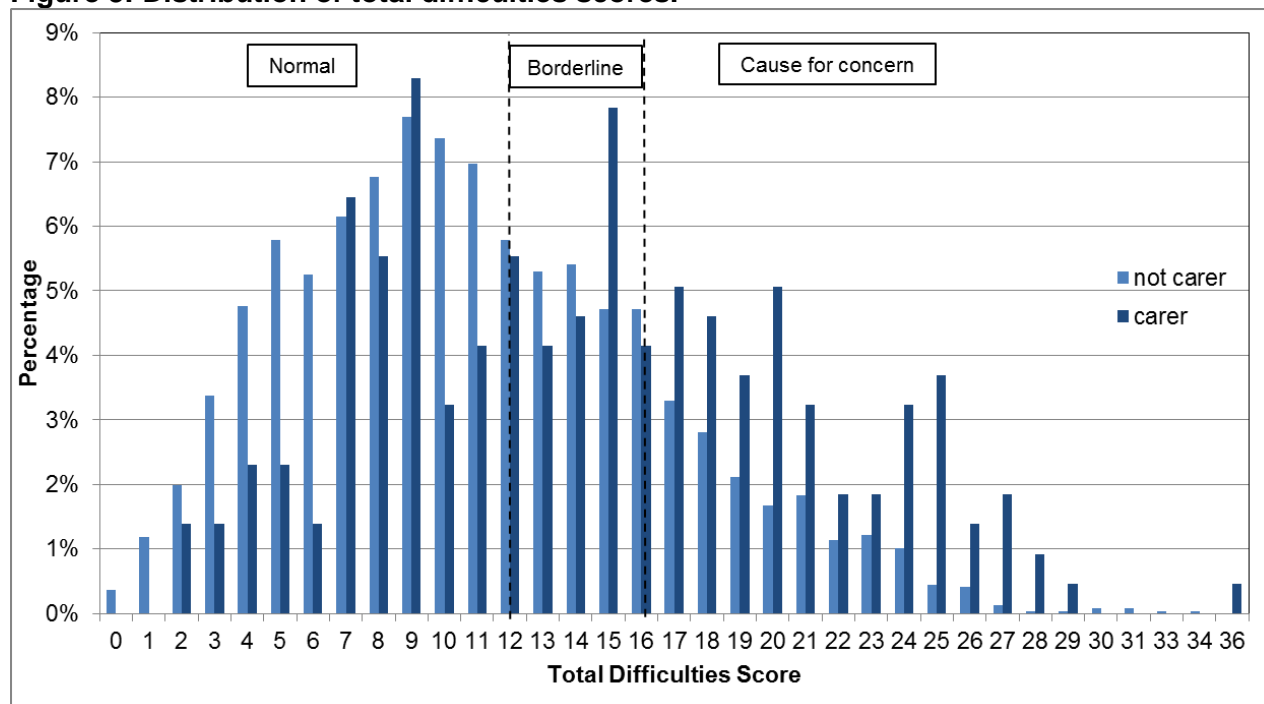
Young carers were also more likely than non-carers to report that they had certain physical health conditions, such as asthma (19.0% versus 12.5%), eczema or psoriasis (11.3% versus 9.6%), arthritis/painful joints (7.7% versus 1.9%), or stomach or digestion problems (8.1% versus 2.4%).

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 3, 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 (39.0% versus 27.5%), the way they look (47.7% versus 35.8%), getting a job (38.6% versus 28.5%), being bullied (16.6% versus 10.7%), and relationships with parents/carers (24.9% versus 12.4%). 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 (29.0% versus 17.2%), somewhere else (13.2% versus 6.7%), and online (17.0% versus 7.4%).

2.5 Cultural and social activities

In terms of the community services they had visited within the last year, carers were slightly more likely to have visited a community centre (20.3% versus 15.7%), but less likely to have visited a sports centre (72.9% versus 82.1%) or museum (47.0% versus 53.6%).

There were few differences between carers and non-carers in terms of the cultural activities they had undertaken over the last year.

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 (52.8% versus 60.8%), with carers slightly more likely to think they would be working (15.4% versus 13.3%), or at further education college (9.8% versus 7.0%).

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.

Just under half of the young carers said that “it makes me feel good to be able to help” (48.1%) and almost a third said that they had learned new skills through caring (28.8%). However almost a third said that it makes them tired (29.2%) and just under a quarter reported that it meant they were sometimes unable to do homework (23.6%).

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^d. 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 hierarchical logistic 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.

