TRAVERSE

Ageing Better in Camden

CMF analysis of data up to Sept '19

Introduction

This report builds on the 2018 analysis of survey data collected over the course of the Ageing Better Camden (ABC) programme. It analyses demographic and CMF data up to and including September 2019 and explores whether any changes have been identified from last year. Additionally, we have included significance testing and regression analysis to better interpret the data. To produce this report, we worked with a statistical modelling specialist to uncover any new important trends and confirm findings from last years' report.

The survey used to capture the data presented in this report is called the Common Measurement Framework (CMF) questionnaire, which is used across all national Ageing Better projects and contains questions to measure **loneliness**, as well as **health, wellbeing and levels of social contact**. This report includes data collected between the start of the project and the 9th Sep 2019.

This CMF survey is administered to participants at **two time points**: within three weeks of joining an ABC project and then again 6 months later. This allows for a mode of comparison to help understand the impact ABC projects are having and whether these are in line with their intended outcomes. We are also now doing 2nd follow up with people after a further 6 months.

Prior to sending out CMF surveys, demographic data are collected from all participants when they first attend a project.

ABC aims to address social isolation and loneliness in older people (over the age of 60) living in Camden by producing the following outcomes:

- Older people at risk from or experiencing social isolation will be **more involved** in their communities and provide stronger support to each other.
- Older people will experience **less social isolation** as a result of participation in programme activities.
- Services which address the social isolation of older people in Camden are more relevant and better co-ordinated, with increased numbers of older people engaged in their **design and delivery**.

The change in sample size at various points of data collection between this year and last year is as follows:

	Number of responses: Oct 2018	**Number of responses: Sept 2019**
Demographic data collection	2,060	2,900
Baseline questionnaire	670	1,040
Follow up questionnaire	176	375

Compared with last year, the number of follow up responses has more than doubled. Having said this, follow up data are skewed to a few projects: 43% of all follow up responses come from participants who first signed up to Community Connectors (n=88) and the LGBT* Connect project (n=73). Additionally, not all CMF questionnaires were completed in their entirety and a score could not be issued to questions where participants did not answer all parts of the question. For this reason, findings within this report should be interpreted with caution.

Loneliness measures

Loneliness is measured within the CMF questionnaire using two scoring methods:

- De Jong Gierveld (DJG) scale: a scale of 0-6 with 6 being the most lonely
- UCLA loneliness scale: a scale of 3-9 with 9 being the most lonely

UCLA and De Jong scoring are strongly correlated (0.70). Within this report, we will be using the UCLA loneliness measure. This is in line with the Government's policy paper *A connected society: a strategy for tackling loneliness* and is the loneliness measure used for designing and reforming policies.

(Please see the Appendix 1 for more details.)

Following Ecorys' groupings for ULCA loneliness scores, to present a streamlined picture we have on occasion grouped UCLA scores as follows:

- 3/4/5 as not lonely
- 6/7 as moderately lonely
- 8/9 as most lonely.

	UCLA baseline
Not Lonely	51.81%
Moderately Lonely	33.10%
Most lonely	15.09%
	N=994

