## Young carers in Renfrewshire

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

## Contact

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## 1 Methods and approach

## 1.1 Background

A 2017 GCPH report<sup>1</sup> looked at outcomes for young carers in Glasgow City. This report is one of a series of follow up reports for three other local authorities – Renfrewshire, East Dunbartonshire, 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 2013 Renfrewshire survey<sup>2</sup>. The survey data of 5,600 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 hopes 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. Hopes after leaving school were measured using pupil responses on their post-school hopes, 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; year; deprivation (whether the pupil was in a 'most deprived school'); 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.

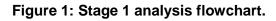
Logistic regression is a statistical technique used to calculate the probability that a person will be in one of two groups – in this case, either having reported: one or more physical health conditions or not; a medium/high difficulties score or not; one or more emotional, behavioural or learning difficulties/disabilities or not; and the hope 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>.

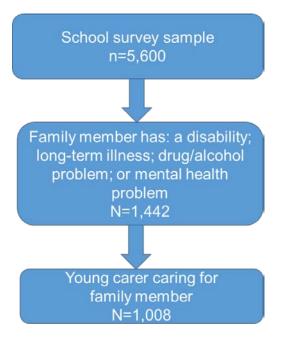
## 1.4 Sampling

The Renfrewshire survey involved the participation of first to sixth year pupils across 11 secondary school, one special educational needs school and two alternative provision units (for more info on survey methodology please see the original Renfrewshire survey report<sup>2</sup>).

In Stage 1 of the analysis the full pupil sample (5,600) was used (see Figure 1). Of the full sample, 1,442 had a family member with one or more conditions, and of these pupils, 1,008 provided care. It should be noted that the question around caring in the Renfrewshire questionnaire differs from the one used in Glasgow City, East Dunbartonshire and Inverclyde, and asks *"Do you ever do anything to help this person, for example, looking after brothers or sisters, shopping, cooking or housework?"* as opposed to *"Do you ever look after or care for this person or others in your household?"*. Therefore, care should be taken when comparing results from Renfrewshire to any other local authority.

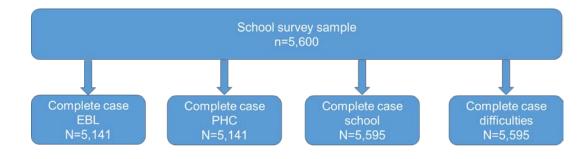
<sup>&</sup>lt;sup>a</sup> The full tables for the second part of the analysis can be found in the Appendix.





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, 19.0% (N=1,008) of the school pupils reported that they looked after or cared for a household family member. In terms of level of care, 90.8% of carers looked after the family member for up to six hours a day, with 6.1% looking after them for between 6 and 12 hours. Young carers were also asked how many hours a week they provided care for, with the majority (92.5%) saying they provided between 1 and 24 hours a week, and 5.2% saying it was between 24 and 48 hours per week.

Over half of these carers (56.7%) cared for someone with a disability; over two fifths (42.4%) for someone with a long-term condition; over a quarter (25.3%) for someone with a mental health problem; and over a seventh (14.3%) 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 that girls were more likely to be carers than in the overall sample (57.4% versus 52.3%), and that carers were more likely to be in a lone parent family than the overall sample (28.0% versus 23.9%). A breakdown of the demographics of the carers and non-carers is shown in Table 1.

Charact	eristic	Carer % (N=1,008)	Overall % (N=5,600)
Gender	Male	42.6	47.7
Gender	Female	57.4	52.3
Ethnicity	BME	4.1	3.7
Deprived school	Most deprived	11.6	10.7
Lone pare	nt family	28.0	23.9
Year	S1	14.7	16.5
	S2	15.6	17.6
	S3	20.0	18.1
	S4	20.2	18.1
	S5	16.9	18.3
	S6	12.7	11.4

### Table 1. Demographic breakdown of pupils.

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

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

<sup>&</sup>lt;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.

compare the prevalence of young carers. As mentioned previously, the Renfrewshire survey asks a slightly different question from the other local authorities, 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.

