

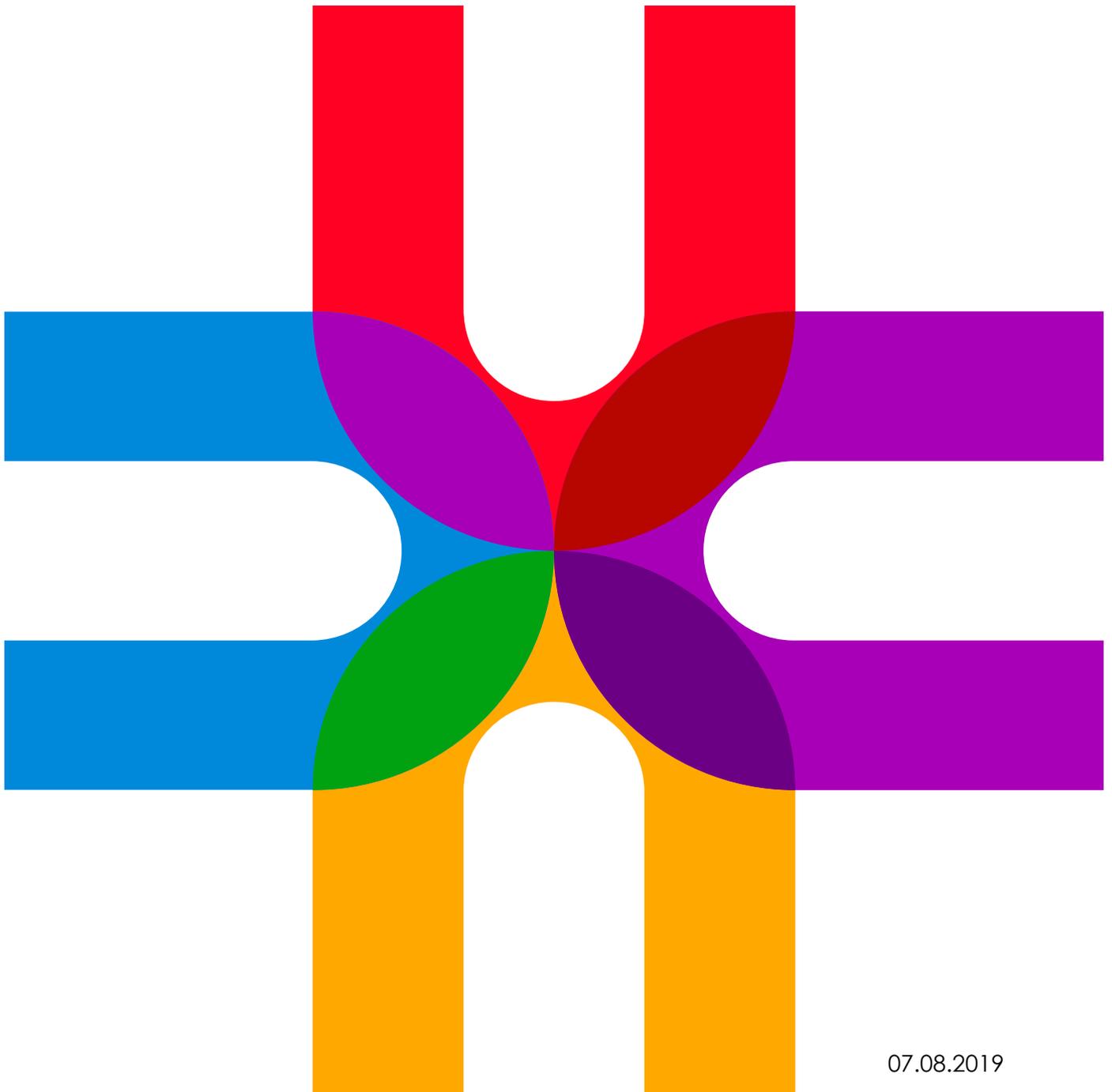
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Volunteering in London

Analysis using Understanding Society data

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07.08.2019

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About London Plus

London Plus is new a pan-London civil society organisation, set up in 2018 with a small team that that focuses on the following work areas:

- Data and intelligence
- Networks/Partnerships
- Advocacy and voice
- Communications/digital content and operations
- Employment and skills policy and project work

We emerged out of a shared consensus that although social action by volunteers and the wider civil society sector has made a significant difference to Londoners, a more unified approach was needed to help the public, politicians and business better understand the range, complexity and importance of the work that civil society does.

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About the Author

Dr Natasha Codioli McMaster is an experienced social researcher, having worked in both the civil service and in academia. She specialises in analysing quantitative data to explore social issues and trends.

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Summary and key findings

Data and research methods

- Understanding Society data were used for research throughout this report. The dataset is a longitudinal household panel survey, interviewing the same individuals annually. It started in 2009, with the most recent data collected in 2018, and includes over 40,000 households.
- Questions were asked about volunteering behaviours (whether an individual volunteered, and how often) every second wave of data collection. Questions were also asked about a range of other factors, including personal characteristics, life experiences, wellbeing and social networks.
- A combination of simple descriptive statistics and multivariate analysis were used throughout this report.

Overview of volunteering in London

- In the most recent wave of interview, 21 percent of Londoners said they had volunteered in the last 12 months, compared to 19 percent of people in the rest of the UK.
- Whilst there was a core group of people who volunteered consistently over the years, there were also a lot of people dipped in and out of volunteering from year to year. Nearly half of people who volunteered in each wave were not volunteering in the next wave, and around one in ten people moved into volunteering.

Diversity of volunteers in London

- Women were only slightly more likely to volunteer than men, and this was not statistically significant when controlling for other characteristics. Women were, however, more likely to volunteer regularly.
- People who were Indian, Pakistani, or Bangladeshi were less likely to say they had volunteered in the last 12 months than people from other ethnic backgrounds.
- There was little difference in volunteering by age in the earlier waves, but in waves six and eight younger people were more likely to volunteer. Differences were not significant when controlling for job status.
- Differences in volunteering behaviours were largest by socio-economic factors:
 - People in the highest income quintile, and people with a degree were most likely to say they volunteered.
 - Full-time students were most likely to do any volunteering, and people who were full-time students, unemployed or retired were most likely to volunteer regularly.
- There were no differences in volunteering behaviours by disability status.
- Whilst there were no differences in volunteering behaviours between people who said they were, or were not, religious, people more actively practiced their religion were most likely to volunteer.



Transitions into, and out of, volunteering

- The characteristics most strongly associated with beginning, or stopping volunteering, were socio-economic ones. People with a degree were most likely to start volunteering, as were people who were unemployed or full-time students.
- People who were religious were also more likely to start volunteering
- People over 65, and people with more children, were less likely to start volunteering.

Volunteering and personal wellbeing

- Wellbeing was measured as overall subjective life satisfaction, and absence of mental distress (using the General Health Questionnaire (GHQ)).
- People who did not volunteer had the lowest wellbeing on average, and people who volunteered frequently (at least once a month) had the highest wellbeing.
- People who did not volunteer in one wave, but began volunteering in the next wave, also experienced an increase in wellbeing.

Volunteering and social integration

- People who volunteered were less likely to say that all their friends were similar to them in terms of age, race and residence.
- Volunteers were also more likely to say that they lived in a close-knit community with trustworthy neighbours who helped and got along well with each other.