Key findings

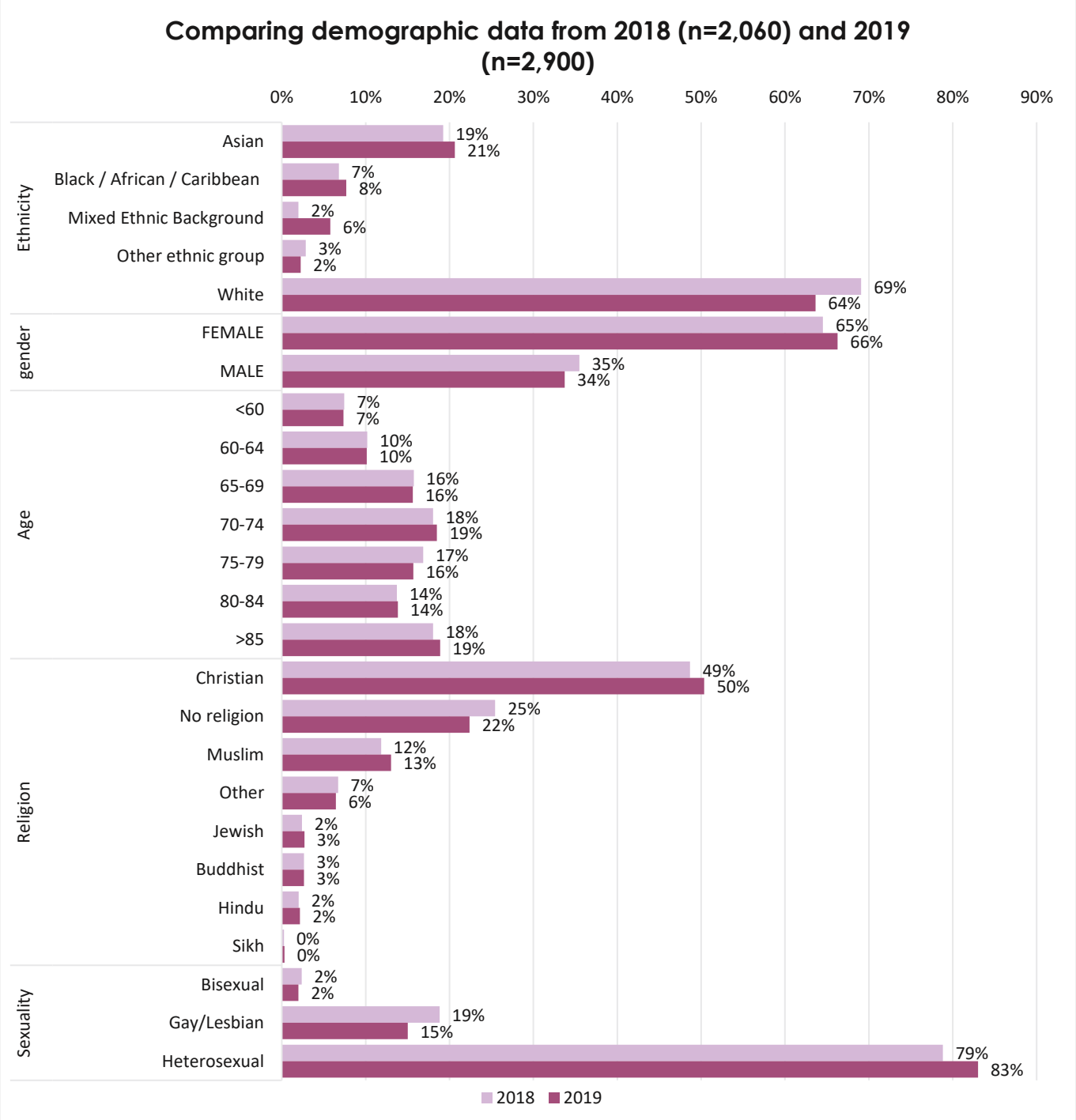
The key findings from analysis of the CMF data are set out below.

- **ABC participants predominantly live alone (68%).**
- **There are twice as many females than males participating in ABC.**
- **ABC participants on average have lower health scores than the English average for those aged 55-74 years.**
- **Being in poor health is a key barrier to being social and feeling connected.**
- **The loneliest participants are in the 60-64 age group**.
- **Those who rate themselves as being in better health are more likely to have lower loneliness levels.**
- **Those who feel that they take part in more activities than their peers have on average lower loneliness scores.** Compared with other measures at baseline, the extent to which participants feel that they take part in social activities compared to other people has the strongest relationship with respondent's loneliness score.
- **The data suggest that help scores are most linked to an improvement in loneliness scores:** While this finding should be treated with caution, as data is more incomplete than for other measures, the linear regression analysis suggests that the more ways in which participants help others, the lower their loneliness scores become.
- While the CMF data does indicate that UCLA scores are affected by a reversion to the mean, **from baseline to follow-up, loneliness levels do improve. The factor that is most associated with this is the average amount that participants report helping others**. Participant contributions and the ways that they help others are explored in the qualitative report.
- **It is not clear from the data *how* the ABC projects are impacting loneliness scores**. This is because the CMF questionnaire does not collect information about how frequently participants attend activities, and which types of activities they take part in. Including questions about this in the CMF would help to understand this.
- **Limitations of the data**: the data should be treated with caution because many respondents submitted incomplete survey responses and there is an overrepresentation in the data from certain projects, including Community Connectors and LGBT+ Connect.

Who are ABC participants?

Demographics

The demographic profile of ABC participants at baseline and follow-up is very much in line with the CMF data from last year. Where the average difference in percentage points is 1 percentage point (pp) and the maximum is 5pp. The table below illustrates the very small change in participant demographics from last year.



Survey respondents as a representative sample for all ABC participants

As discussed in the CMF report from October 2018, the demographic data for those who responded at baseline and at follow up are representative of the demographics of **the whole data set** (i.e. for all ABC participants, not just those who have received and completed the CMF questionnaire at baseline or follow up). The only substantial difference is that non-heterosexual participants are over represented at both baseline and follow up compared with the dataset as a whole[1]. There is also a lower proportion of BAME responses at baseline and follow-up compared to the whole data set. This led to a 2pp increase in white participants at baseline and an additional 7pp increase at follow up. These changes can be explained by the high proportion of LGBT+ Connect follow-up CMF survey respondents compared with other projects, where this project has the highest proportion of white participants (86% compared to the 54% ABC project average) and a near 100% non-heterosexual user group (compared to the 9% ABC project average).

