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Ageing Better Impact Evaluation Report: Methods note

Ecorys: Diarmid Campbell-Jack, Amy Humphreys, James Whitley, Jenny Williams and Korina Cox
Bryson Purdon Social Research: Caroline Bryson and Susan Purdon

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1.0 Introduction

In 2014 The National Lottery Community Fund (TNLCF) commissioned Ecorys UK to lead the national evaluation of the Ageing Better programme. The evaluation team also included Bryson Purdon Social Research and Professor Christina Victor from the Brunel Institute for Ageing Studies at Brunel University.

1.1 The Ageing Better programme

Ageing Better is an £87 million, seven-year programme funded by TNLCF. The programme runs from 2015 until 2022, following an extension from the initial six-year term, with this extension taking account of the impact of the COVID-19 pandemic on the programme's work.

The Ageing Better programme funds the following voluntary sector led partnerships in each of 14 areas across England

- Ageing Better in Birmingham
- Bristol Ageing Better
- Ageing Better in Camden
- Brightlife (Cheshire)
- Talk, Eat, Drink (T.E.D.) (East Lindsey)
- Ambition for Ageing (Greater Manchester)
- Connect Hackney
- Age Friendly Island (Isle of Wight)
- Time to Shine (Leeds)
- Leicester Ageing Together
- Ageing Better Middlesbrough
- Age Better in Sheffield
- Ageless Thanet
- Ageing Well Torbay

The aim of Ageing Better is to improve the lives of people aged 50 and over, by addressing social isolation and loneliness, improving social connections, and enabling people over 50 to be more engaged in the design of services for their

communities. The programme also aims to challenge negative narratives around ageing and promote a positive image of later life.

The starting hypothesis for Ageing Better was that reducing social isolation among people over 50 would improve their wellbeing and give them the confidence and support to be more active in their neighbourhoods. It recognised that giving people a voice would be critical to achieving its aims and that to do this people over 50 needed to be viewed as assets.

As a national strategic programme, Ageing Better also aims for its work through local partnership areas to influence wider efforts to address isolation and loneliness and the approach to ageing, both locally and nationally.

The intended outcomes for the programme are that:

1. People over 50 are less isolated and lonely
2. People over 50 are actively involved in their communities with their views and participation valued more highly
3. People over 50 are more engaged in the design and delivery of services that improve their social connections
4. People over 50 are recognised for their positive contribution to society
5. Services that help to improve social connections are better planned, co-ordinated and delivered
6. Better evidence is available to influence the services that help reduce isolation for people over 50 in the future

More information on the Ageing Better programme is available in the Impact Evaluation Report.

1.2 Methods note overview

This Methods note contains information on three quantitative strands of research carried out as part of the national evaluation:

- **Common Measurement Framework (CMF).** A key purpose of the national evaluation of Ageing Better was to monitor participant numbers, collect data about participants to understand who took part in the programme and the changes that they experienced in their levels of social contact, wellbeing and loneliness during and after their involvement. Data on participant

demographics and outcomes was collected using Ageing Better participant questionnaires, with project participation data completed by project staff. Data was used during programme delivery to monitor the number of people taking part, to understand the characteristics of those taking part and to provide data to evaluate the impact on the change in participant outcomes.

- **Impact evaluation of the Ageing Better programme**. The key question addressed by the impact evaluation was whether participation in Ageing Better improved older people's levels of social contact, loneliness and wellbeing, compared to those who are not engaging in any organised activities. The impact evaluation used CMF data on how outcomes changed for Ageing Better participants and compared it to how outcomes changed for other people. The impact evaluation also considered how effective Ageing Better is for different sub-groups of older people.
- **Project type data**. Data from a study commissioned by TNLCF and undertaken in 2019 by the University of Sheffield and the University of Kent classified Ageing Better projects into different types. Information was provided by the 14 partnerships on 374 projects. The project types data was linked to the CMF data to allow analysis of the types of projects that participants took part in and the link between project types and participant outcomes.

This report explains the methodology for each strand and provides data tables to support those who are interested in the evaluation and to accompany the Ageing Better Impact Evaluation Report.