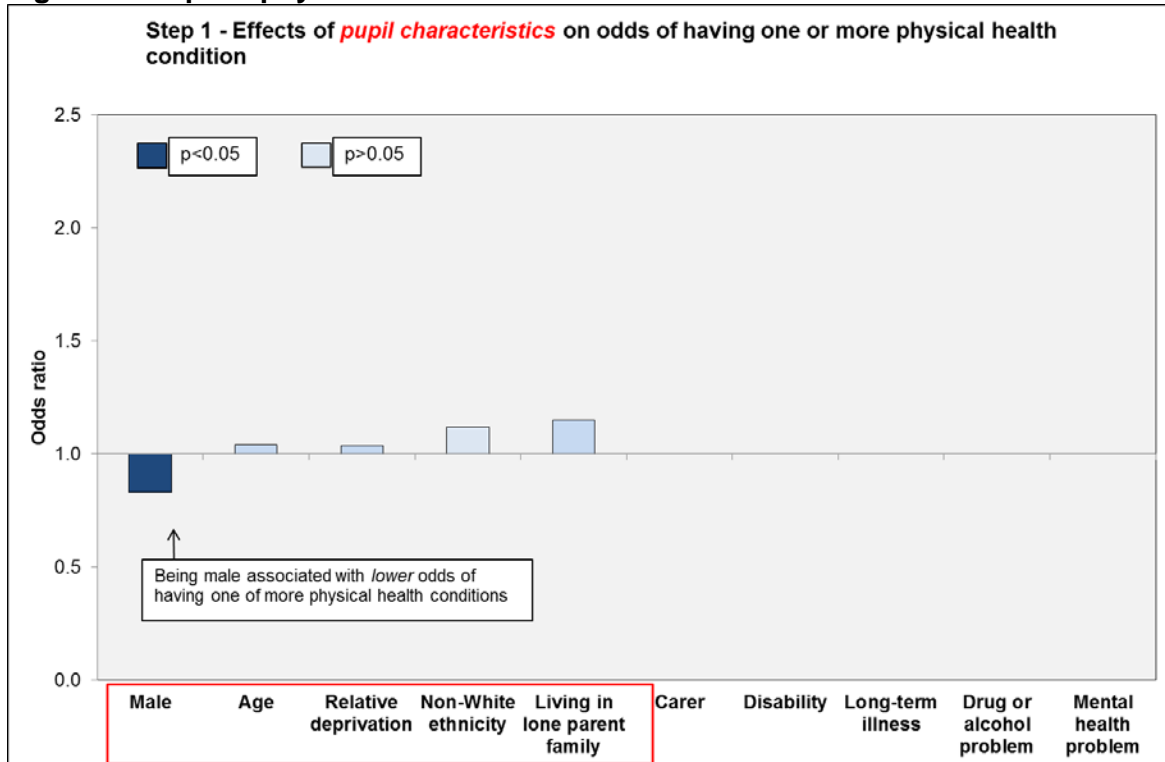
The graphs show the odds ratio on the vertical y-axis, with bars for each variable included. Bars with a score less than 1 indicate a negative association, and bars with a score more than 1 indicate a positive association.

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.

^d 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.

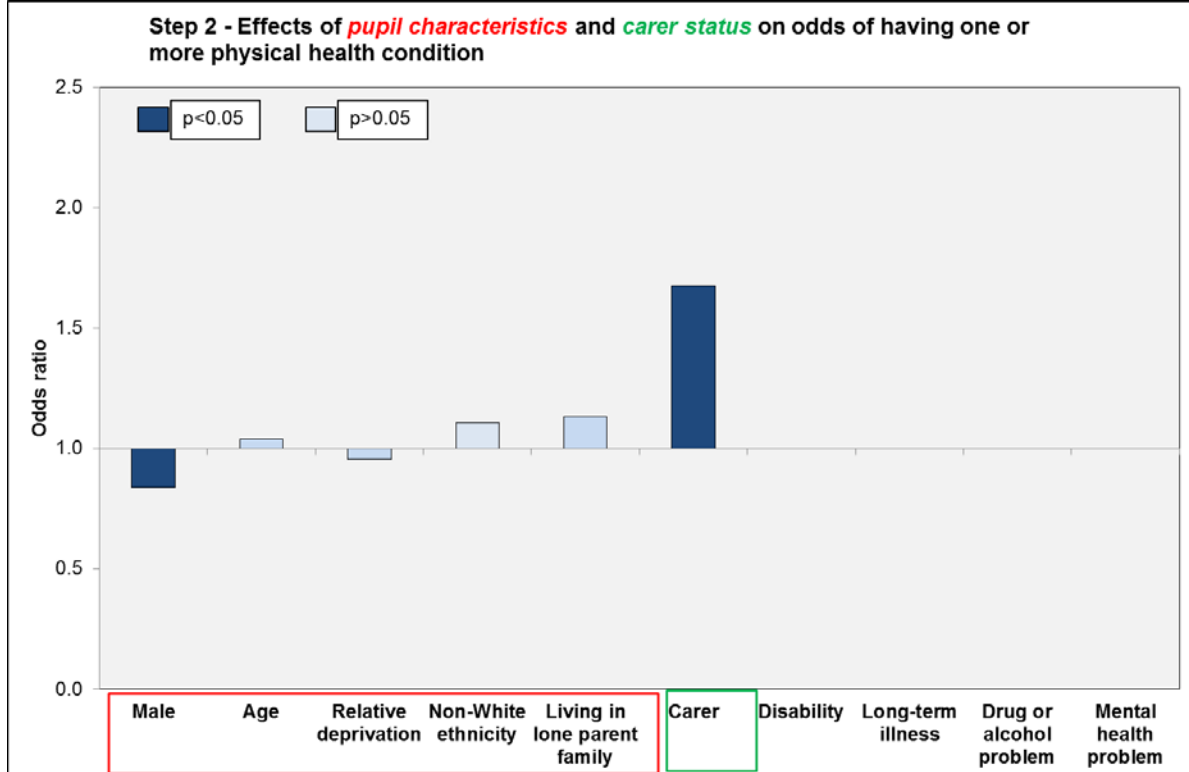
In step 1, as can be seen in Figure 4, only pupils' gender was significantly associated with the reporting of a physical health condition, with males less likely to report a physical health condition.

Figure 4: Step 1 – physical health conditions.