Having said this, the average difference between the whole data set to the baseline demographic is 1pp and to the follow up data set it is 4pp (please see chart on page 7.) Please note that this data does not include respondents who chose not to answer certain demographic questions).

Regression analysis reveals that the follow up data can be used as a sample to make assumptions about the data set as a whole. Baseline UCLA scores were compared for those who have submitted complete follow up data and those who have not.

The table below shows UCLA scores:

- For those who did and those who did not respond to the follow-up.
- On average for the group and over the 7 possible scores.

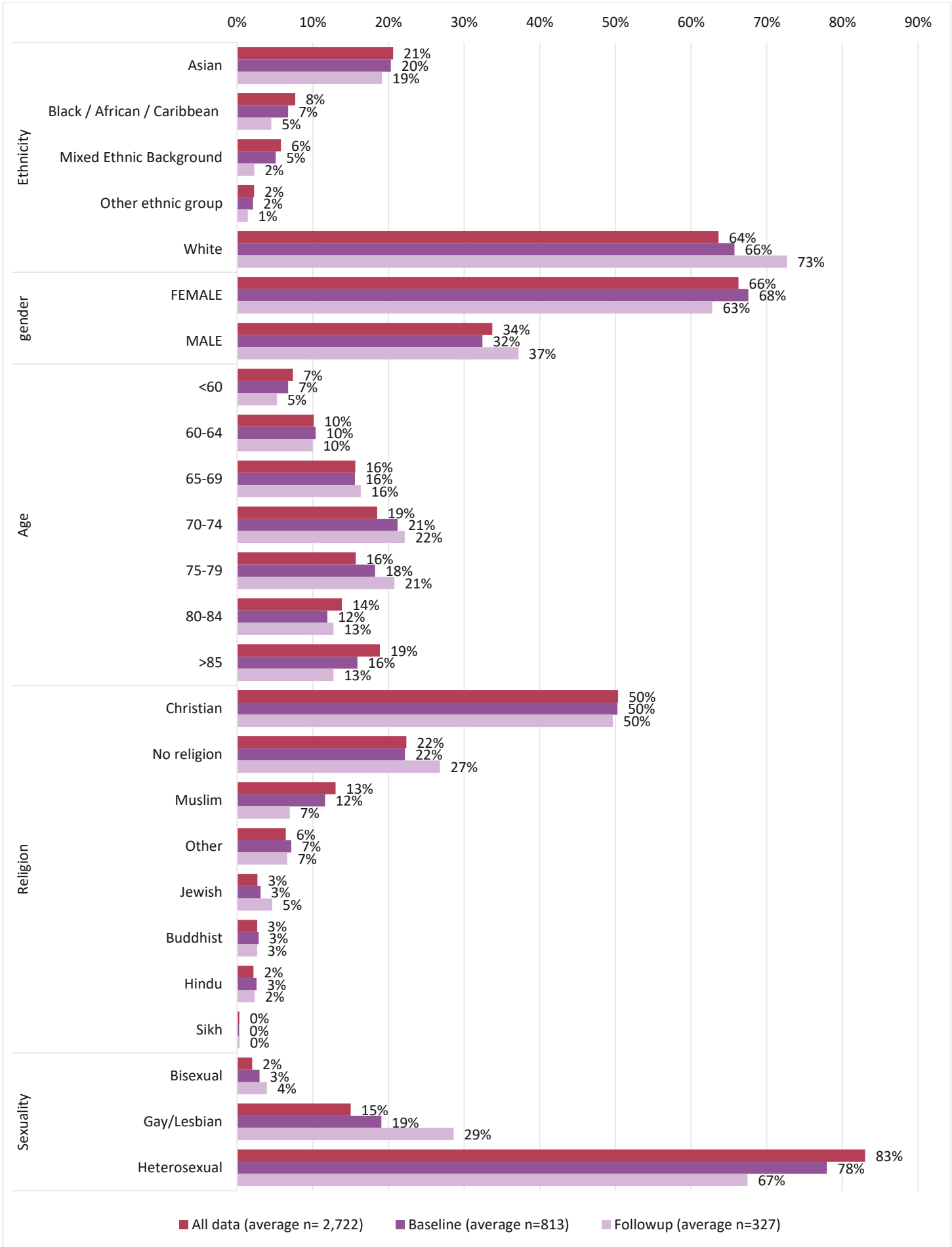
Baseline UCLA score	**With follow-up**		**Without follow-up**	
	Numbers of respondents	**Proportion**	**Numbers of respondents**	**Proportion**
3	108	29%	157	25%
4	46	12%	76	12%
5	45	12%	83	13%
6	95	25%	141	23%
7	31	8%	62	10%
8	16	4%	38	6%
9	33	9%	63	10%
UCLA score	**With follow-up**		**Without follow-up**	
Average	5.20		5.39	

The difference between the average baseline UCLA score for those with and those without follow-up data was 0.19. This is not statistically significant, as the related t-statistic of 1.90 is

[1] Non-heterosexual participants at baseline are 22% of the sample (5pp+) and at follow up 33% (16pp +)

below the standard threshold of 1.96. However, this should be revisited when more follow-up data are collected.