The Impact Evaluation Report explores the profile of people taking part in Ageing Better and the kinds of activities that engaged them. The report also explores the impact – or effect – of taking part in Ageing Better activities. It draws on data from all three strands of quantitative data collection covered in this Methods note and includes background or contextual information from other data sources as required, for example information on population prevalence from nationally representative surveys.

Common Measurement Framework

2.0 Common Measurement Framework

2.1 Overview of the Common Measurement Framework

The CMF was designed to outline relevant common measures for monitoring the outcomes of participants in Ageing Better. The data from these measures was used to establish evidence so partnerships and projects could 'test and learn' during delivery, and to build a dataset (the CMF dataset) for the final evaluation containing information on participant demographics, outcomes and their project participation.

The outcome measures in the CMF dataset were to be used in two ways:

- To assess change for those taking part in Ageing Better – both to see the change for all participants (Table 13) and how project type links to change (Chapter 4.0).
- To separately compare any change for those taking part in Ageing Better to similar data collected for the impact evaluation from a comparison group of people who did not take part in Ageing Better (reported in Chapter 3.0).

During the first year of the Ageing Better national evaluation (2014, as the evaluation began before delivery in 2015), the national evaluation team worked with TNLCF and the 14 partnerships to agree a set of common measures for the CMF.

An online platform was developed so project staff could enter data into the platform and access a regularly updated dashboard containing results for key measures. Data for the common measures came from two separate sources.

Ageing Better participant questionnaires. Following feedback from Ageing Better partnerships, the participant questionnaires were designed as self-completion paper questionnaires as this approach was most suitable for projects and participants. The questionnaires covered participants' demographics and programme outcomes. Data from completed questionnaires was entered into the online platform by project staff.

- **Project participation data**. The project participation data covered information on the projects each person attended and their engagement. The data was entered directly into the online platform.

Both the participant questionnaires and project participation data questions were finalised following consultation between partnerships, external expertsand TNLCF. Feedback from partnerships was particularly valuable in selecting the most appropriate measures, given the objectives of Ageing Better programmes and the situation and needs of potential respondents.

The CMF was reviewed by the Ecorys Research Ethics Committee, which co-opted an external expert, Dr Bernadette Bartlam, Lecturer in Health Services at Keele University.

2.2 CMF fieldwork period

Data was collected between 23 October 2015 and 23 March 2020, with data collection ending earlier than planned at the beginning of the UK Government's lockdown due to the COVID-19 pandemic.

2.3 Ageing Better participant questionnaires and data collection

Three different participant questionnaires were produced to collect information from those taking part in the programme:

- **Full questionnaire**. This was the standard version of the questionnaire to be completed where possible. The full questionnaire contained questions on participants' demographics, and outcome measures.
- **Short questionnaire**. This was a shorter version of the full questionnaire used when projects felt that a full questionnaire was not suitable. The short questionnaire comprised questions on outcome measures and demographics.
- **Local questionnaire**. This provided tailored information on a small number of short questionnaire measures, and was used by only a few projects.

Two separate versions of each questionnaire were produced for use at different times.

- **An entry questionnaire** was completed as soon as participants entered their first project. This questionnaire covered participant demographics, project participation and outcome measures.

- **A follow-up questionnaire** was used for subsequent data collection. Partnerships were asked to ensure these questionnaires were completed when participants exited their first project or entered or exited any subsequent projects (exit or follow-up), and 6 and/or 12 months after exiting the programme (long-term follow-up). This questionnaire focused on outcome measures, and any participant demographic information that may have changed since completion of the initial questionnaire, such as experience of any longstanding illness or disability.

2.3.1 Participant questionnaire design

The questionnaires described above were developed to provide information on participant demographics, and on programme outcomes linked to the programme Theory of Change.

Participant demographic questions included questions on gender, age, ethnicity, sexuality, longstanding illness or disability, living arrangements and whether participants were carers.