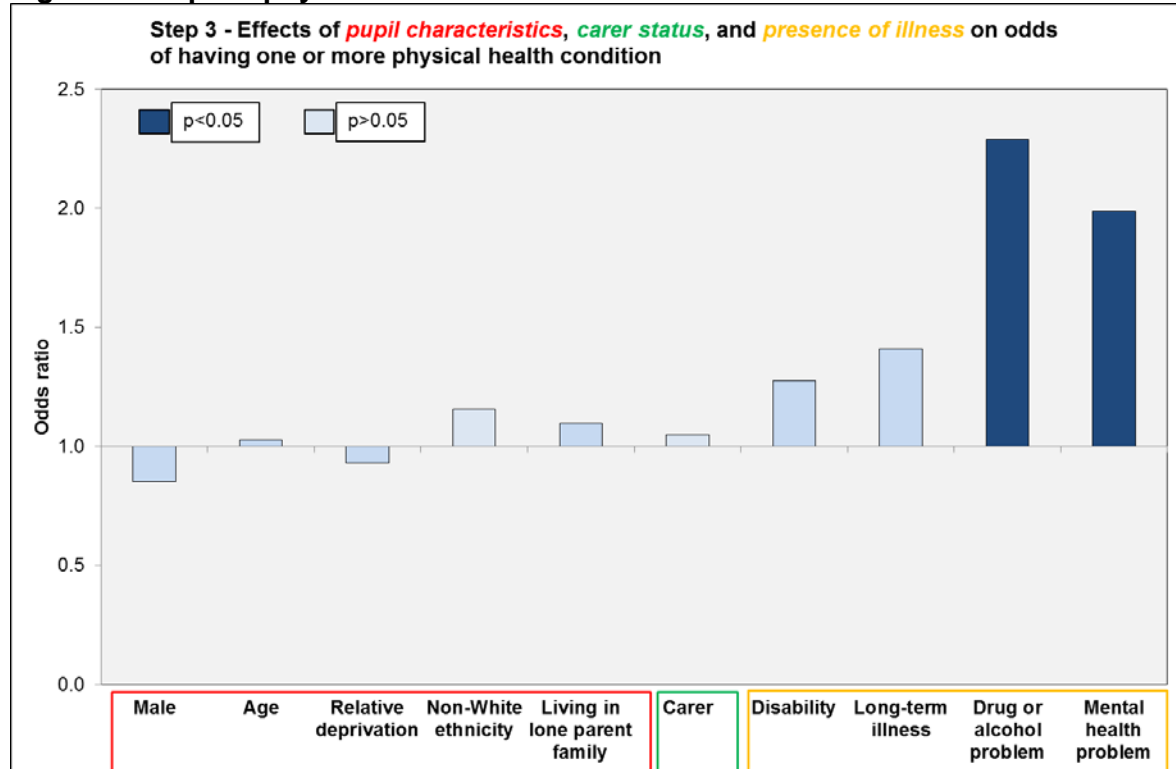
As can be seen in Figure 5, pupil gender remained significant with the introduction of carer status in the second model. Being a carer had a strong and significant association with reporting one or more physical health conditions, with an odds ratio of 1.68 – carers were 68% more likely to report one 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 were introduced. As can be seen in Figure 6, carer status becomes insignificant. Of the presence of illness variables, two were significant, indicating that living with a family member with a drug or alcohol problem 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.



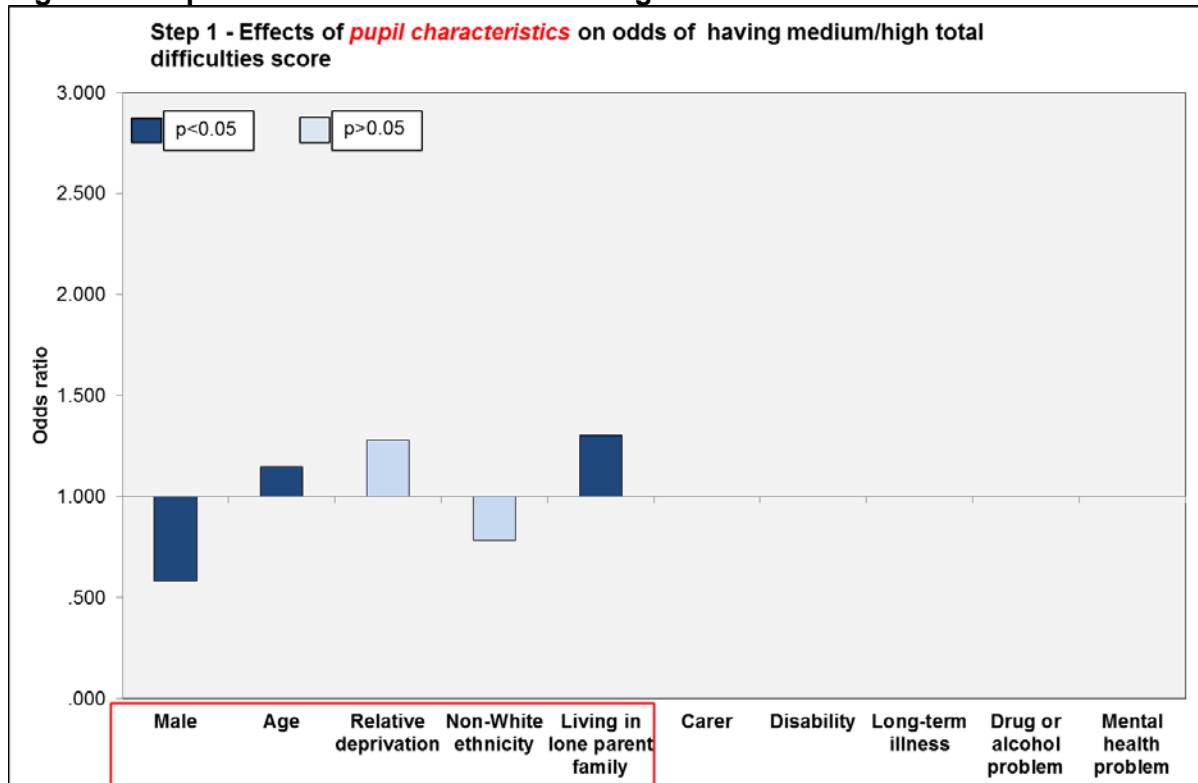
These findings suggest that the reporting of one or more physical conditions is associated with the presence of a drug or alcohol problem or a mental health problem in the household.