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

Table 2. Carer figures	from other local authori	ities across NHS GGC.

## 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.

The Renfrewshire survey did not ask about individual pupil free school meal registration – 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 at an individual and area level. However, pupils are categorised as being within the 'least deprived' or 'most deprived' schools within the survey, with 11.0% in the 'most deprived', and 89.0% in the 'least deprived'. There is little difference between carers and non-carers in this measure (11.6% versus 10.5%).

Young carers were more likely than their non-carer counterparts to live with just one parent (28.0% versus 22.9%). Young carers were also more likely than non-carers not to have eaten breakfast on the morning of the survey (25.7% versus 19.3%).

## 2.3 Physical health

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

Self-reported health over the last year was lower among carers than non-carers. Self-reported health over the last year was recorded as one of five faces, with the happiest face being coded as a 1 and the saddest face coded as a 5. In general, young carers felt slightly worse about their health over the last year than non-carers, with two and a half times as many saying they felt their health over the last year was a 4 or 5 (8.3% versus 3.3%).

Young carers were also more likely than non-carers to report that they had a physical health condition (38.4% versus 25.6%). Young carers were more likely to have some specific conditions, such as asthma (23.4% versus 13.4%), eczema (10.2% versus 8.1%), or painful joints (10.9% versus 5.8%).

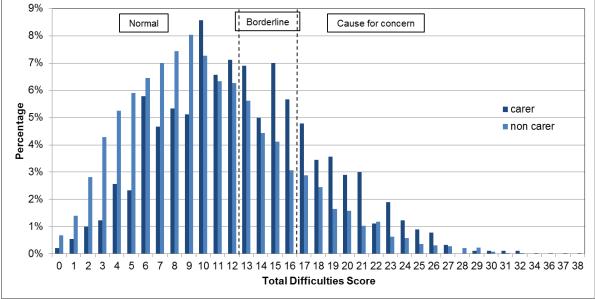
In general young carers were more likely to report that they had any emotional, behavioural or learning difficulties/disabilities (15% versus 9.7%). Young carers were almost twice as likely to report having dyslexia (8.4% versus 4.8%), as well as more than twice as likely to report having attention deficit hyperactivity disorder (4.5% versus 1.8%), and learning difficulties (5.9% versus 2.9%).

Almost half of the young carers who had reported having a medical condition said that it limits what they can do, higher than the level of non-carers who reported a condition (46.0% versus 30.9%).

## 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 3, the distribution of total difficulties scores shows that carers were more likely to be borderline or cause for concern.





Young carers were more likely than non-carers to worry about things, including school (51.3% versus 39.9%), the way they look (55.4% versus 44.4%), family rows (38.5% versus 23.1%), and money problems (41.3% versus 29.5%).

## 2.5 Cultural and social activities

Overall, there were few differences between carers and non-carers in terms of the community services they had visited within the last year, however carers were slightly more likely to have visited a community centre (34.9% versus 27.0%) or a library (60.7% versus 55.4%).

Over the past year, young carers were slightly more likely to have undertaken volunteer work (34.8% versus 29.0%), taken part in a charity event (44.1% versus 37.1%), and taken part in a drama/acting/singing group (21.1% versus 17.4%).

## 2.6 Education and employment

There were very few differences between what carers and non-carers hoped they would be doing after school, with around 7 in 10 hoping to go to further education/college/university, and just over 1 in 10 hoping to get a job.

## 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<sup>d</sup>.

Over a quarter said that it makes them stressed (28.4%), just over a quarter said it makes them tired (26.3%) and that it meant they were sometimes unable to do their homework (23.3%).

<sup>&</sup>lt;sup>d</sup> Unlike the other local authority surveys, the Renfrewshire survey did not give the options: "it makes me feel good to be able to help" or "I have learned new skills through caring".