Given the minimal variation in the demographic data from baseline to follow-up, and the above analysis, we conclude that the follow up data can be used to make assumptions about programme participants.


0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
Ethnicity
Asian
21%
20%
19%
Black / African / Caribbean
8%
7%
5%
Mixed Ethnic Background
6%
5%
2%
Other ethnic group
2%
2%
1%
White
64%
66%
73%
gender
FEMALE
66%
68%
63%
MALE
34%
32%
37%
Age
<60
7%
7%
5%
60-64
10%
10%
10%
65-69
16%
16%
16%
70-74
19%
21%
22%
75-79
16%
18%
21%
80-84
14%
12%
13%
>85
19%
16%
13%
Religion
Christian
50%
50%
50%
No religion
22%
22%
27%
Muslim
13%
12%
7%
Other
6%
7%
7%
Jewish
3%
3%
5%
Buddhist
3%
3%
3%
Hindu
2%
3%
2%
Sikh
0%
0%
0%
Sexuality
Bisexual
2%
3%
4%
Gay/Lesbian
15%
19%
29%
Heterosexual
83%
78%
67%
All data (average n= 2,722)
Baseline (average n=813)
Followup (average n=327)

Loneliness scores and baseline

Demographics and loneliness scores

The figures outlined below are the entry level (baseline) scores. It should also be noted that the overall average UCLA score was 5.41 and this varied by gender, ethnicity and age group.

Demographic factors are linked to loneliness scores, where some demographic characteristics are linked to higher levels of loneliness:

- The highest average UCLA score corresponds with those in the 60-64 age bracket.
- Not including those under the age of 60, the non-lonely women (on average) are between 75-79 and the non-lonely men are between 80-85.
- In general, men on average are slightly lonelier than women.

	BAME Average baseline UCLA score	***N=***	***White Average baseline UCLA score***	***N=***	***Total Average Baseline UCLA score***	***N=***
FEMALE	**5.46**	**208**	**5.31**	**334**	**5.37**	**542**
<60	5.33	24	4.56	9	5.12	33
60-64	6.54	24	6.22	23	6.38	47
65-69	4.91	45	5.47	49	5.20	94
70-74	5.31	42	5.13	62	5.20	104
75-79	5.27	37	5.14	72	5.18	109
80-84	5.36	14	5.40	50	5.39	64
>85	6.23	22	5.28	69	5.51	91
MALE	**5.72**	**69**	**5.39**	**206**	**5.48**	**275**
<60	4.67	3	6.33	15	6.06	18
60-64	6.00	10	6.18	22	6.13	32
65-69	6.83	6	5.60	30	5.81	36
70-74	5.36	14	5.10	51	5.15	65
75-79	5.40	10	5.21	34	5.25	44
80-84	5.75	12	4.65	23	5.03	35
>85	5.86	14	5.42	31	5.56	45
Grand Total	**5.53**	**277**	**5.34**	**540**	**5.41**	**817**

We have calculated differences in female and male average scores and reviewed the t-statistic score in order to determine whether the differences in their loneliness scores are statistically significant. As per the table below, the data indicates that two categories show a variance from the average that is statistically significant: males aged 60 to 64, and females aged 60 to 64. This indicates that male and females in this age group are significantly more lonely, with men in this age group being significantly more lonely than women.