3.2 Mental health and wellbeing

In the first section of the findings we found that the distribution 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.

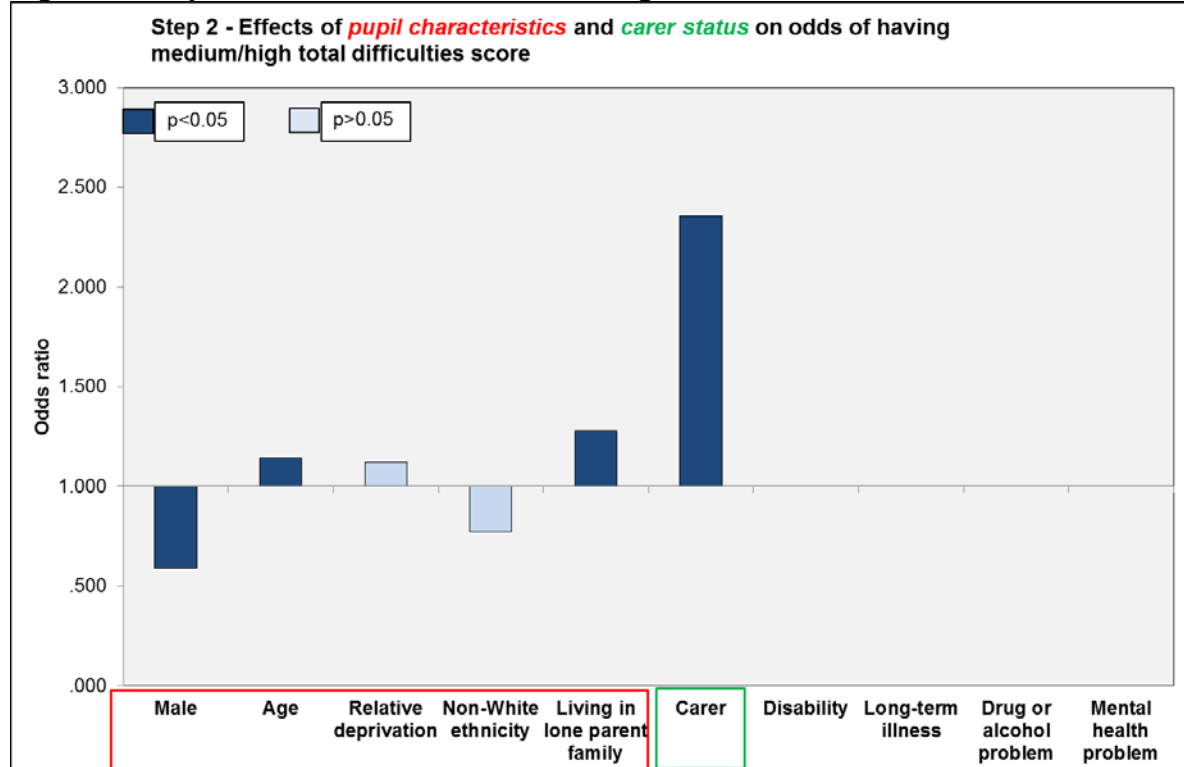
As can be seen in Figure 7, the first step of the model showed that gender, age, and living in a lone parent family all had a significant association with whether a pupil had a high difficulties score. Not having a medium/high difficulties score was associated with being male, while having a medium/high difficulties score was associated with age and living in a lone parent family.

Figure 7: Step 1 – mental health and wellbeing.



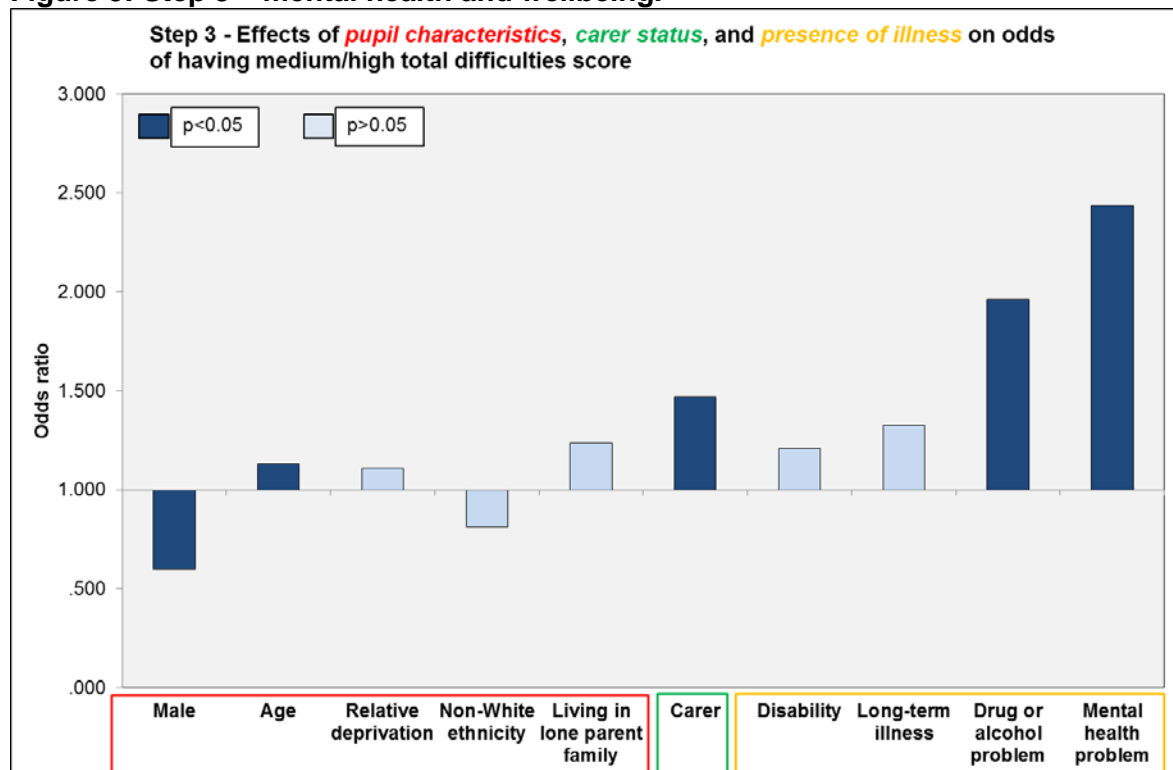
The next step was to add the young carer status into this model. As can be seen in Figure 8, this also had a significant association with whether a pupil had a medium/high difficulties score. It showed that those who were carers were more likely to have a medium/high difficulties score than those who 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, the association of carer status became less strong, but remained significant, as can be seen in Figure 9. Two of the four of the types of illness/condition were also significantly associated with a having a medium/high difficulties score, indicating that having a family member with a drug or alcohol problem or a mental health condition had an association with having a medium/high total difficulties score, over and above background and carer status.