Data and research methods

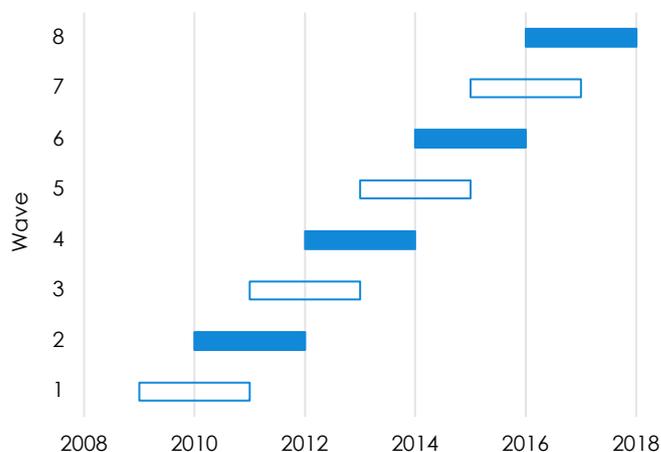
Data

Data used for this analysis come from Understanding Society (otherwise known as the UK Household Panel Survey (UKHLS)). As the largest panel survey in the world it includes a sample of over 40,000 households from the United Kingdom, and approximately 100,000 individuals.

The survey is representative of the UK population at the time of data collection and includes an ethnic minority boost sample to facilitate analysis of smaller demographic groups in society. The survey started in 2009 and now has eight data releases following the same individuals at regular intervals, so can be used to track changes in people's lives and attitudes over time.

Questions about volunteering behaviours were asked every second wave. Thus, analysis in this report includes data from waves two, four, six and eight. Waves of data collection take place over a two-year period; therefore, wave of data collection does not necessarily correspond to a particular year. The figure below shows the time intervals for each wave of data collection. Questions about volunteering were asked in the years corresponding to the filled bars.

Figure 1: Timing of data collection in Understanding Society.



Sample

All eligible household members who completed the individual questionnaire, who were over 16, and who were not dependent children were included in analysis. This means that people between 16 -18 who were still in full-time compulsory education were not included. Proxy responses (those given by another household member if the individual could not be interviewed) were also not included.



The final sample for the majority of analysis only included respondents who were resident in London at the time of interview. In estimating the relationship between wellbeing and volunteering behaviours the whole sample was used, because results were similar in London and the rest of the UK, and there was no theoretical reason to believe results would differ. This increased the power of the models to identify statistically significant associations.

The total eligible sample of individuals ranged from 50,674 in the second wave of data collection to 37,108 in the eighth wave, and the final sample of London based interviewees ranged from 6,083 in the second wave of data collection, to 4,986 in the eighth wave. Complete case analysis was used for this report, and people were removed from analysis if they did not have valid responses to any variables included in each model. Therefore, sample sizes differ between models, with the precise sample shown in each table.

For much of the multivariate analysis, data are pooled so that analysis is run on individuals in all eligible waves, and dummy variables are included to account for possible differences over time.

Variables used

Because a large range of variables were used in this report full details of variables, including a description of the way they were derived and levels used in analysis, can be found in the appendix.

Survey weights

Survey weights were used to maintain the representativeness of the data, given the ethnic minority boost sample, initial sampling design, and attrition of individuals from the survey over time. Using the `svy` command in stata, weights applied included the primary sampling unit, strata and analysis weights. Thus, the final code for weighting the data was:

```
svyset psu [pweight=my_lw], strata(strata) single(scaled)
```

Analytical approach

The majority of analysis in this report takes the form of simple descriptive statistics and cross tabulations.

Multivariate analysis was used when testing associations between variables to take account of other factors associated with them. Where the aim of analysis is to estimate the association between probability of an event occurring, for example probability of volunteering, logistic regression analysis was used. Where the aim was to test the relationship between continuous dependent variables, including wellbeing and neighbourhood cohesion, linear regression models were used. Control variables used in each regression are detailed within the corresponding tables or in a footnote below the tables.



What is regression analysis?

Regression analysis is a statistical tool used to test the magnitude of association between two or more variables. Variables used in this paper include people's behaviours, characteristics, and attitudes.

Whilst regression analysis can measure the connection between variables, they cannot test whether one causes the other. However, by including additional variables, we can rule out the possibility that associations are driven by similarities in other spheres. For example, we test the association between wellbeing and volunteering, but we know that both wellbeing and volunteering are also associated with education level. By including education level in the regression model, we test the association between volunteering and wellbeing for people with the *same education level*.

Understanding society is a comprehensive dataset, allowing us to control for a wide range of personal attributes that could drive associations. However, it is not possible to control for all differences between people when using observational data.

To account for this, we have used regression models with fixed effects. These models measure the association between a change in one variable (for example volunteering), and a change in another variable (for example wellbeing) for each individual. For example, is starting volunteering associated with a change in wellbeing? This is possible because we have multiple years of information for each person in the dataset. The models control for personal differences between individuals that may influence both volunteering and wellbeing and gets closer to a causal estimate.

It's important to note that we still can't estimate the direction of association, e.g. does increased wellbeing drive people to volunteer, or does volunteering lead to increased wellbeing. The best way to answer this would be through experimental methods, e.g. by running a randomised control trial, so that the choice to volunteer is controlled.

Overview of volunteering in London

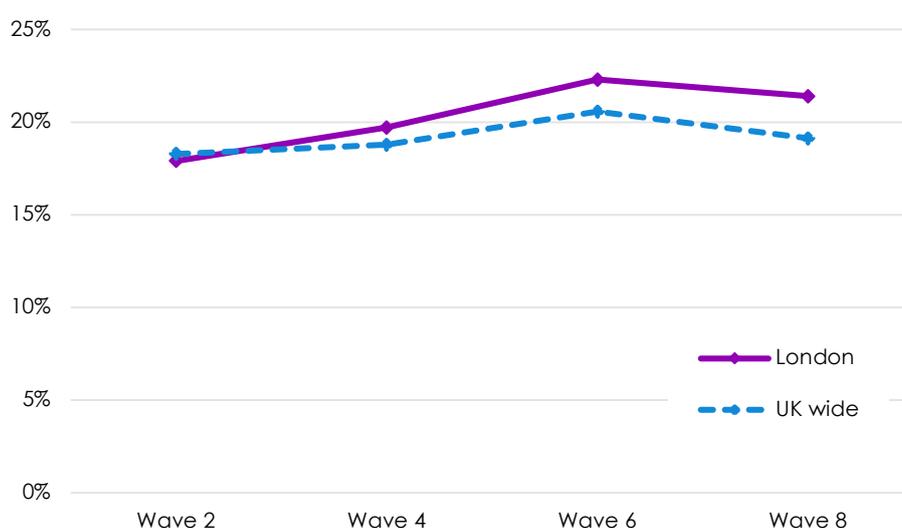
According to the Understanding Society data, volunteering has remained relatively steady from 2009 onwards, with a slight increase in participation in both London and the UK as a whole. Estimates are very similar between London and the rest of the UK, with 21 percent of people in London, and 19 percent of people across the UK, volunteering in the last 12 months in the most recent wave of the study.

Research by Chaeyoon Lim and James Laurence using the Citizenship survey found a sharp decrease in both formal volunteering and informal helping in the period after the recession. They refer to this as 'social recession;' and found the rate of decline in civic participation depended on area, being much more acute in more disadvantaged communities.



This surveys time-period covers the aftermath of the recession. Given the sharp decrease in volunteering immediately after the recession, we may have expected an increase in volunteering behaviour in the subsequent decade back to pre-recession levels. This would particularly be the case after the higher profile given to volunteering during the 2012 Olympic games, and the [Big Society policy agenda](#) aimed at increasing people's engagement in helping their community through volunteering. Whilst it does look like volunteering behaviour increased, in line with [slow economic growth](#) the differences across the years are relatively small.