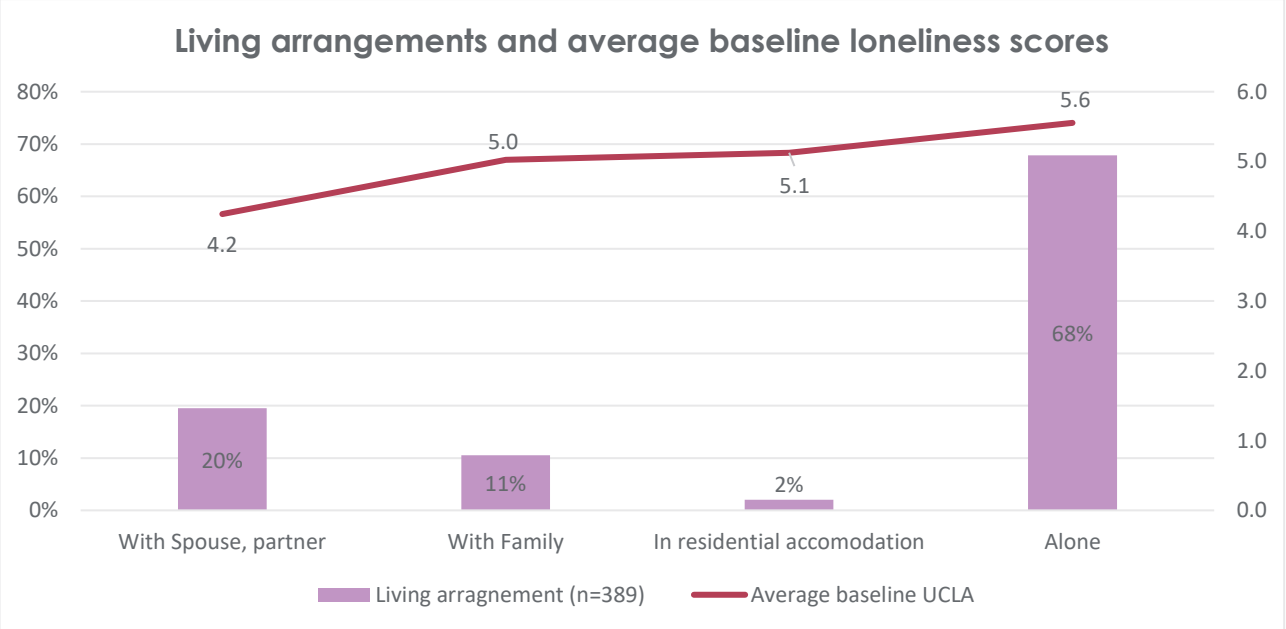
	Female		Male	
	Difference from female average	t-statistic	Difference from male average	t-statistic
<60	-0.2	-0.70	0.2	0.45
60-64	1.1	4.15	0.7	2.05
65-69	-0.1	-0.68	0.4	1.07
70-74	-0.2	-1.20	-0.3	-1.42
75-79	-0.2	-0.99	-0.2	-0.58
80-84	-0.1	-0.20	-0.4	-1.30
>85	0.1	0.52	0.1	0.17

We have also examined the differences in score from reporting ethnicity as White English/Scottish/Welsh/Northern Irish/UK or not. While the average loneliness scores for BAME individuals is higher than for white individuals, the difference has been shown to not be statistically significant (see the table below). However, delivering activities that are BAME inclusive will ensure that this discrepancy in loneliness scores does not increase.

	Difference from overall average	t-statistic
White English/Scottish/Welsh/Northern Irish/UK	-0.06	-0.67
Other	0.07	0.69

Living arrangements of participants

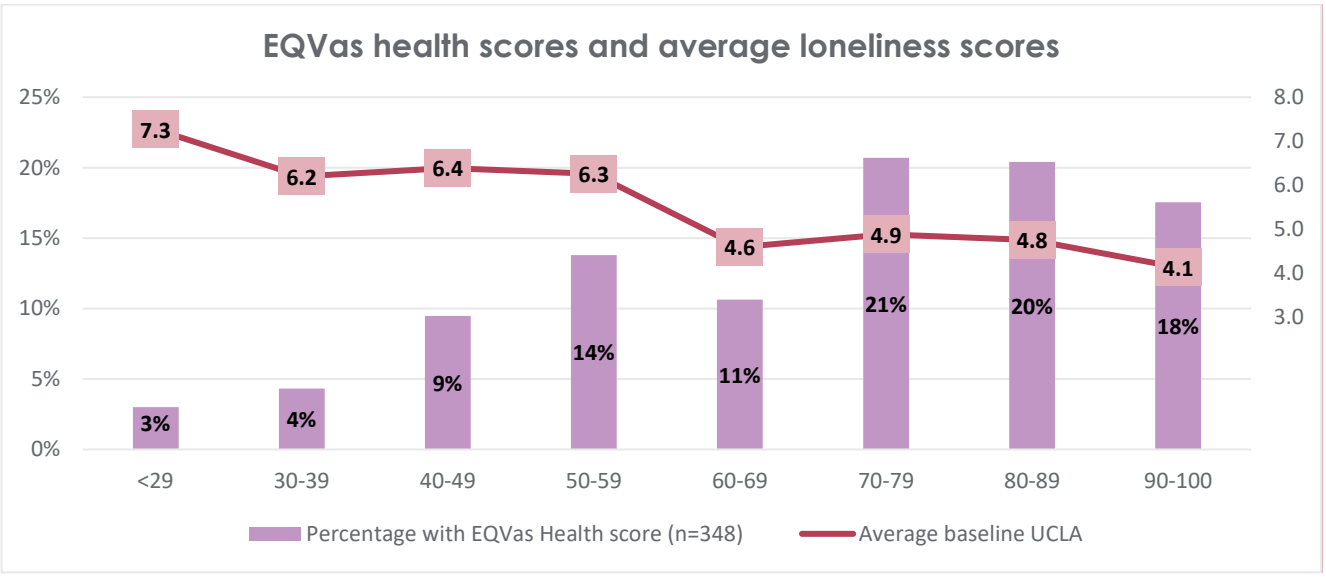
The CMF questionnaire asks participants to describe their living arrangements and to answer questions about their health. The chart below illustrates participants' living situations and their average baseline UCLA scores.