Programme outcome questions used indirect measures to assess the outcomes of Ageing Better where possible. For example, instead of asking people to state how often they felt lonely, indirect measures asked several questions so loneliness could be measured in a standardised way. While the larger number of questions required for these indirect measures added to the research burden for participants, it provided a more rigorous approach[1]. The following outcome measures were selected:

- **Social and emotional loneliness**. Loneliness was measured using two indirect measures:
  - The De Jong Gierveld (DJG) Loneliness Scale. The DJG scale is a rigorous tool that was specifically designed for use with older people and is widely used.[2] The DJG scale measures overall loneliness using a mix of positive and negatively worded questions, and differentiates between social and

[1] Measuring loneliness: Guidance for use of the national indicators on surveys', Office for National Statistics. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys. Accessed on 23 July 2021.
[2] 'Measuring your impact on loneliness in later life', Campaign to End Loneliness: Connections in Older Age. Available at: https://www.campaigntoendloneliness.org/wp-content/uploads/Loneliness-Measurement-Guidance1.pdf. Accessed on 23 July 2021.

emotional loneliness. The six-scale, three-response, shortened version of the scale is used, providing an overall mean average of loneliness score on a scale of 0 to 6, a social loneliness sub-scale mean average on a scale of 0 to 3, and an emotional loneliness sub-scale mean average on a scale of 0 to 3. Higher scores represent greater loneliness. Lonely is defined as scoring 2 or above on a scale from 0 to 6.

- The UCLA scale. The UCLA scale was developed to measure relational connectedness, social connectedness and self-perceived isolation.[3] There are several versions including a short three-item scale. The questions are all negatively worded. It has been widely cited, and forms part of the English Longitudinal Study of Ageing (ELSA), meaning that local data can be compared with data from a representative sample of older people in England. Since 2018, the UCLA is the government's recommended indirect measure for loneliness.[4] It is used as a measure of overall loneliness, providing one overall score between 3 and 9, with a score of 9 representing the loneliest. Lonely is defined as scoring 6 or more on a scale from 3 to 9.

- **Social contact with family and friends**. This measure evaluates the impact of activities on social contact within existing social circles. Evidence shows that lack of social contact is a distinct element of social isolation. An increase in the average score indicates greater social contact. To reduce the research burden on participants, this question is an adaptation of three questions used in the ELSA (which asks this question separately for children, for family and for friends).[5]

- **Social contact with non-family members**. This measures social contact outside of the family and with neighbours and the community, a lack of which is a potential precursor to social isolation. An increase in the average score indicates greater social contact.

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[3] 'Measuring loneliness: Guidance for use of the national indicators on surveys', Office for National Statistics. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys. Accessed on 23 July 2021.
[4] 'Measuring loneliness: Guidance for the use of national indicators on surveys', Office for National Statistics. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys. Accessed on 23 July 2021.
[5] See English Longitudinal Study of Ageing (ELSA) at: https://www.elsa-project.ac.uk

- **Social participation in clubs, organisations and societies**.[6] This measures involvement in groups, and the influence of social participation on social isolation. An increase in the average score indicates greater participation in different categories or types of membership.
- **Taking part in social activities**.[7] This measures change in engagement in social activities, a lack of which is a potential precursor to social isolation. An increase in the average score indicates greater participation.
- **Wellbeing**, measured by the Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) scale.[8] This focuses on both mental and emotional wellbeing (how 'good' somebody feels) and psychological functioning (how well somebody thinks they are functioning). A higher score represents higher wellbeing. Low wellbeing is defined as a score of less than 20 on a scale from 7 to 35.
- **Quality of life**, measured by the EQ-5D-3L scale.[9] This looks at issues with mobility, self-care, pain/discomfort, anxiety/depression and if participants report any problems with carrying out their usual activities (e.g. work, study, housework, leisure activities). A higher score represents a higher quality of life.
- **Health**, measured by the EQ-VAS scale.[10] This reports participants' self-rated health, from 'best imaginable health state' (100) to 'worst imaginable health state' (0).
- **Volunteering**, measured using a question adapted from the Community Life Survey to incorporate answer options relevant to Ageing Better.[11] This measure is used to record participation in activities that aim to support volunteering and provide evidence of the types of volunteering carried out by participants, as well as collecting information on whether respondents plan to