# 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>e</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.

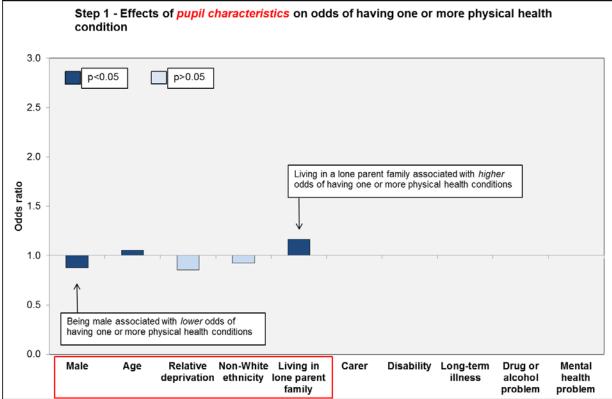
In order to look at whether these differences persist when the pupil's background and the presence of family illness in the household were controlled for, a hierarchical logistic regression model was constructed. The results can be seen below. As this was a binary outcome, a logistic regression analysis 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.

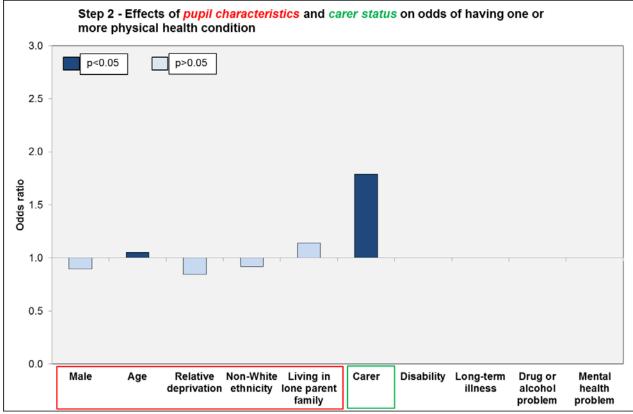
<sup>&</sup>lt;sup>e</sup> The conditions were: asthma; diabetes; eczema; epilepsy; painful joints; physical disability; other. Please note this variable is based on a different question to the other physical health variables for other local authority analysis.

In step 1, as can be seen in Figure 4, pupils' gender, age (represented by school year), 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, and those in lone parent families were more likely to report a physical health condition.



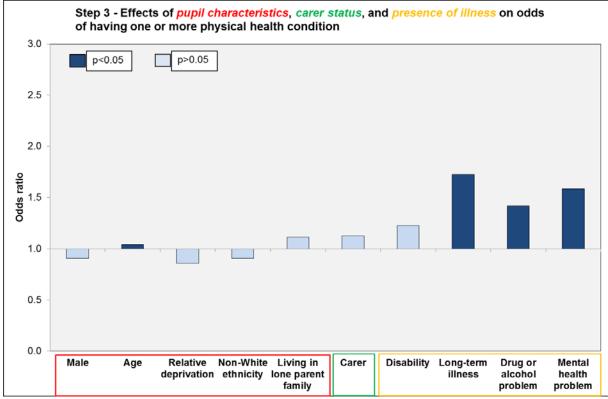
#### Figure 4: Step 1 – physical health conditions.

As can be seen in Figure 5, out of all the pupils' background factors, only age 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 1.78 – carers were 78% 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 6, when they are introduced, carer status became insignificant. Of the presence of illness variables, all were significant except disability. In other words, those living with a family member with a long-term illness, mental health problem, or drug or alcohol problem were all more likely to report physical health conditions, over and above background factors.



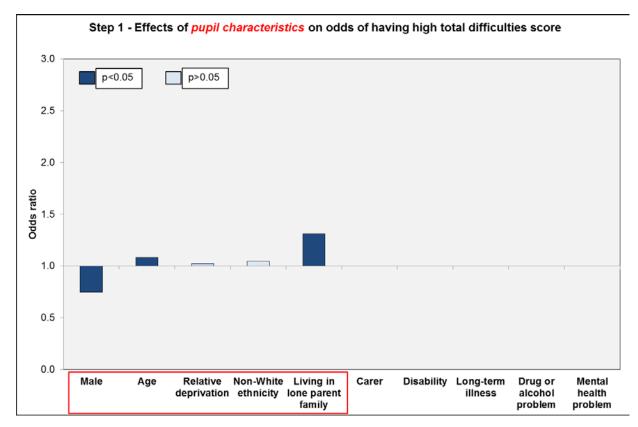
#### Figure 6: Step 3 – physical health conditions.