The figures suggest that ABC participants who live alone experience more loneliness than those who live with others.

Participants' health and loneliness scores

Health is assessed in the CMF questionnaire using questions about mobility, self-care, ability to engage in usual activities, whether they have any pain or discomfort and whether they experience anxiety or depression. Following this, participants are asked to rate their health on a scale of 0-100, with 100 being the best state of health. The chart below illustrates the percentage of participants at baseline with each EQVas health score and the corresponding average baseline UCLA score for this group.



Analysis suggests that these health scores are correlated with UCLA loneliness scores, where the higher the health score, the lower the average UCLA score (i.e. the healthier a participant perceives themselves to be, the less lonely they are). The biggest drop in loneliness scores occurs for those with health scores over 59, where average loneliness scores drop by close to 2 points. This finding suggests that there is value in considering how projects are able to reach and support participation from those who are in ill health.

The English Health survey (2012) suggests that the median average health score for all those aged between 55 and 74 in England is 80. For this data set, comparing the scores for the same age range, the median score is 70, 10 points lower than the English average, suggesting that ABC attracts those in poorer health than the English average.

Social measures and loneliness

Last year we explored various social measures that are included within the CMF survey and their link to loneliness levels. This year we have used regression analysis to understand which of these measures are **the most associated** with loneliness levels. Results can be seen below. Numbers closer to 0 suggest no correlation, and those closer to 1 or -1 suggest a strong correlation.

The social measure most strongly correlated to baseline UCLA scores is the '**Take Part**' score. This asks participants to state how often they feel that they take part in social activities compared to their peers. Participants were asked to choose on a Likert scale between 'much less than most' and 'much more than most', which each correspond to a numerical score from 0-5. The

correlation suggests that the more participants **feel that they take part in social activities** compared to other people of their age, **the less lonely they are**, and vice versa.

The regression analysis also showed an unsurprising correlation between social levels and health scores. The highlighted cells on the table below represent the strongest correlations at baseline:

- The strongest factor that correlates with UCLA scores at baseline is the 'Take Part score' – in theory, if there were no other variables to take into account, if a UCLA score would increase by one point, this would suggest that the Take Part score would decrease by 0.22 points; in practice, there are many factors to take into account.
- Social scores are strongly correlated with one another, where an increase in 'social score' is related to an increase in 'take part' score, 'involved score', 'influence score' and 'help score' (see appendix 3 for an explanation of these measures)
- These are all linked to participants' EQVas health scores, where higher health scores are correlated with higher social scores. Being in poor health can therefore be seen as a key barrier to being social and feeling connected.

	UCLA (baseline)	Gender	Age	Non-White	Non-Hetero	Social score	Take part score	Involved score	Influence score	Help score	EQ5D score	Carer
UCLA (initial)	1.00											
Gender	-0.05	1.00										
Age	-0.04	0.03	1.00									
Non - White	0.03	0.10	-0.21	1.00								
Non - Hetero	-0.06	-0.31	-0.16	-0.11	1.00							
Social score	-0.13	-0.06	0.01	-0.15	0.14	1.00						
Take part score	**-0.22**	-0.02	0.01	-0.09	0.12	**0.76**	1.00					
Involved score	-0.04	0.01	-0.03	0.00	-0.01	**0.32**	**0.26**	1.00				
Influence score	-0.10	-0.05	-0.02	-0.04	0.11	**0.70**	**0.77**	**0.29**	1.00			
Help score	-0.11	-0.11	-0.02	-0.18	0.20	**0.70**	**0.56**	**0.31**	**0.55**	1.00		
EQ5D score	-0.12	-0.12	-0.02	-0.07	0.12	**0.60**	**0.71**	**0.21**	**0.70**	**0.44**	1.00	
Carer	-0.02	0.01	-0.24	-0.02	0.07	0.05	0.00	0.11	0.01	0.12	-0.01	1.00

Change in loneliness levels from baseline to follow up

Analysing the follow up data for UCLA loneliness scores (for all 374 for which we have follow up data) shows that on the whole loneliness levels have improved. Where the average loneliness score has changed as follows:

Average UCLA baseline (N=374)	Average UCLA at follow up (N=374)
5.20	5.06

The difference between the two average scores is -0.14. Our calculation is that the t-statistic of statistical significance is equal to -1.42, which falls short of the standard required threshold of 1.96. This suggests that this broad-brush approach does not reveal a statistically significant difference in loneliness scores from baseline to follow up.