Figure 9: Step 3 – mental health and wellbeing.



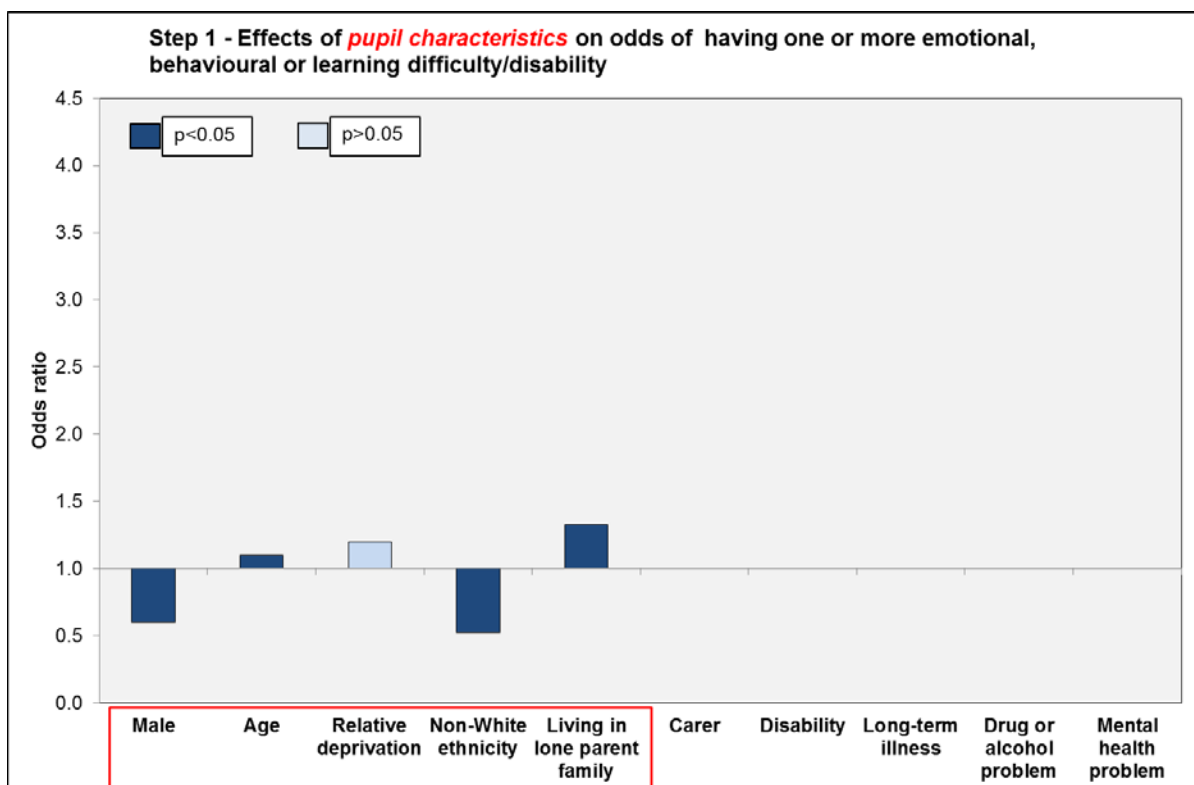
In terms of the young carer's mental health and wellbeing, it seems that although being a carer does impact on having a medium/high difficulties score, the presence of illness, in terms of having a family member with a drug or alcohol problem or a mental health condition, has the biggest association 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^e. 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 10, some pupil background factors had a significant association with EBL. Older pupils, and those in lone parent families were more likely to report one or more emotional, behavioural or learning difficulties/disabilities, whereas those who were male or of a non-White ethnicity were less likely to report this.

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



^e 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.