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[6] Question wording used in ELSA and forms part of the Shankar et al. (2011) social isolation index. 'Social isolation, loneliness, and all-cause mortality in older men and women', Andrew Steptoe et al., Proceedings of the National Academy of Sciences, 2013, 110(15), pages 5797–5801.
[7] The source is the European Social Survey, which has been used in the UK context. For more information, see European Social Study. Available at: http://www.europeansocialsurvey.org. Accessed on 23 July 2021.
[8] Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS) © NHS Health Scotland, University of Warwick and University of Edinburgh, 2006, all rights reserved. Available at: https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs. Accessed on 23 July 2021.
[9] 'EQ-5D-3L: About', Euroqol. Available at: https://euroqol.org/eq-5d-instruments/eq-5d-3l-about/. Accessed on 23 July 2021.
[10] 'EQ-5D-3L: About', Euroqol. Available at: https://euroqol.org/eq-5d-instruments/eq-5d-3l-about/. Accessed on 23 July 2021.
[11] Data available from 'Health survey for England, Chapter 4.0, General mental and physical health', NHS Digital. Available at: http://digital.nhs.uk/catalogue/PUB13218. Accessed on 23 July 2021.

volunteer in the future. An increase in the average score demonstrates increased participation in different volunteering activities.

- **Co-design**, measured by asking participants what activities they have been involved with, using a bespoke response list agreed separately with each partnership. Common activities asked across all areas included sharing ideas to help plan a new activity, deciding how an activity will be delivered and helping to run an activity for other people. An increase in the average score demonstrates greater participation in different volunteering activities.
- **Influencing**, measured using a Community Life Survey[12] question asking participants if they think they can influence decisions affecting their local area. A higher score represents greater agreement.

Most questions were included by all projects. This was so that standardised data could be collected across all partnerships, maximising the sample size and the ability to undertake detailed analysis, and allowing results across partnerships to be aggregated. Other CMF questions were optional, with partnerships able to choose to include these questions depending on their particular projects and needs.[13]

Project staff sought informed consent directly from eligible participants (see Section 2.3.2) and obtained consent from all participants using consent forms. Participants opted in to the research based on information provided about the research and the use of their data. They could skip any questions if they wished or choose not to take part in the research altogether.

Guidance was provided to partnerships and projects on administering questionnaires, research ethics, obtaining informed consent and using the online platform. Guidance was provided via face-to-face workshops, written guidance documents and an email and telephone helpdesk. Hall Aitken, the Ageing Better National Support and Development contractor, also offered training to partnerships. Guidance included ensuring participants were given enough support where necessary to complete questionnaires. In some cases, data was collected by telephone, email or online surveys.

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[12] Data available from 'Health survey for England, Chapter 4.0, General mental and physical health', NHS Digital. Available at: http://digital.nhs.uk/catalogue/PUB13218. Accessed on 23 July 2021.
[13] In addition, each partnership developed their own answer options to a question on co-design so they could collect data relevant to their exact approach to co-designing.

2.3.2 Participant sampling

All Ageing Better participants were invited by project staff to complete questionnaires where it was deemed reasonable and appropriate to do so. There were several reasons why participants might not be asked to complete a questionnaire:

- Where projects were one-off events or light touch and intended only to support engagement in the programme rather than have a direct influence on outcomes.
- Where it was not practical to collect data, for example, when projects took place outdoors.
- When staff knew participants would not be able to provide informed consent, in line with the Mental Capacity Act 2005 Code of Practice.[14]
- When project staff felt that asking participants to complete questionnaires, particularly those containing sensitive questions, was too much of a burden.

2.4 Project participation data collection

Data from the Ageing Better participant questionnaires was supplemented with project participation data on the projects each person attended and their engagement.

Project participation information included questions covering: participant name, start and end date of project; whether they were provided with information only or engaged in one-off or ongoing activity; which participant questionnaire they completed; how they found out about the project; whether they were a volunteer. Participation information also included information on project activities, which was linked to data on project types collected as part of a separate exercise (see Chapter 4.0).

Project staff entered all the project participation information directly into the online platform, asking respondents to provide details where required. Data was usually entered when participants started a project and updated as required on an ongoing basis (for example, on the end date of projects and project activities).