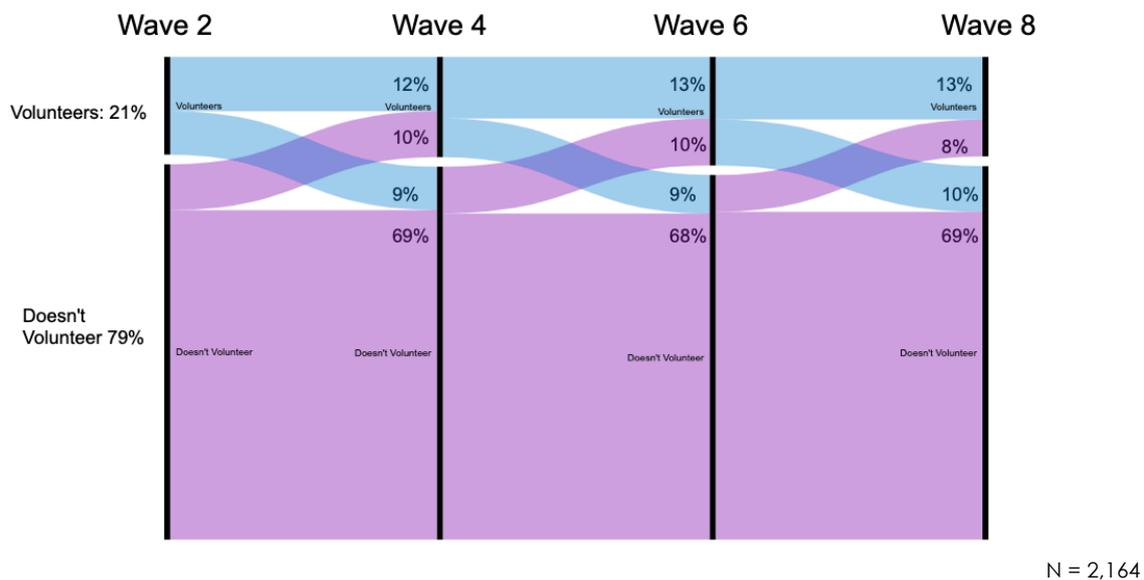
Figure 2: Proportion of people saying they have volunteered in the last 12 months



The estimates of overall volunteering are smaller than those from other surveys, which could be a reflection of differences in data collection methods. The results are more similar to the monthly estimates in the [Community Life survey](#), where 22 percent of adults across the UK volunteered formally in the last 4 weeks (and 38 percent volunteered either formally or informally over the same time period). It is possible that the question 'have you volunteered in the last 12 months' asked in the Understanding Society survey was interpreted by participants as formal volunteering rather than informal helping. Given the nature of the survey, it is also likely people under, rather than over, estimated their involvement. Participants are not only asked questions about their civic behaviour and would be less primed to consider different forms of contribution to society or to reflect accurately across the entire 12 months. They may also be less likely to exaggerate their contribution.

It is also very possible that, without an explanation given by the interviewer about what constitutes volunteering, the question could be interpreted differently based on a person's culture and norms – this will be discussed in more detail in the section about diversity in volunteering.

Figure 3: Transitions into, and out of, volunteering across the four waves in the London sample¹



The longitudinal data also indicates that there was no real shift towards volunteering across the waves of study within individuals. The majority of people who did not volunteer in the first wave of interview continued not to volunteer, and 8-10 percent of people moved into volunteering in the next wave of interview. For those who started the study volunteering, just over half continued to volunteer in the next wave. Estimates were similar between each pair of waves, suggesting that there were no large events impacting individuals' decisions to start, stop or continue volunteering across the years of the survey (either through differences in question administration or policy changes).

¹ For this chart, individuals were only included if they were present in all four waves to reliably measure movement across timepoints. For later transition analysis, however, an individual only needed to be in at least two eligible waves of interview, therefore exact point estimates will differ.



Diversity of volunteers

Gender

There was a small difference in rates of volunteering by gender in London, with women more likely to volunteer than men. These gender differences in volunteering were consistent over time, with the proportion of people engaged in volunteering increasing in London for both men and women at similar rates. In the last wave of the study, 20 percent of men, compared with 23 percent of women, said they had volunteered in the last 12 months. This is in line with findings from NCVO's research into national patterns of volunteering, published in their report *Time Well Spent*.

Gender differences in probability of volunteering are not significant in the regression model after controlling for other characteristics associated with volunteering, importantly work status. This is also in line with NCVO's research, which found that when accounting differences in working patterns, gender differences in volunteering were no longer present.

Women were, however, more likely to volunteer frequently than men, with 11 percent of men and 16 percent of women saying they volunteered at least once a month.

Figure 4: Proportion of Londoners who volunteered in the last 12 months by gender and wave of interview

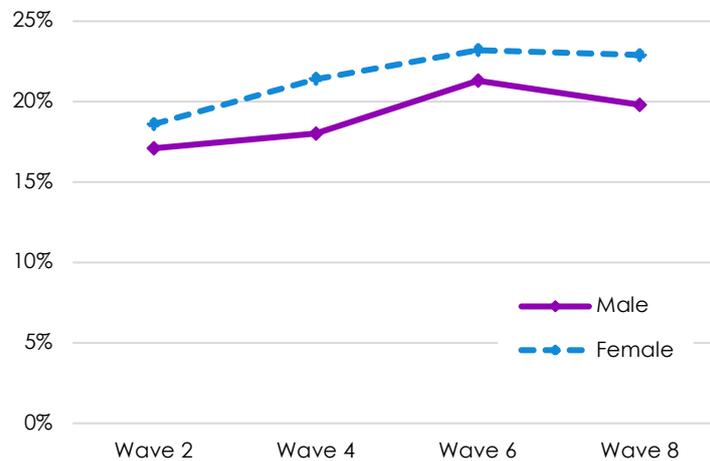
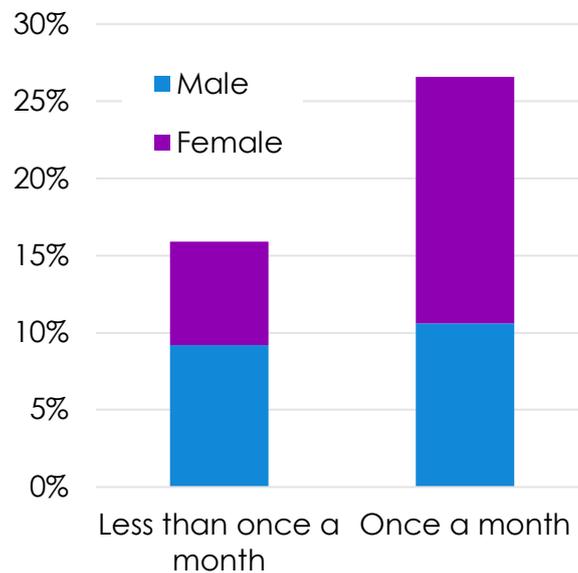


Figure 5: Proportion of Londoners who volunteered, frequently and infrequently, by gender



Ethnicity

A crucial benefit of Understanding Society data compared to other surveys is the large sample of people from ethnic minority backgrounds, enhanced by their ethnic minority boost sample. Whilst estimates differ depending on the data used, the Understanding Society data shows that in London, 37 percent of people do not identify as white British, compared to 9 percent in the rest of the country².

National statistics show that the percentages of people volunteering monthly were broadly similar by ethnic background, however people from Asian and Mixed backgrounds were less likely to say they volunteered regularly.

In this study, compared to gender differences, differences in volunteering behaviour appear much larger by ethnic background. For simplicity, data from the last wave (wave eight) are shown, however differences in volunteering behaviour by ethnicity were relatively consistent over time.

Overall, and similar to the national picture, people who were Indian, Pakistani, or Bangladeshi were less likely to say they volunteered in the last 12 months than people from other ethnic backgrounds in London. These differences remain when accounting for differences in characteristics associated with ethnicity, including socio-economic status and age.