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

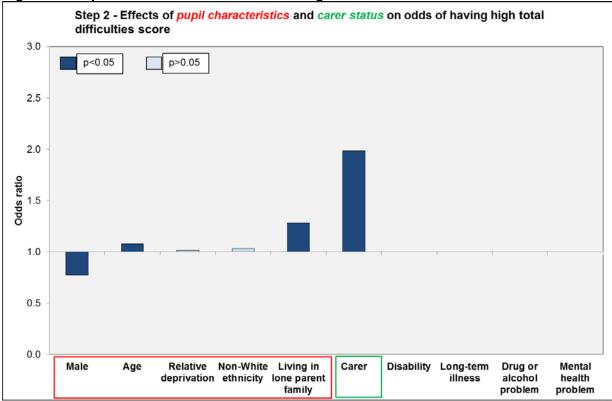
In the first section of the findings we found that the total difficulties scores for carers and non-carers differed, with carers tending to have a higher score, suggesting that young carers have poorer mental health and wellbeing than non-carers.

As can be seen in Figure 7, the first step of the model showed that gender, age, and 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 and living in a lone parent family.



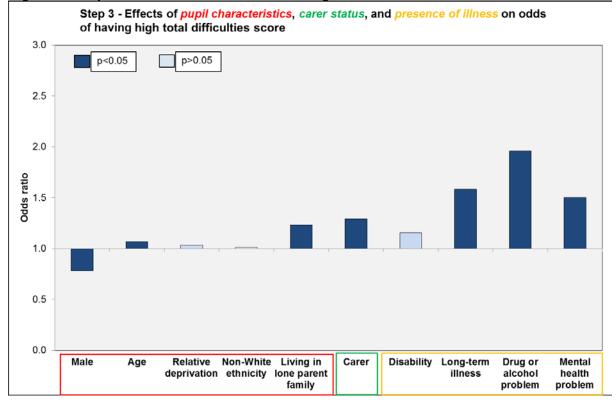
#### Figure 7: Step 1 – mental health and wellbeing.

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, caring status became less strong, but remained significant, as can be seen in Figure 9. Three of the four of the types of illness/condition were also significantly associated with a having a medium/high difficulties score, indicating that both carer status and presence of illness was associated with poorer mental health over and above background factors. In particular, having a family member with a drug or alcohol problem had a strong association with having a medium/high total difficulties score.



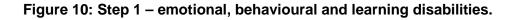
#### Figure 9: Step 3 – mental health and wellbeing.

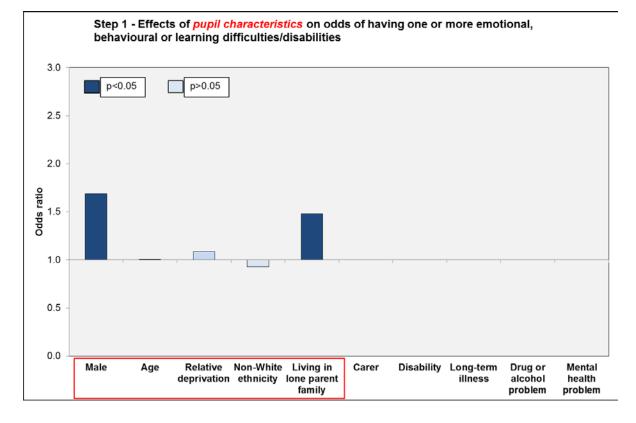
In terms of young carers' mental health and wellbeing, it seems that being a carer does have a significant association with having a medium/high difficulties score. However, the presence of illness, particularly having a family member with a drug or alcohol problem has the biggest association with having 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>f</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.