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[14] 'Mental Capacity Act 2005 Code of Practice', Department for Constitutional Affairs. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/921428/Mental-capacity-act-code-of-practice.pdf. Accessed on 23 July 2021.

As with the participant questionnaire, guidance was provided to projects and participants on fulfilling project participant data requirements.

2.5 CMF dataset

Data from the Ageing Better participant questionnaire and the project participation data were combined in the final CMF dataset.

The final CMF dataset consists of data (both from questionnaires and project participation data) from 35,920 participants across 366 projects. This compares to 140,886 participants recorded in Ageing Better monitoring information (data on attendance collected on an ongoing basis by project staff) although, as noted previously, not all participants were asked to complete a participant questionnaire. Outcomes at baseline were collected for 21,046 participants, with 8,085 providing outcomes at any follow-up questionnaire (the number of completed follow-ups was affected by the early closure of data collection due to the pandemic).

Table 1 CMF completion

	Number	Percentage of number involved (%)	Percentage of CMF questionnaires (%)
Number of people involved in Ageing Better in total	140886	-	-
...those that completed a CMF questionnaire	35920	25	-
...including demographics (based on gender)	33765	24	94
...including outcomes at baseline (based on contact with family and friends)	21046	15	59
...including outcomes at any follow-up (based on contact with family and friends)	8085	6	23
Base size		*140866*	*35920*

The full questionnaire was completed by almost two-thirds of participants (64%) who competed questionnaires (Table 2), with 32% completing a short questionnaire. A local tool was completed by 3% of participants, and details on the tool used were not provided for a further 2%.

Table 2 Ageing Better participant questionnaire completion

Ageing Better participant questionnaire completed	Number of participants	Percentage of participants completing each CMF tool (%)
Full questionnaire	22907	64
Short questionnaire	11566	32
Local questionnaire	909	3
Type of questionnaire not recorded by staff	544	2
Base size	*35920*	

The analysis in this Methods note and the Impact Evaluation Report includes data from relevant measures from across all types of questionnaires as applicable. The total number of responses for questions varies according to whether questions were included by all projects or were additional questions, the type of questionnaire used by each project and how often participants skipped individual questions.

Most (61%) of the projects that completed CMFs had 50 or fewer CMF participants, 16% of projects had between 51 and 100 participants, with just under a quarter (23%) having over 100 participants. Four CMF projects had over 1,000 participants.[15] As data was not collected for all projects and participants, this data should not be used as a measure of relative attendance across projects.

2.6 CMF data quality checks and analysis

At the end of the fieldwork period, the CMF dataset was cleaned and quality-assured to check for accuracy, including removing erroneous data (e.g. implausible ages or project dates) and non-responses and verifying the quality of the data (e.g. categorising non-response, liaising with partnerships to check that data had been collected and that there were no quality concerns, and removing data where the project participation information had been entered in the online platform but not a questionnaire).

These checks included making sure the dataset linked together all the data from the same person across different questionnaires (e.g. entry, exit, long-term follow-up) and across all the projects in which they may have taken part. This linking was

[15] These were Wellbeing in Thanet, Wellbeing Practitioners Project in Sheffield, Community Connectors in Camden and Age Friendly Community Development in Greater Manchester (although the last included a variety of small community-based projects rather than forming one single project as with the other three large-scale projects).

achieved using the Unique Reference Number assigned to each participant to track their participation.

The clean CMF dataset was merged with data from the project types dataset (see Chapter 4.0) to provide additional information on the types of project that each participant attended.

Analysis of the CMF dataset included in this Methods note was carried out using R software.

Analysis focused on participant demographics, outcomes and their project participation. Outcomes are presented in this chapter both at baseline stage (to show the characteristics of people starting the programme) and comparing baseline to their final follow-up (to show how outcomes changed over time). The latter analysis (Table 13) should not be interpreted as suggesting that any change is necessarily linked to the programme as similar data for a comparison group is not provided (this analysis is provided in Chapter 3.0).