² This is likely to be an underestimate. The Census estimates that the majority of Londoners in 2011, 55.1%, were not white British.

The differences in volunteering behaviours were larger for regular volunteering, with people from 'other' ethnic backgrounds (including Arab and Chinese) most likely to have volunteered at least once a month. Due to sample size restrictions and the coding of data it was not possible to break this category down any further.

Importantly, no differences in volunteering behaviours were observed by country of birth. People born in the UK were as likely to volunteer, and to volunteer monthly, as those born outside the UK.

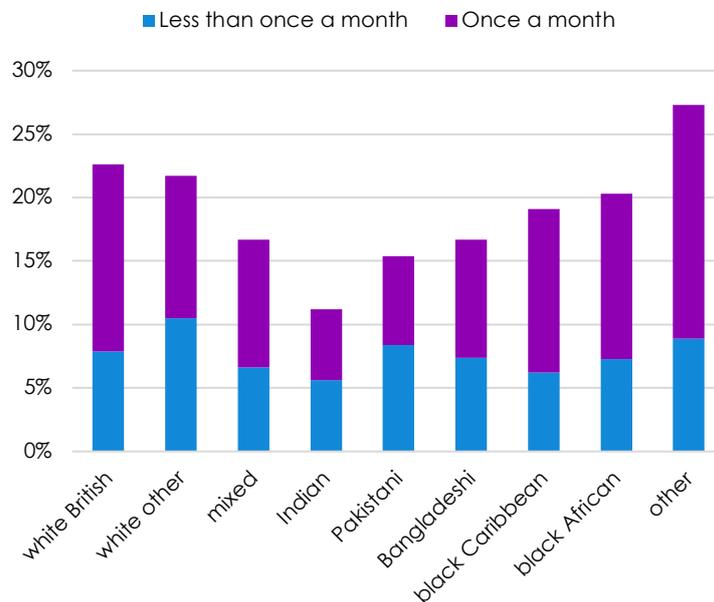
There are a number of different possible interpretations for these differences in volunteering behaviours. The results potentially suggest that the voluntary sector could do more to engage people from different ethnic backgrounds. It could also be the case that there are differences in the way people talk about their civic action and whether they classify activity as volunteering by ethnicity. People from different ethnic backgrounds may be more or less likely to classify informal helping as volunteering, particularly if this takes place within a local community setting.

More work could be done using surveys that differentiate between formal and informal volunteering and give prompts as to what constitutes volunteering (e.g. helping someone you are not related to) to start to unpick the reasons behind differences in rates of volunteering. The Community Life Survey is well placed for this research, asking more nuanced questions specifically about volunteering.

Another possible explanation is differences in the extent that people care for members of their own family. Pakistani and Bangladeshi Londoners were more likely to say that they provided care for someone in their household. People who are already caring for someone in their household will likely have less time to volunteer in their community. However, although care giving is negatively associated with volunteering, differences in volunteering behaviours remain when an indicator of whether the individual cares for a member of their household is included in the regression models.



Figure 6: Proportion of Londoners who volunteered, frequently and infrequently, by ethnicity



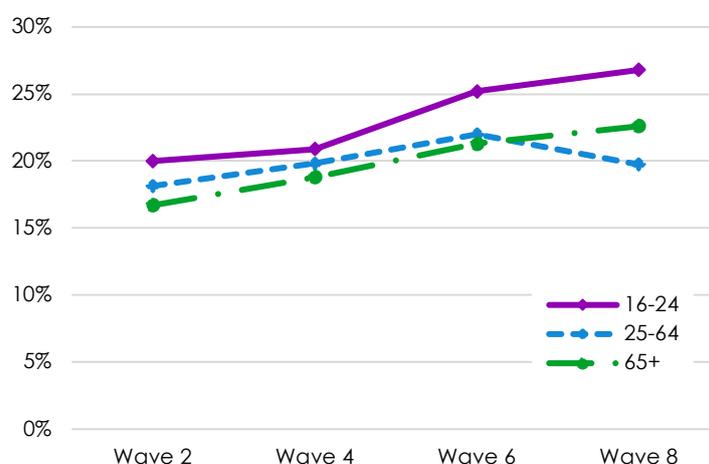
Age

At the start of the survey there was little difference in proportions of people volunteering by age. These differences appear to have grown over time, with 27 percent of young people (16-24) volunteering in the final wave of the study compared to 20 percent of people aged 25-64 and 23 percent of people over 64.

The trend suggests that the increase in volunteering over the eight waves of the study are driven largely by increases in volunteering amongst older and younger people, with little difference in rates of volunteering amongst people aged 25-64 over the years.



Figure 7: Proportion of Londoners who volunteered in the last 12 months by age group and wave of interview



It is likely that the overall differences in volunteering behaviours by age are largely driven by differences in economic activity and work status, explored in more detail in the next section. For example, students and people in retirement have more time to dedicate to volunteering and may turn to volunteering for important life experience or for the intrinsic benefits like finding fulfilment or purpose. Indeed, in the regression model, when controlling for these differences in economic activity there is no significant association between age and volunteering behaviours.

Socioeconomic factors: work status, education, and income

The largest differences in volunteering behaviours were by socio-economic factors. People with higher disposable incomes and more educated people were more likely to have volunteered in the last year.

For income, the largest differences are between people with the highest income and everyone else, instead of a linear trend from least to most advantaged people. Rates of volunteering are relatively similar between people in the lowest and next three income quintiles.

The biggest differences in volunteering are between people with and without a degree (or equivalent qualification). The regression model shows that people with a degree are four times more likely to volunteer than someone with no qualifications, and people with some qualifications twice as likely to volunteer as those with no qualifications.

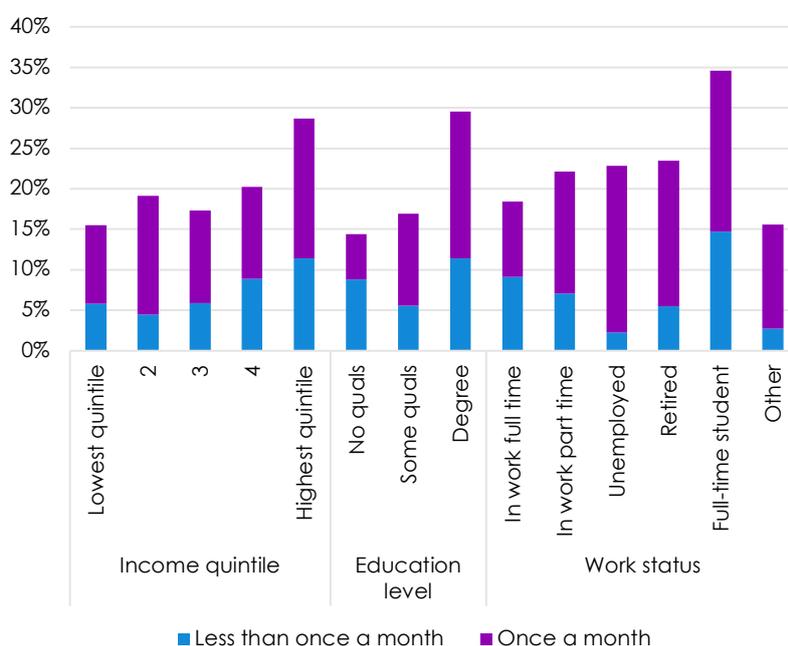
In terms of job status, full-time students were most likely to volunteer, and people in work full time were least likely to volunteer. Along with students, people who were unemployed or retired were most likely to volunteer regularly (at least once a month). This is somewhat in contrast to findings for income and



education, given that most students and people who are unemployed or retired have lower incomes and do not have a degree compared to people in work full-time. Students and people who are unemployed will often have more time to volunteer, but will also likely turn to volunteering for experience in the work places and to gain new skills.