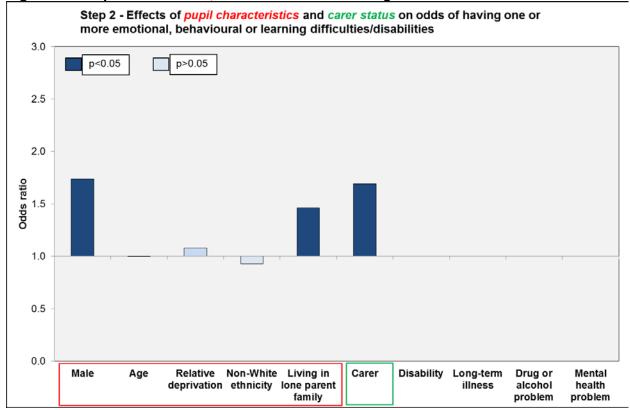
As can be seen in Figure 10, some pupil background factors had a significant association with EBL. Those pupils who were male were more likely to report emotional, behavioural or learning difficulties/disabilities, as were those in lone parent families.





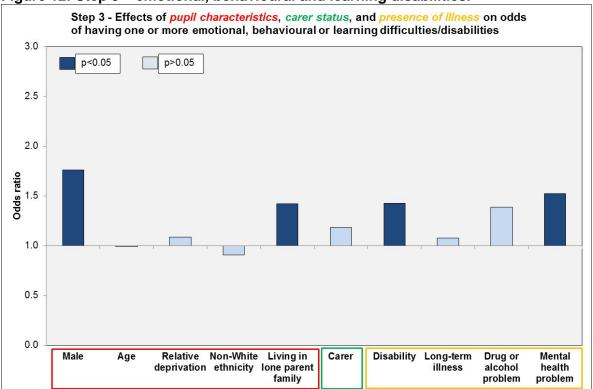
<sup>&</sup>lt;sup>f</sup> The conditions were: dyslexia; attention deficit hyperactivity disorder; autism/ASD learning difficulties; other. Please note that this variable is based on a different question to the other EBL variables for other local authority analysis.

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 more than 50% more likely than non-carers to report emotional, behavioural or learning difficulties/disabilities.





At step 3, when all four illness variables were added into the model, carers' status became insignificant, as can be seen in Figure 12. Of the presence of illness variables, disability and mental health problem were significant.



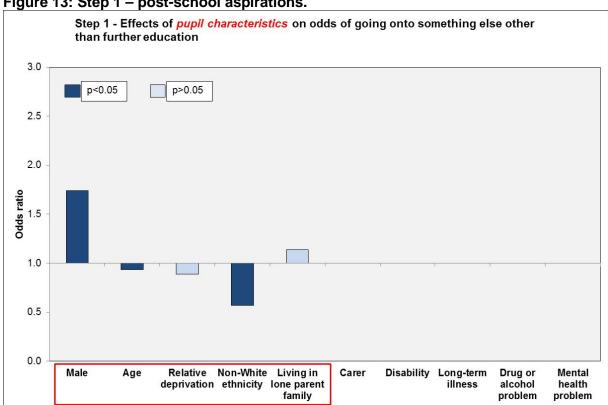


These findings suggest that the reporting of emotional, behavioural or learning difficulties/disabilities is associated with the presence of some types of family illness, over and above background factors.

#### 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 options offered to pupils in the school survey question<sup>9</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.