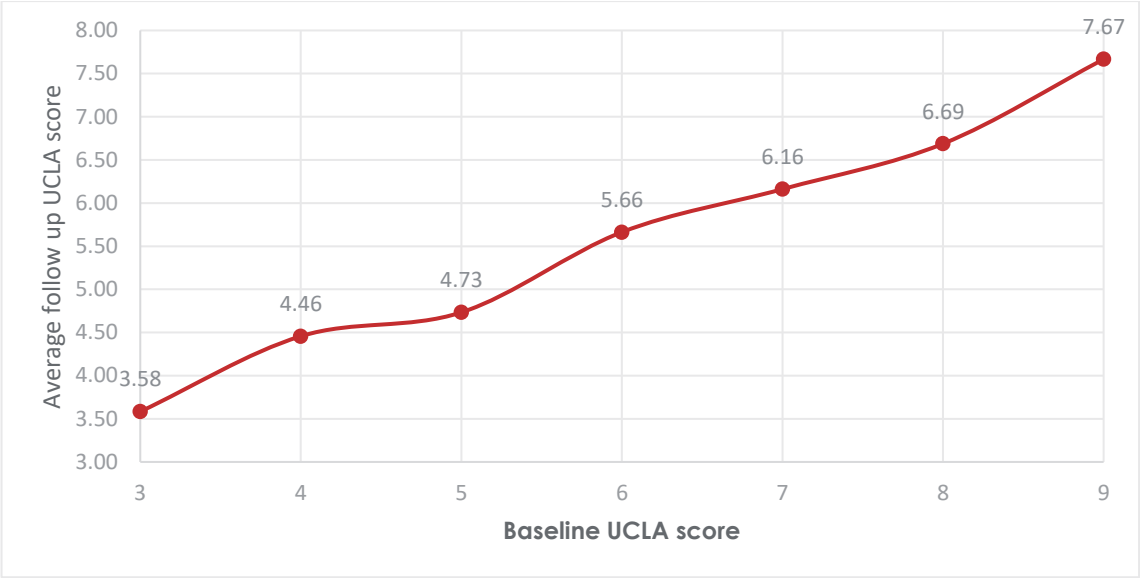
Changes in UCLA scores are more dramatic for those who scored most lonely at baseline. This is a positive result for the programme. However, numbers are low for some subgroups and this trend will be checked when more data are available.

Baseline score	N=	Follow up average score	Average change
3	108	3.58	0.58
4	46	4.46	0.46
5	45	4.73	-0.27
6	95	5.66	-0.34
7	31	6.16	-0.84
8	16	6.69	-1.31
9	33	7.67	-1.33

This reduction in average loneliness scores can be seen across different starting points:

(N=374)	Baseline	Follow up	Difference (pp)
3	28.88%	28.61%	-0.27
4	12.30%	14.97%	2.67
5	12.03%	13.37%	1.34
6	25.40%	25.13%	-0.27
7	8.29%	6.42%	-1.87
8	4.28%	5.35%	1.07
9	8.82%	6.15%	-2.67

The improvement in loneliness levels is greater for those who started most lonely. The average follow-up loneliness scores for those who started with UCLA scores 8 and 9 are 6.69 and 7.67 respectively.



Testing statistical significance

To test whether these changes in loneliness scores from baseline to follow up are statistically significant, linear regression analysis was used to understand 'expected UCLA scores' and whether any correlated variables could be used to accurately predict this, and what, if any, statistical data errors could be identified.

To do this, linear regression was used to identify **what factors have the greatest correlation with changing loneliness scores**, and then to determine **'expected' UCLA scores** at follow up for instances where this data exists.

Step 1: This part of the process teed-up an assessment of reversion to the mean effects. Such effects are separate from the impact of ABC, and a first step in identifying these effects is determining the extent to which a client is "different" from what would be expected. A first set of linear regression analysis showed that '**Take Part**' scores were the most strongly correlated with UCLA loneliness scores and that for every Take Part score point gained from baseline to follow up, the UCLA score reduced by 0.36 points. Note that:

(a) variables in respect of Age, Gender, BME status, EQ5D (heath score) as key variables that could realistically be expected to influence UCLA did not show up as statistically significant in this analysis (see appendix 2).

(b) living arrangement data was not included as the many gaps in respondents meant that this would have substantially reduced the available data set.

(c) data on all respondents was used, regardless of whether follow-up data was available or not.

Take part scores were then used to identify 'expected UCLA scores' as a means of determining clients' divergence from the mean.

Step 2: A second set of regression analysis, this time only in relation to those clients with follow-up data and considering participants' initial divergence from the 'expected UCLA score', showed that UCLA scores from baseline to follow up do **revert to the mean**. This means that for those who start in the loneliest categories, they would naturally move to less lonely categories and vice versa, not necessarily as a result of the programme. It was, however, found that some effects between baseline and follow up are significant above and beyond reversion to the

mean and that ABC can be seen to have an impact. The next steps identify what variable could be having the greatest impact.