The associations remain when controlling for characteristics like age, and other socio-economic factors. For example, the regression models show that people with higher incomes are more likely to volunteer than people with lower incomes even if they have similar education levels.

Figure 8: Proportion of Londoners who volunteered in the last 12 months, frequently and infrequently, by socio-economic characteristics



Disability status

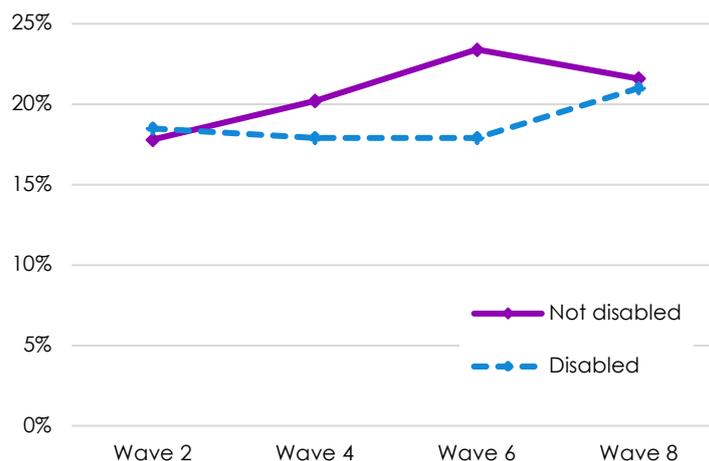
Given the nature of questions in the survey, a person was defined as disabled if they said they had a long-term health condition that lasted 12 months or more and limited their ability to carry out any of a range of activities.

Whilst the chart below indicates that there was a difference in volunteering behaviour by disability status in wave four and, particularly, wave six, differences overall were not statistically significant, and disabled people were just as likely to volunteer as people who were not disabled. This is also reflected in the regression analysis. When looking at frequency of volunteering, proportions of people volunteering monthly, or less frequently, by disability status are almost identical.



This is not unique to London, whilst it is statistically significant, there is only a one percentage point difference in the proportions of people volunteering outside London by disability status in wave eight, and the differences are larger in waves six and four.

Figure 9: Proportion of Londoners who volunteered in the last 12 months by disability status and wave of interview



Religion

There was no substantial or statistically significant difference in volunteering behaviours in London over the years between people who said they belonged to a religion, and those that did not. In the final wave of the survey, 22 percent of people who belonged to a religion said they had volunteered in the last 12 months, compared to 19 percent of people who did not belong to a religion.

People were also asked about the denomination of their religion, whether they feel their religion 'makes a difference to their lives,' and how often they attended religious services. People who said their religion made a difference to their lives, and those who attended religious services more frequently, were most likely to volunteer frequently. This could reflect the high engagement of religious organisations in civic activity, which would influence volunteering behaviours more for people who were more actively involved with their religious communities.

Figure 10: Proportion of Londoners who volunteered in the last 12 months by religious status and wave of interview

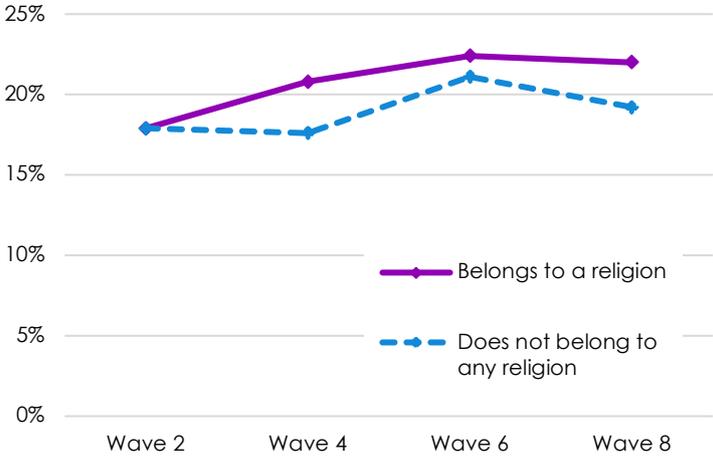


Figure 11: Proportion of Londoners who volunteered in the last 12 months, frequently and infrequently, by religious status.

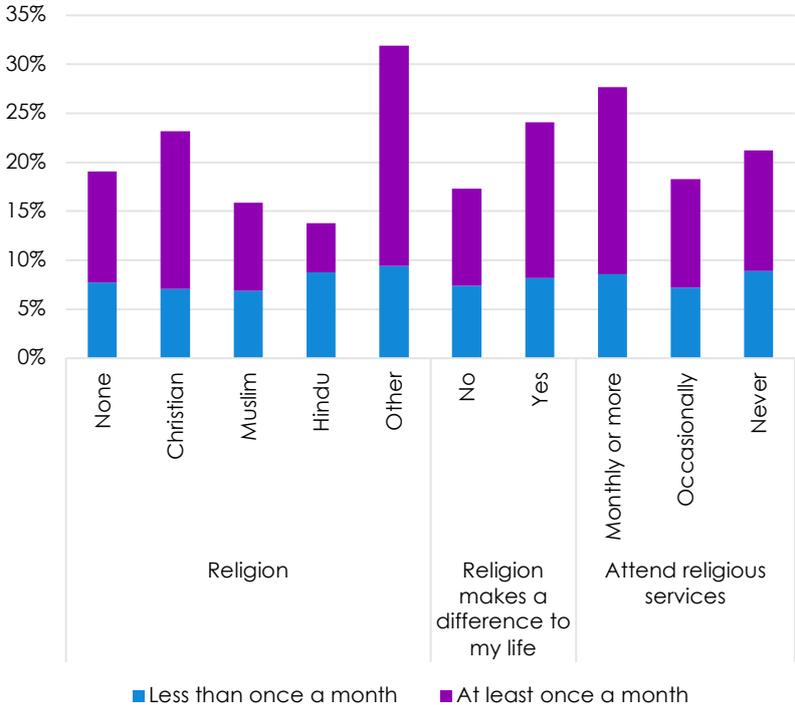


Table 1: Logistic regression results predicting probability of volunteering based on a person's characteristics

Probability of volunteering	Odds ratio (OR)	Standard error (SE)
Ethnicity (reference: white British)		
White other	0.984	(0.138)
Mixed	0.966	(0.178)
Indian	0.656*	(0.096)
Pakistani	0.601*	(0.145)
Bangladeshi	0.642*	(0.113)
Black Caribbean	0.963	(0.130)
Black African	0.797	(0.126)
Other	0.976	(0.156)
Female	1.103	(0.085)
Age (reference: 25-64)		
16-24	1.165	(0.160)
65+	0.906	(0.155)
Education (reference: no qualifications)		
No degree	2.103*	(0.381)
Degree	4.185*	(0.771)
Employment status (reference: In work full time)		
In work part time	1.431*	(0.164)
Unemployed	1.474*	(0.219)
Retired	1.657*	(0.304)
Full-time student	2.008*	(0.325)
Other	1.253+	(0.165)
Belongs to a religion	1.350*	(0.134)
Income (reference: Highest quintile)		
Lowest quintile	0.610*	(0.070)
1	0.626*	(0.073)
2	0.583*	(0.063)
3	0.745*	(0.065)
Long term, limiting health condition	1.051	(0.090)
Expects to move in the next year	1.078	(0.104)
Number of children in household	0.975	(0.042)
Born in the UK	0.927	(0.105)
Wave of interview (reference: 2)		
4	1.125+	(0.076)
6	1.287*	(0.097)
8	1.172*	(0.089)
Observations	82276	

Exponentiated coefficients; Standard errors in parentheses, + p<0.10, * p<0.05



Transitions into, and out of, volunteering

It's important to find out not only which characteristics are associated with volunteering at one time point, but also who is more likely to start (or stop) volunteering over the course of the study. Figure three showed that, whilst the majority of people either kept volunteering, or continued not to volunteer, around 20 percent of people either started or stopped volunteering over each pair of waves.