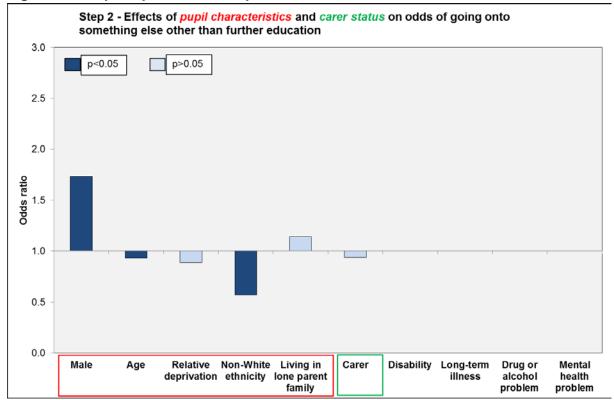
The first step in this model controlled only for background factors. It shows clearly that some of the factors had a significant association with future aspiration - for example boys were almost twice as likely as girls to think they will be doing 'something else', as can be seen in Figure 13. Younger pupils and non-White pupils were less likely to think they would be doing 'something else'.



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

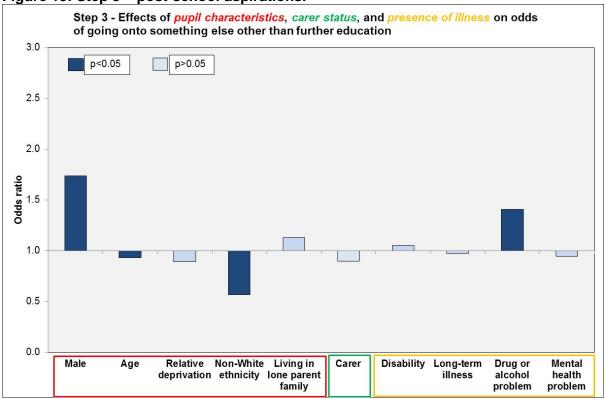
<sup>&</sup>lt;sup>9</sup> The options in the original question were: go to further education/college/university; take a gap year; obtain training or join a training scheme; get a job; don't know. Please note this variable is based on a different question to the other post-school aspirations variables for other local authority analysis.

As can be seen in Figure 14, 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 types of family illness had little impact on either the background or carer variables, as can be seen in Figure 15. Apart from 'drug or alcohol problem', 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 background factors, especially gender and ethnicity that have an association with future aspirations, as well as the presence of drug or alcohol problems in the household.

## 4 Summary

In Renfrewshire, almost a fifth (19%) of the pupils in the 2013 schools' survey reported that they helped the person in their family with an illness or long-term condition. This figure is higher than previous estimates for Scotland<sup>3</sup>.

In the Renfrewshire survey, unlike the other three local authorities, deprivation was not measured at the individual pupil level, however carers were more likely to be living in a lone parent family than non-carers.

Carers were more likely to report having mental and physical health conditions, as well as have emotional, behavioural or learning disabilities, however there were few differences between carers and non-carers in terms of post-school expectations. When controlling for all factors, reporting physical or emotional/behavioural conditions was associated with the presence of illness rather than carer status, while mental health was associated with both presence of illness and carer status. Although 'post-school expectations' was not significantly associated with carer status, it was associated with pupil background, and also with the presence of drug/alcohol problems in the household.

## References

- 1 Robison O, Inglis G, Egan J. Young carers in Glasgow: health, wellbeing and future expectations. Glasgow: GCPH; 2017. Available at: <u>http://www.gcph.co.uk/publications/721\_young\_carers\_in\_glasgow\_health\_wellbeing\_and\_future\_expectations</u>
- 2 Traci Leven Research. *Health and Wellbeing Survey of Young People in Renfrewshire 2013*. Glasgow: NHS GGC, Renfrewshire Council; 2014. Available at: <u>http://www.nhsggc.org.uk/media/232369/nhsggc\_public\_health\_health\_and\_wellb\_eing\_survey\_of\_young\_people\_in\_renfrewshire\_2013.pdf</u>
- 3 Scottish Government. Young carers: Review of research and data. Edinburgh: The Scottish Government; 2017. Available at: <u>https://www.gov.scot/Publications/2017/03/2478</u>