Step 3: As part of that same second set of regression analysis, it was found that **'help scores'** are linked to changes in loneliness scores from baseline to follow up. In other words, if you increase the help score of an individual by 1 point between baseline and follow up, you can expect their UCLA score to decrease by 0.36. This could suggest that helping others more between baseline and follow-up leads to a significant decrease in loneliness levels (compared with other social measures, see appendix 3).

There are some signs that participants may have reduced loneliness scores due to other social measures explored in the CMF questionnaire, but currently there is not sufficient evidence in the data to reach statistical significance. Changes in other social scores between baseline and follow up are as follows:

	Average baseline score	Average follow up score	Change in average score
Contact (N=307)	3.56	3.58	0.02
Social (N=413)	1.84	1.90	0.06
Speak Local (N=411)	6.92	7.05	0.12
Help (N=379)	1.34	1.59	0.25
Take Part (N=396)	1.91	1.92	0.02

Statistical analysis on the basis of a standard error of approximately 0.10 indicates that the change in the "Help" variable is statistically significant, with a t-statistic of 2.5 exceeding the standard threshold of 1.96. This suggests that on average participants report more community involvement six months after they joined an ABC activity.

Appendix 1: Loneliness measures

Loneliness is measured using two scoring methods. This report focused on the **UCLA loneliness scale**. This asks the following questions:

1. How often do you feel you lack companionship?
2. How often do you feel left out?
3. How often do you feel isolated from others?

Answers are scored as follows:

- Hardly ever: 1
- Some of the time: 2
- Often: 3

Where answering all 3 questions corresponds to a score from 3-9, with 3 being the least lonely and 9 being the most lonely.

Appendix 2: Regression analysis

Initial full analysis shows only Age and Take Part as statistically significant:

UCLA1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Gender	.0769371	.2304196	0.33	0.739	-.3764077	.530282
Age	-.0257826	.0117526	-2.19	0.029	-.0489057	-.0026596
BME	.0331367	.217523	0.15	0.879	-.3948345	.4611079
NonHetero	.1944495	.2348246	0.83	0.408	-.2675622	.6564612
Socialscore	.0555641	.0936055	0.59	0.553	-.1286024	.2397306
Takepartscore	-.6994222	.1027025	-6.81	0.000	-.9014869	-.4973575
Involvedscore	.0261594	.1575262	0.17	0.868	-.2837696	.3360884
Influencescore	-.0008617	.0811247	-0.01	0.992	-.1604726	.1587491
Helpscore	-.1041222	.0704386	-1.48	0.140	-.2427086	.0344641
EQ5Dscore	-.2591942	.2814177	-0.92	0.358	-.8128767	.2944883
Carer1	-.2051575	.2982438	-0.69	0.492	-.7919449	.3816299
_cons	8.497927	.9872533	8.61	0.000	6.55553	10.44032

Scaled down analysis shows that age is no longer statistically significant, leading to final model having only Take Part score:

UCLA1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Age	-.0076694	.0064231	-1.19	0.233	-.0202738	.004935
Takepartscore	-.3602888	.0506098	-7.12	0.000	-.4596035	-.2609742
_cons	6.15868	.4808673	12.81	0.000	5.215045	7.102315

Appendix 3: Social scores

Measure name	Description	Scoring
Social	Not counting the people you live with, how often do you do any of the following with children, family or friends? • Meet up in person • Speak on the phone (including FaceTime and Skype) • Email or write • Text message	Each is scored from 0-5 with 5 being the most frequent contact and then an average is taken across each social measure.
Take part	Compared to other people of your age, how often would you say you take part in social activities?	Scored from 0-4 with 4 being much more than most and 0 being much less than most
Help	In the last 12 months, have you given unpaid help in any of the ways shown on this card? • Raising or handling money / taking part in sponsored events • Leading a group/member of a committee • Organising or helping to run an activity or event • Visiting people • Befriending or mentoring people • Giving advice / information / counselling • Secretarial, admin or clerical work • Providing transport/driving •Representing •Campaigning •Other practical help •Any other help	Each item counts for 1 point and a total is taken
Speak local	Thinking about people in your local area, how often do you speak to anyone who isn't a family member? Please include local friends, neighbours, acquaintances, people who come in to help you, people you see if you go out, and so on.	This is scored from 0-8 with being the most frequent contact
Involved	Which of the following activities have you been involved in?	A total is taken for each element that a participant does

	• Sharing ideas to help plan a new activity • Deciding how an activity will be delivered • Helping to run an activity for other people • Gathering information to see if an activity is making a difference for people • Been consulted about policies and services	
Influence	Do you agree or disagree that you personally can influence decisions affecting your local area?	A Likert scale from 'definitely disagree' (1) to 'definitely agree' (5)