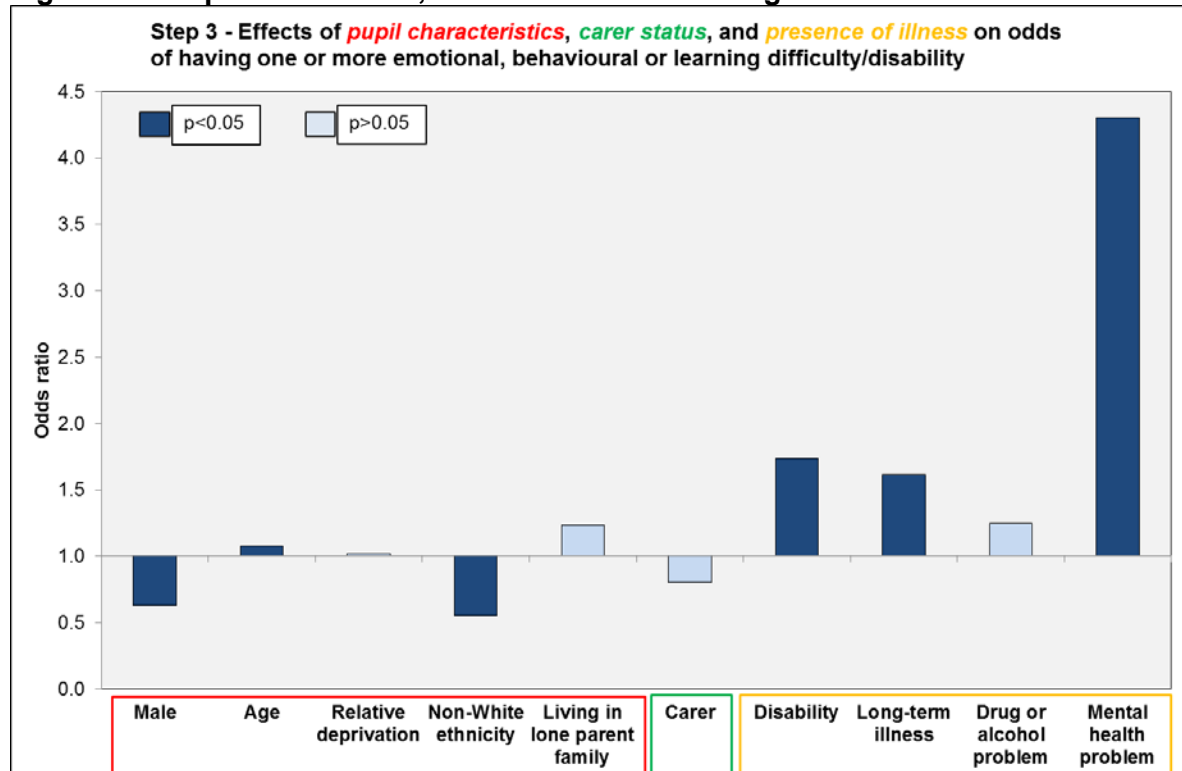
When carer status was added in at step 2, it was strong and significantly associated with the reporting of EBL, as can be seen in Figure 11. Carers were almost twice as likely as non-carers to report emotional, behavioural or learning difficulties/disabilities.

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



At step 3, when all four illness variables were added into the model, carer status became insignificant, as can be seen in Figure 12. Three of the four 'presence of illness' variables were significant, with the presence of a mental health problem in the household having a particularly strong association with the likelihood of the pupil reporting one or more emotional, behavioural or learning difficulties/disabilities.

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



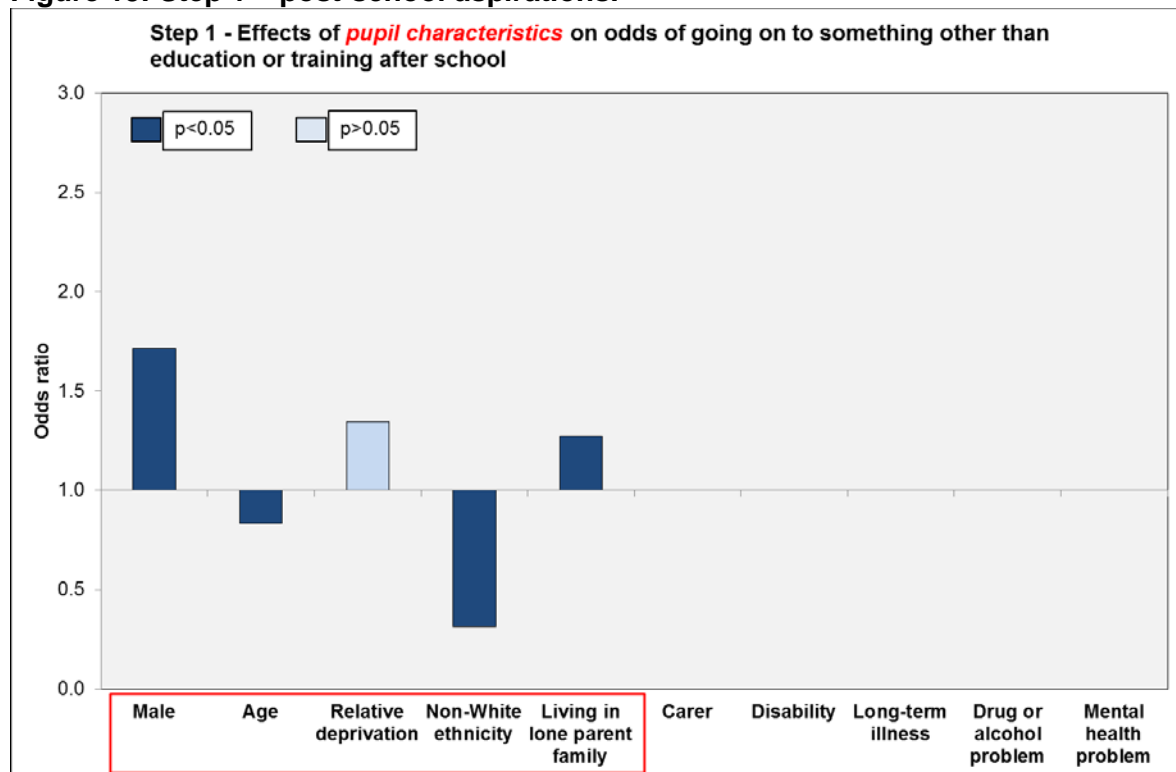
These findings suggest that the reporting of emotional, behavioural or learning difficulties/disabilities is associated with the presence of family illness, over and above background factors.