Ethnicity was associated with probability of volunteering but had less of a relationship with starting or stopping volunteering. There is tentative evidence that people from other white backgrounds, Pakistani and Bangladeshi people were less likely to start volunteering than white people during the study, and people from other white backgrounds were more likely to stop volunteering. The largest associations were seen for continuing volunteering. Indian, Bangladeshi and black African people were less likely than white people in similar economic positions (based on education level, income, and job status) to volunteer in two consecutive waves. The magnitude of this difference ranged from just over 65% less likely to volunteer than white people for Bangladeshi people, to 45% for black African people.

There were no gender differences in probability of starting or stopping volunteering, and, perhaps unsurprisingly, people who were 65 or over were less likely to start volunteering than people aged 25-64.

As with the findings for probability of volunteering in one time point, the largest differences are seen in education level and employment status. People with a degree were almost twice as likely to start volunteering across two waves than people with no qualifications (whilst people without a degree, but with some qualifications are more similar in their volunteering-transition behaviours to people with no qualifications). People with some qualifications were four times more likely to volunteer in two consecutive waves, and people with a degree eight times more likely, than those without any qualifications.

Income level also had a stronger relationship with continuing volunteering, rather than starting or stopping volunteering. People in lower income quintiles were less likely to volunteer over two consecutive waves than the most advantaged fifth.

Having a long-term, limiting, health condition, expecting to move in the next year, or being born in the UK were all not significantly (nor substantively) related to volunteering transitions after accounting for all other characteristics in the model.



Table 2: Logistic regression results predicting probability of an individual starting, stopping or continuing volunteering over two consecutive waves

	Start volunteering		Stop volunteering		Continue volunteering	
	OR	SE	OR	SE	OR	SE
Ethnicity (reference: white British)						
white other	0.702+	(0.132)	1.407*	(0.241)	0.756	(0.194)
mixed	0.979	(0.203)	0.967	(0.197)	1.093	(0.392)
Indian	0.807	(0.149)	1.192	(0.206)	0.447*	(0.113)
Pakistani	0.557+	(0.169)	0.905	(0.246)	0.709	(0.251)
Bangladeshi	0.660+	(0.146)	0.920	(0.223)	0.341*	(0.157)
black Caribbean	0.808	(0.136)	1.022	(0.160)	0.958	(0.200)
black African	1.037	(0.194)	1.196	(0.251)	0.556*	(0.159)
other	1.200	(0.290)	1.035	(0.207)	0.975	(0.271)
Female	1.039	(0.101)	1.067	(0.092)	1.080	(0.126)
Age (reference: 25-64)						
16-24	1.331	(0.315)	1.458+	(0.324)	0.787	(0.234)
65+	0.594*	(0.122)	0.644+	(0.158)	1.091	(0.292)
Education (reference: no qualifications)						
Some qualifications, no degree	1.015	(0.186)	0.930	(0.174)	3.957*	(1.519)
Degree	1.942*	(0.379)	1.314	(0.262)	8.238*	(3.186)
Employment status (reference: In work full time)						
In work part time	1.055	(0.175)	0.982	(0.168)	1.654*	(0.281)
Unemployed	1.606*	(0.341)	1.276	(0.318)	1.073	(0.269)
retired	1.218	(0.288)	1.104	(0.263)	1.863*	(0.556)
Full-time student	1.720*	(0.468)	1.526	(0.406)	1.569	(0.469)
Other	1.283	(0.256)	0.931	(0.160)	1.702*	(0.364)
Belongs to a religion	1.296*	(0.149)	1.083	(0.129)	1.553*	(0.242)
Income (reference: Highest quintile)						
Lowest quintile	0.798	(0.138)	0.824	(0.127)	0.613*	(0.125)
1	0.731+	(0.133)	0.741+	(0.134)	0.588*	(0.119)
2	0.790	(0.131)	0.846	(0.138)	0.577*	(0.109)
3	0.791	(0.119)	0.887	(0.121)	0.839	(0.130)
Long term, limiting health condition	0.964	(0.123)	1.101	(0.138)	1.003	(0.131)
Expects to move in the next year	0.946	(0.152)	1.149	(0.179)	0.925	(0.142)
Number of children in household	0.896*	(0.049)	0.930	(0.051)	0.939	(0.069)
Born in the UK	0.995	(0.129)	0.925	(0.113)	0.885	(0.173)
Wave of interview (reference: 2)						
4	1.039	(0.123)	0.980	(0.132)	1.126+	(0.081)
6	0.782*	(0.097)	1.186	(0.146)	1.128	(0.114)
8						
Observations	26,864					

Exponentiated coefficients; Standard errors in parentheses, + p<0.10, * p<0.05



Volunteering and personal wellbeing

Wellbeing, defined broadly as the state of being comfortable, healthy and happy, and referring to long-term positive affect rather than moment-to-moment happiness, is related to a number of different positive outcomes. In the Understanding Society survey, regular questions related to wellbeing are asked about people's life satisfaction (how satisfied they were with their life on a seven-point scale), and absence of mental distress (measured using the General Health Questionnaire (GHQ) on a 36-point scale). These two measures represent different ways of thinking about wellbeing, of either an increase in positive feelings, or an absence of negative feelings. Both are coded such that a higher score indicates a more positive response. Measures of satisfaction in particular areas of life, including health, income, amount of leisure time and their job were also included in the survey, but not included in analysis for this report.

To allow more detailed exploration of the relationship between frequency of volunteering and wellbeing, the UK wide sample is used in this analysis rather than the London sample. This reflects the fact that, whilst it is likely average wellbeing scores differ by region in the UK, we have no reason to believe the relationship between wellbeing and volunteering behaviours would differ. Results were compared with regressions which only included people resident in London, and substantive results were similar (however relationships were less likely to be statistically significant). Interaction terms were also included as a way to see whether the relationship between volunteering and wellbeing differed in London and the rest of the UK, and these were not significant. These interaction terms were not included in the final models.

Life satisfaction and volunteering appeared to have a linear relationship. People who didn't volunteer had the lowest life satisfaction on average, and the more they volunteered (measured either as frequency of volunteering or persistence over the course of the study) the better their life satisfaction. Mental health also increased with frequency of volunteering, with people who volunteered once a month having the highest mental wellbeing scores. People who only volunteered in one wave, however, had similar mental wellbeing scores to people who never volunteered, and only those who volunteered over two or more waves had higher mental wellbeing scores.