## Appendix

#### Table A1. Physical health conditions full tables.

	Step 1		Step 2		Step 3	
Physical health conditions	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI
Male	0.87	0.77, 0.99	0.90	0.79, 1.01	0.90	0.80, 1.02
Age	1.05	1.02, 1.10	1.05	1.01, 1.09	1.04	1.00, 1.08
Relative deprivation	0.86	0.70, 1.05	0.85	0.69, 1.04	0.86	0.70, 1.05
Non-White ethnicity	0.92	0.66, 1.28	0.92	0.66, 1.28	0.90	0.65, 1.26
Living in lone parent family	1.16	1.01, 1.34	1.14	0.99, 1.32	1.11	0.97, 1.29
Carer			1.79	1.54, 2.08	1.13	0.91, 1.40
Disability in household					1.23	0.99, 1.52
Long-term illness in household					1.72	1.39, 2.14
Drug or alcohol problem in household					1.42	1.07, 1.88
Mental health problem in household					1.58	1.25, 2.02

#### Table A2. Total difficulties full tables.

	Step 1		Step 2		Step 3	
Medium/high difficulties	Exp(B)	95% Cl	Exp(B)	95% CI	Exp(B)	95% CI
Male	0.75	0.66, 0.85	0.77	0.68, 0.88	0.78	0.69, 0.89
Age	1.08	1.04, 1.13	1.08	1.04, 1.12	1.07	1.03, 1.11
Relative deprivation	1.02	0.84, 1.25	1.01	0.83, 1.24	1.03	0.84, 1.27
Non-White ethnicity	1.05	0.75, 1.46	1.03	0.74, 1.44	1.01	0.72, 1.42
Living in lone parent family	1.31	1.14, 1.51	1.28	1.11, 1.48	1.23	1.06, 1.43
Carer			1.99	1.71, 2.31	1.29	1.04, 1.61
Disability in household					1.16	0.93, 1.43
Long-term illness in household					1.58	1.28, 1.96
Drug or alcohol problem in household					1.96	1.49, 2.58
Mental health problem in household					1.50	1.19, 1.91

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

	Step 1		Step 2		Step 3	
EBL	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% Cl
Male	1.69	1.41, 2.03	1.74	1.45, 2.09	1.76	1.47, 2.11
Age	1.00	0.95, 1.06	1.00	0.94, 1.05	0.99	0.94, 1.05
Relative deprivation	1.09	0.82, 1.44	1.08	0.82, 1.43	1.08	0.82, 1.44
Non-White ethnicity	0.93	0.57, 1.52	0.93	0.57, 1.52	0.91	0.55, 1.48
Living in lone parent family	1.48	1.22, 1.80	1.46	1.20, 1.77	1.42	1.17, 1.73
Carer			1.69	1.37, 2.09	1.18	0.88, 1.60
Disability in household					1.42	1.06, 1.91
Long-term illness in household					1.08	0.79, 1.45
Drug or alcohol problem in household					1.39	0.96, 2.01
Mental health problem in household					1.52	1.10, 2.10

## Table A4. Post-school hopes tables.

	Step 1		Step 2		Step 3	
'Something else' after school	Exp(B)	95% CI	Exp(B)	95% CI	Exp(B)	95% CI
Male	1.74	1.53, 1.97	1.73	1.53, 1.97	1.74	1.53, 1.97
Age	0.93	0.90, 0.97	0.93	0.90, 0.97	0.93	0.90, 0.97
Relative deprivation	0.89	0.72, 1.09	0.89	0.73, 1.09	0.89	0.73, 1.09
Non-White ethnicity	0.57	0.39, 0.84	0.57	0.39, 0.84	0.57	0.38, 0.84
Living in lone parent family	1.14	0.99, 1.31	1.14	0.99, 1.32	1.13	0.98, 1.30
Carer			0.94	0.80, 1.11	0.90	0.71, 1.14
Disability in household					1.05	0.83, 1.33
Long-term illness in household					0.97	0.77, 1.23
Drug or alcohol problem in household					1.41	1.05, 1.89
Mental health problem in household					0.94	0.72, 1.24