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^f 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 clearly that most of the factors have a significant association with future aspiration – for example boys were more likely than girls to think they will be doing 'something else', as were those living in a lone parent family, as can be seen in Figure 13. Younger pupils and those of a non-White ethnicity were less likely to think they would be doing 'something else'.

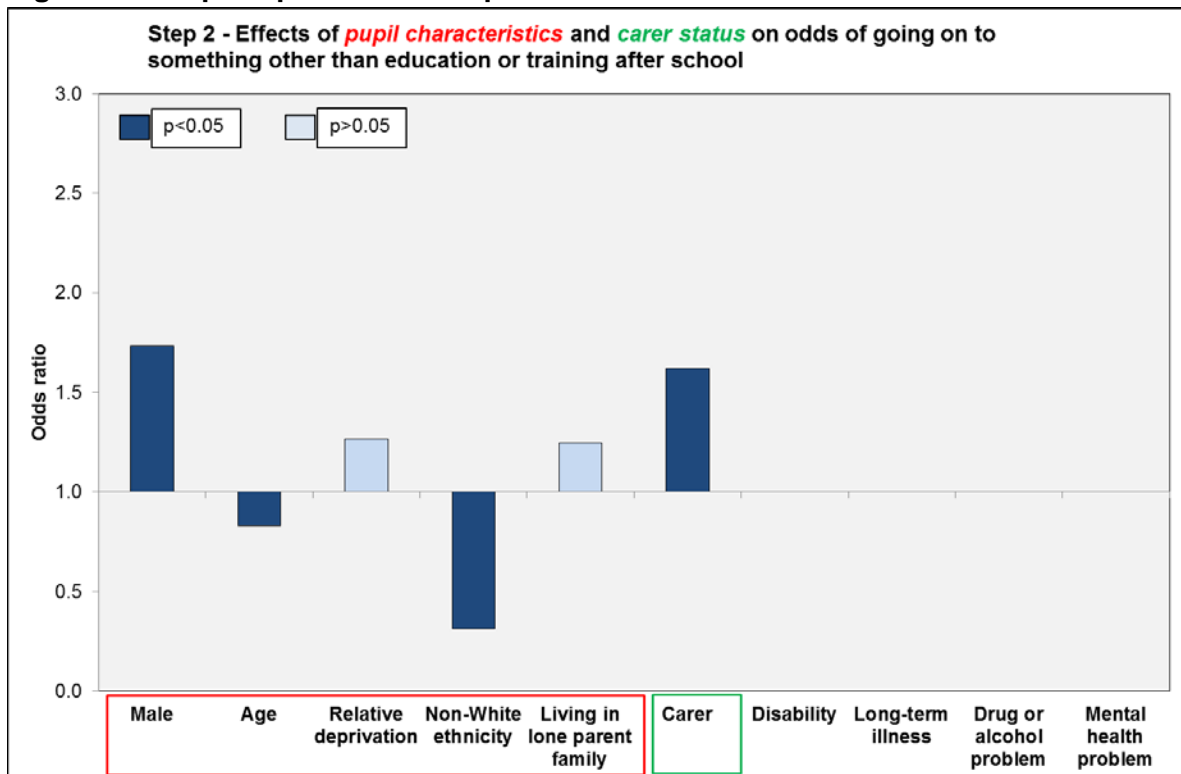
Figure 13: Step 1 – post-school aspirations.



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

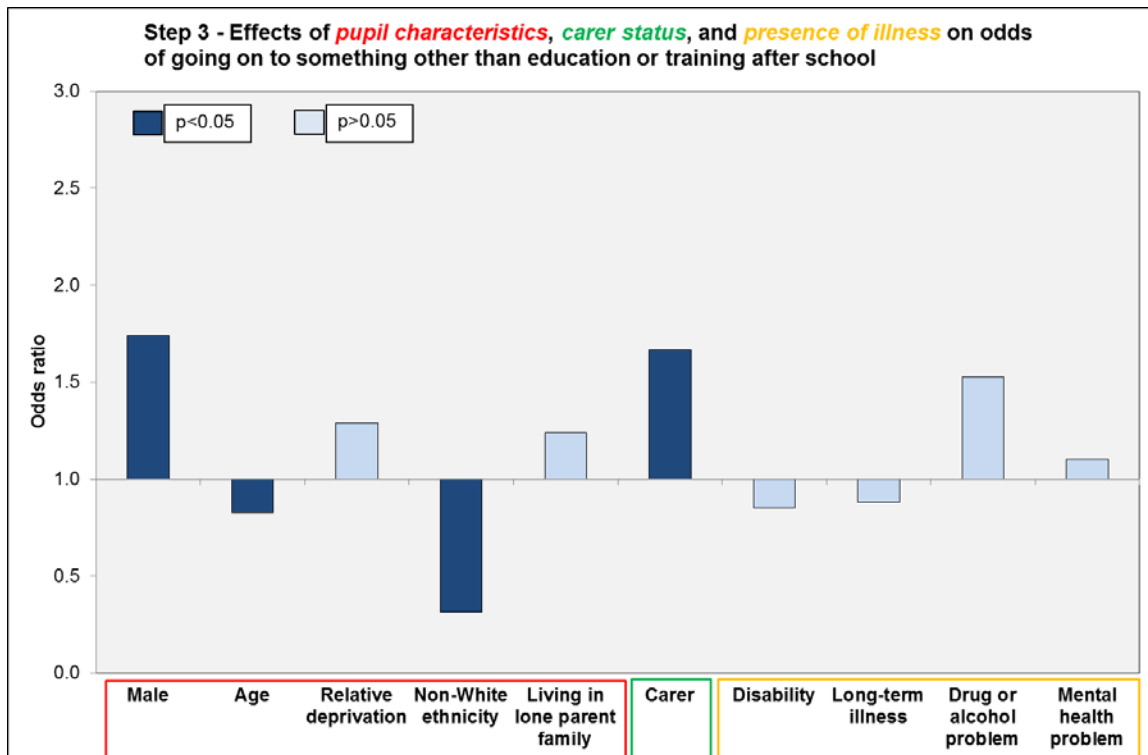
As can be seen in Figure 14, the addition of carer status had a significant association, indicating that carers were more likely to see themselves going on to 'something else' after school, even accounting for background factors.