Figure 12: Life satisfaction by frequency of volunteering and persistence of volunteering across the survey

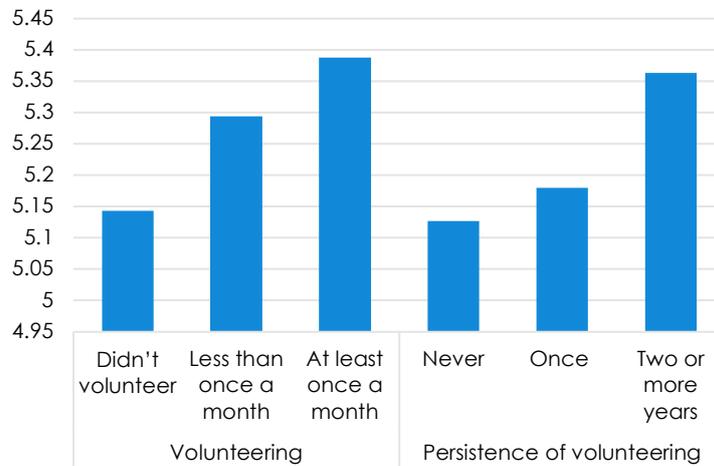
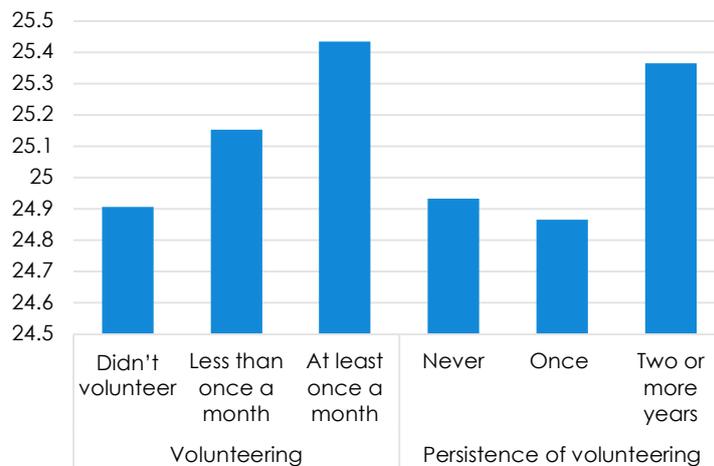


Figure 13: Mental health (GHQ score) by frequency of volunteering and persistence of volunteering across the survey



Descriptive analysis does not account for the possibility that other factors associated with both volunteering and wellbeing could be driving these differences. However, results from the regression analysis, which controlled for other factors associated with wellbeing, showed a similar picture. Life satisfaction scores were higher for people who volunteered, even if they volunteered infrequently. People who volunteered at least once a month had the highest life satisfaction scores. Frequency of volunteering across waves was also important for life satisfaction. People who volunteered in two or more waves had higher life satisfaction than people who volunteered in just one.

In the previous regression model, the data has been pooled across waves, giving a larger sample and more power to identify statistically significant



effects. The longitudinal nature of the data can also be used to help test whether *change* in volunteering behaviours are associated with *change* in wellbeing within individuals. For example, does a person who starts volunteering experience a congruent increase in wellbeing, and does a person who stops volunteering experience a decrease in wellbeing. This helps to address the issue that factors we can't measure could drive both volunteering behaviour and wellbeing. Fixed effects regression models were used, which analyse changes within individuals, to address this. Results from these regressions show that, for an individual, starting to volunteer at least once a month, from not volunteering at all, has a positive association with both life satisfaction and mental health.

Table 3: OLS Regression results predicting life satisfaction and mental health scores (higher scores indicating more positive responses) if an individual has volunteered in the last 12 months³

Volunteering	Life satisfaction		Mental health (GHQ12)	
	Coefficient	SE	Coefficient	SE
Reference: Didn't volunteer				
Volunteered less than once a month	0.043*	(0.012)	-0.037	(0.078)
Volunteered at least once a month	0.106*	(0.015)	0.288*	(0.058)
Observations	182,115		181,890	
Persistence of volunteering:				
Reference: Never				
Once	0.027	(0.030)	-0.119	(0.113)
Two or more years	0.068*	(0.026)	0.026	(0.102)
Observations	26,969		26,893	

Exponentiated coefficients; Standard errors in parentheses, + p<0.10, * p<0.05

Table 4: Fixed effects regression results predicted life satisfaction and mental health scores (higher scores indicating more positive responses) if an individual has volunteered in the last 12 months⁴

Volunteering	Life satisfaction		Mental health (GHQ12)	
	Coefficient	SE	Coefficient	SE
Reference: Didn't volunteer				
Volunteered less than once a month	0.025	(0.018)	0.143*	(0.061)
Volunteered at least once a month	0.048*	(0.016)	0.243*	(0.052)
Observations (Individuals)	148,374 (60,628)		148,015 (60,586)	

Exponentiated coefficients; Standard errors in parentheses, + p<0.10, * p<0.05

³ Control variables included in these models were: ethnicity, gender, age group, education level, employment status, income quintile, disability status, marital status, number of children, whether they lived in London and whether they expected to move in the next year.

⁴ Only variables that can vary over time were included in these models, these were: work status (in work or not), income quintile, disability status, number of children, marital status, whether they lived in London and whether they expected to move in the next year.



Volunteering and social integration

Social networks

Volunteering is often discussed as a way to improve social integration, primarily because it involves bringing people from different backgrounds together to address a shared goal. In *All of Us, the mayor's strategy for social integration*, increasing incentives to volunteer, particularly the reward and recognition of volunteers, was outlined as one of Greater London Authorities key priorities in promoting social integration.

The extent that people socialise with people who are different to themselves in characteristics such as ethnicity, age and social class is one way of measuring the level of social integration in an area. In wave six of Understanding Society (2014-17) people were asked how many of their friends were a similar age, were the same race, had a similar education level or income, or lived in the same local area. Londoners were less likely to say that all their friends were similar to them across all domains than people in the rest of the UK, highlighting London's status as a multicultural city.

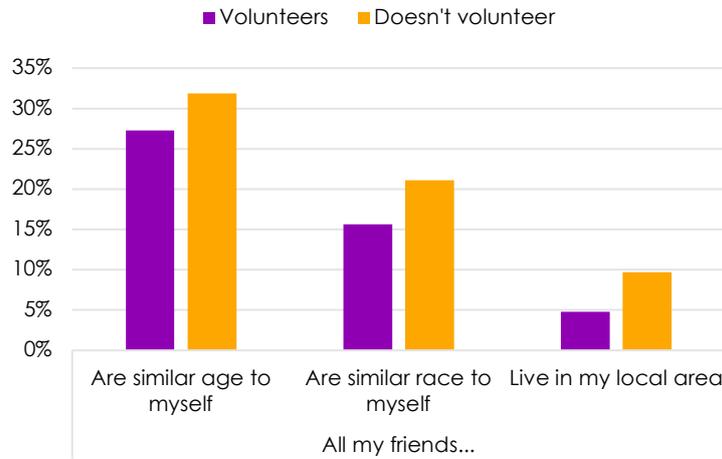
Overall, people in London who volunteered in the last 12 months appeared to be more socially integrated than people who didn't. Londoners who hadn't volunteered in the last 12 months were more likely to say that all their friends were a similar age to themselves, were a similar race to themselves, and lived in the same local area. They were also more likely to say all their friends had similar education levels and incomes to themselves, however these results were not statistically significant. Results were similar to those for the whole of the UK; fewer people who volunteered said that all their friends were like them across all five domains.

These results indicate that people who volunteer are more socially integrated than those who don't and suggest that volunteering could be an important mechanism through which social integration can be supported across the capital. It remains possible that, rather than volunteering increasing the opportunities for people to mix with others from different communities and backgrounds, people who are already more socially integrated are also more likely to volunteer. Because the questions were only asked in one wave, it was not possible to look at change in integration over time, and how this corresponded with changed in volunteering behaviours.

The comparison used for this analysis was people who said 'all their friends' were like them, and those who said they had some friends with different characteristics to themselves. When comparing people who said 'all, or more than half', to those who said 'half or less' of their friends were similar to them, there was little difference between people who volunteered and people who did not. Thus, the differences in friendship groups were significant but not large shifts.



Figure 14: Social integration by volunteering behaviours



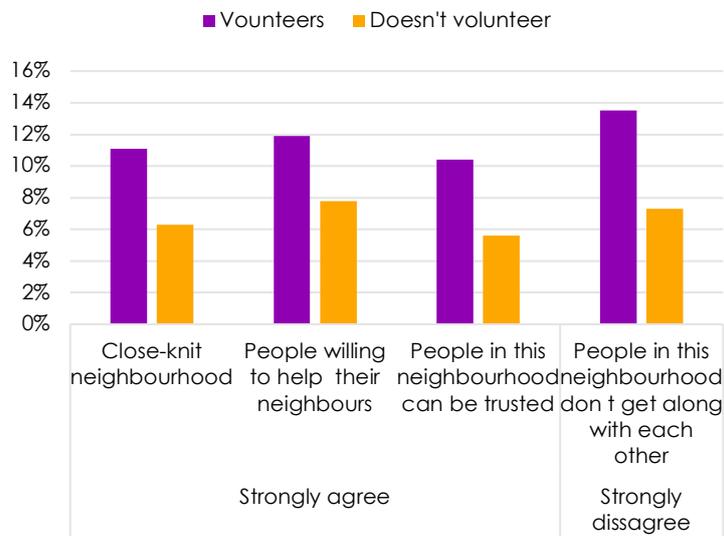
It's also possible that some other personal characteristic may be driving the association, for example a person's education level, which we have established is associated with volunteering behaviours, but could also be associated with social integration. Further analysis suggested that this was not the case. Whilst the sample size of Londoners was too small for more comprehensive analysis, given that the relationships between social integration and volunteering were similar across the UK, regression analysis was conducted with the entire sample. When controlling for other factors associated with volunteering behaviours, the relationships between social integration and volunteering remained, with volunteers still less likely to say all their friends were similar to them.

Local neighbourhood cohesion

Social integration can also be thought of in terms of the extent that people connect with their local communities, and how much they trust their neighbours. People who volunteered were more likely to score highly in all measures of neighbourhood cohesion included in the survey. A higher proportion of volunteers, compared to people who didn't volunteer, said they strongly agreed that they lived in a close-knit neighbourhood, that people were willing to help their neighbours, that people in the neighbourhood could be trusted, and to strongly disagree that people in the neighbourhood don't get along with each other.



Figure 15: Neighbourhood cohesion measures by volunteer status



Individual responses were similar across the four questions. For example, if someone said that people were willing to help their neighbours, they were likely to also say that people in the neighbourhood could be trusted. The extent this was the case was tested statistically using a measure of internal consistency of responses (cronbach's alpha = 0.78). Because responses were similar across questions, a composite score of neighbourhood cohesion was provided in the survey.

This score was used for further regression analysis, which suggested, as with the measures of diversity of social networks, that relationship remained when controlling for other characteristics associated with volunteering.

It should be noted that, whilst a large range of individual and household characteristics can be controlled in the model, we do not have access to more detailed information about the persons neighbourhood or local area. It could be that people living in more diverse, social integrated areas where neighbours get along and trust each other are also more motivated to contribute to their community through volunteering. This could be as a consequence of living in a more desirable area, and therefore wanting to be involved with the community, or that these areas attract people who are more civically inclined.

It's also unclear whether people are volunteering in their community, or if they are travelling to volunteer. Where people are volunteering is a particularly pertinent question in London (and other major cities), where peoples local community, workplace, and where they spend leisure time can be more spread out in comparison to people living in smaller cities or towns.



Table 5: Logistic regression results predicting probability of an individual saying all their friends are similar to themselves, and OLS regression results predicting social cohesion score, if they have volunteered in the last 12 months

All my friends...	OR	SE	Observations
Are similar age to myself	0.720*	(0.030)	91472
Are similar race to myself	0.689*	(0.026)	91449
Have a similar education level	0.701*	(0.028)	90479
Have similar income	0.641*	(0.040)	85513
Live in my local area	0.660*	(0.043)	88294
	Coefficient	SE	Observations
Neighbourhood social cohesion score (higher = more cohesive)	0.189*	(0.048)	88036

Exponentiated coefficients; Standard errors in parentheses, + p<0.10, * p<0.05



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Appendix

Variable	Levels	Description
Volunteering behaviours		
Volunteering	Yes or no	People were asked if they had volunteered in the last 12 months every other year (waves 2, 4, 6 and 8).
Frequency of volunteering	Volunteered at least once a month. Volunteered in the last 12 months but less frequently. Did not volunteer.	People who said they had volunteered in the last 12 months were asked how often; three or more days a week, twice a week, once a week, once a fortnight, at least once a month, quite often but not regularly, just a few times, one-off activity, on a seasonal basis. A new variable was derived with three levels.
Volunteering transitions	Start, stop and continue volunteering	People were classified as starting, stopping, continuing or never volunteering based on their answers to the question about volunteering in the last 12 months in the current and next wave. Note that the waves were spaced two years apart, so it is not known whether the individual volunteered in the intervening year.
Persistence of volunteering	Never Once Two or more times	A variable was calculated to measure the persistence of an individuals' volunteering across the study for those who gave eligible responses in at least three of the four waves. It should be noted those in the 'never' group could potentially have volunteered in the waves in which the question about volunteering was not asked.
Wellbeing		
Life satisfaction	Completely dissatisfied - Completely satisfied	People were asked how satisfied with their life they were overall, with seven possible responses from completely dissatisfied to completely satisfied.
Mental health	0-36	This is a 36-point scale based on the General Health Questionnaire (GHQ12), which is used as a screening device for minor psychiatric disorders in the general population (Goldberg, 1972). Scores are reverse coded, so that high scores represent more positive responses. It is commonly used in psychological research
Personal characteristics and lifestyle		
Ethnicity	White British White other Mixed Indian Pakistani Bangladeshi Black Caribbean Black African Other	Ethnicity was self-reported in the wave of interview. Whilst a more comprehensive range of options were included in the dataset, the ethnic groups chosen to reflect the largest groups in London. The groups were not broken down further to retain sample sizes for reliable analysis.
Gender	Female or male	Gender is self-reported in the wave of interview. 'Other' or 'prefer not to say' options were not included in the original survey and therefore could not be included in analysis.
Age	16-24 25-64 65+	Age was grouped into young, prime working-age, and retirement age to reflect the fact that relationships between age and many other variables do not follow linear patterns.
Education	Degree Some qualifications below degree level No qualifications	
Employment status	In work full-time In work part-time Unemployed Retired Full-time student Other	
Income after housing costs	Quintiles, 1 (lowest) – 5 (highest)	An individual's equalised household income was calculated after subtracting housing costs. The housing costs measure chosen excludes principle mortgage payments but includes interest repayment for homeowners. Modified OECD equivalence scales were used to account for household size. This was split into five groups of equal size.
Religion	Belong to a religion, or not	



Disability	Disabled, or not disabled	People were asked if they have a long-term limiting illness, and if they <i>'have any health problems or disabilities that mean you have substantial difficulties with any of the following areas of your life?'</i> If the individual answered yes to the first question, and that their health problem or disability meant they had substantial difficulties in any of the included areas, they were coded as disabled.
Housing tenure	Owned Social housing Private renter Other	
Number of children	0 – 3 or more	Number of children living in the household was included with 4 levels, no children, one child, two children, or three or more children.
Marital status	Single, never married Married Separated or divorced Widowed	The original variable included separate groupings for civil partnerships, which were combined such that married refers to being married or in a civil partnership. Divorce and separation were also combined into one category (including desolation of civil partnership).
Expectation of moving home in the next year	Yes or no	Participants were asked if they expected to move in the next year. Because of the difficulty of keeping an individual in the survey after they move, this was thought to be a good indicator of transience of lifestyle. A person's perception of their living situation will likely have a strong link to their behaviour (e.g. decisions to take up a new activity, like volunteering, in the area) and personal wellbeing.