Figure 14: Step 2 – post-school aspirations.



The addition of all four types of family illness had little impact on either the background or carer variables, as can be seen in Figure 15. The presence of illness coefficients were themselves not significant, suggesting that the presence of illness did 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 carer status that has an association with future aspirations, rather than the presence of illness in the household.

4 Summary

Overall, 8.4% of the pupils surveyed in the 2014 East Dunbartonshire schools' survey reported that they were providing care. This figure is higher than previous estimates for Scotland³, but slightly lower than comparable figures from Glasgow City and Renfrewshire¹.

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. In the further analysis, once all factors were accounted for, reporting of both physical and emotional health conditions were not significantly associated with being a carer, but were associated with presence of illness, particularly drug and alcohol problems and mental health problems. Having a high total difficulties score was associated with both being a carer and the presence of illness, again particularly drug and alcohol problems and mental health problems. Post school expectations of not going on to further or higher education were associated with being a carer, as well as background factors.

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
- 2 Traci Leven Research. *East Dunbartonshire Schools Health and Wellbeing Survey 2014/15*. Glasgow: NHS GGC, East Dunbartonshire Council; 2016. Available at: http://www.nhsggc.org.uk/media/237007/nhsggc_ph_east_dunbartonshire_schools_health_wellbeing_survey_2014-15.pdf
- 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	0.83	0.70, 0.99	0.84	0.71, 1.00	0.85	0.72, 1.01
Age	1.04	0.99, 1.10	1.04	1.04, 1.09	1.03	0.98, 1.08
Relative deprivation	1.04	0.72, 1.50	0.96	0.96, 1.39	0.93	0.64, 1.36
Non-White ethnicity	1.12	0.84, 1.50	1.11	1.11, 1.48	1.16	0.86, 1.55
Living in lone parent family	1.15	0.93, 1.42	1.13	1.13, 1.40	1.10	0.89, 1.36
Carer			1.68	1.26, 2.24	1.05	0.71, 1.54
Disability in household					1.28	0.88, 1.85
Long-term illness in household					1.41	0.98, 2.02
Drug or alcohol problem in household					2.29	1.40, 3.75
Mental health problem in household					1.99	1.36, 2.90

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>
High difficulties						
Male	0.58	0.48, 0.69	0.59	0.49, 0.70	0.60	0.50, 0.72
Age	1.15	1.09, 1.21	1.14	1.08, 1.20	1.13	1.07, 1.19
Relative deprivation	1.28	0.89, 1.85	1.12	0.77, 1.63	1.11	0.76, 1.62
Non-White ethnicity	0.78	0.56, 1.09	0.77	0.56, 1.08	0.81	0.58, 1.13
Living in lone parent family	1.30	1.05, 1.62	1.28	1.03, 1.58	1.23	0.99, 1.54
Carer			2.36	1.78, 3.12	1.47	1.01, 2.13
Disability in household					1.21	0.84, 1.75
Long-term illness in household					1.32	0.92, 1.91
Drug or alcohol problem in household					1.96	1.23, 3.14
Mental health problem in household					2.44	1.70, 3.49

Table A3. Emotional, behavioural and learning difficulties/disabilities full 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	0.60	0.47, 0.75	0.61	0.48, 0.77	0.63	0.50, 0.80
Age	1.10	1.03, 1.18	1.10	1.10, 1.17	1.08	1.00, 1.15
Relative deprivation	1.20	0.76, 1.90	1.09	1.09, 1.73	1.02	0.63, 1.65
Non-White ethnicity	0.52	0.32, 0.86	0.52	0.52, 0.85	0.55	0.33, 0.92
Living in lone parent family	1.32	1.01, 1.73	1.30	1.30, 1.70	1.24	0.94, 1.63
Carer			1.87	1.87, 2.64	0.80	0.51, 1.27
Disability in household					1.74	1.13, 2.68
Long-term illness in household					1.61	1.04, 2.49
Drug or alcohol problem in household					1.25	0.68, 2.27
Mental health problem in household					4.30	2.91, 6.35

Table A4. Post-school expectations 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>
After school						
Male	1.72	1.40, 2.10	1.73	1.42, 2.12	1.74	1.42, 2.13
Age	0.83	0.78, 0.88	0.83	0.83, 0.88	0.83	0.78, 0.88
Relative deprivation	1.35	0.89, 2.04	1.27	1.27, 1.92	1.29	0.85, 1.96
Non-White ethnicity	0.31	0.20, 0.50	0.31	0.31, 0.50	0.32	0.20, 0.50
Living in lone parent family	1.27	1.00, 1.62	1.25	1.25, 1.59	1.24	0.97, 1.58
Carer			1.62	1.62, 2.26	1.67	1.07, 2.59
Disability in household					0.85	0.55, 1.3
Long-term illness in household					0.88	0.57, 1.38
Drug or alcohol problem in household					1.53	0.90, 2.61
Mental health problem in household					1.10	0.71, 1.72