The analysis uses various thresholds for key outcome measures. The following table shows the thresholds and whether they are used in the CMF analysis (Chapter 2.0), impact evaluation (Chapter 3.0) and/or project typology analysis (Chapter 4.0). Different thresholds were used for certain measures in the same chapter depending on the analysis required.

Table 3. List of thresholds used for outcome measures in the Methods note, and the sections they are used in

Measure	Threshold	CMF	Impact	Typology
DJG social and emotional loneliness scale	"Lonely" defined as scoring 2 or above on a scale of 0 to 6	✓	✓	✓
UCLA loneliness scale	"Lonely" defined as scoring 6 or above on a scale of 3 to 9	✓	✓	✓
UCLA loneliness scale	"No loneliness" defined as score of 3 and "Any loneliness" defined as a score of 4 to 9, both on a scale of 3 to 9	×	✓	×
UCLA loneliness scale	"No loneliness" defined as score of 3, "Medium loneliness" defined as a score of 4 to 6, "High loneliness" defined as a score of 7-9 both on a scale of 3 to 9	×	×	✓
Short Warwick Edinburgh Mental Wellbeing Scale	"Low wellbeing" defined as scoring 19 or less on a scale of 7 to 35	✓	✓	✓
Short Warwick Edinburgh Mental Wellbeing Scale	"Medium wellbeing" defined as scoring 20 to 27 and "High wellbeing" defined as scoring 28 to 35, both on a scale of 7 to 35	×	✓	✓
Social contact with family and friends, in person	At least once a week on a scale from "Three times a week" to "Less than once a year or never"	✓	✓	✓
Social contact with family and friends, writing/ by phone/ by text	At least once a week on a scale from "Three times a week" to "Less than once a year or never"	×	✓	×
Social contact with people locally, spoke with	At least three times a week on a scale from "Every day or almost every day" to "Less than once a year"	✓	✓	✓

Where relevant, differences have been tested for statistical significance, with p-values reported. The p-value is the probability of an observed difference being due to chance, rather than being a real underlying difference between the two groups. A p-value of less than 5% is conventionally taken to indicate a statistically significant difference ($p<0.05$).[16] The analysis presented in this report is based on many statistical tests so, inevitably, some apparently 'significant findings' may be spurious.[17] In general, a result should be treated with caution if there is no clear logic behind the finding, or if the finding is not supported by the analysis of similar outcomes.[18]

2.7 CMF data limitations

The CMF dataset has five key data limitations.

- While using scales and repeating questions over time is a reliable way to examine change, it only provides insight into Ageing Better's role in bringing about specific changes as measured by the chosen scales. It doesn't elaborate more generally on the difference that activities make and does not cover all of the potential benefits of taking part.
- The CMF does not include information on whether the Ageing Better participants *only* participated in Ageing Better or whether they also participated in other activities or events. Any change over time may be attributable to Ageing Better and/or other non-Ageing Better activities.
- The CMF data does not cover all of the Ageing Better projects funded. Inferences cannot be drawn in relation to projects where CMF data was not collected and where the activities offered were very different.
- There may have been unintentional bias in the way individual projects asked certain people to take part in data collection. This may mean that data does not completely represent the experience of everyone taking part in Ageing Better.

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[16] The p-values take into account the fact that the Ageing Better participant data is clustered within a number of projects, plus the fact that the propensity score-matching adds weight to the comparison group data.
[17] No adjustment for family/pooled Type 1 error (Bonferroni or other corrections) were made.
[18] No attempt has been made to adjust for multiple comparisons. To do so would lead to only very small p-values being interpreted as 'significant' with the accompanying risk that genuine Ageing Better impacts would be missed. Furthermore, most of the outcomes reported on are correlated with one another, so the tests are not independent. Adjusting for multiple comparisons under this scenario is far from straightforward, with most of the textbook adjustments being too conservative.

- The lack of monitoring data (e.g. demographic information) for all Ageing Better participants across all projects means we cannot assess the extent that respondents included in the CMF analysis represent all 140,886 Ageing Better participants or the subset taking part in relevant projects (for example, projects that are not one-off events).

2.8 CMF data tables

The following sections present tables of CMF data analysis. Sections 2.8.1, 2.8.2 and 2.8.3 present analysis of data across the programme as a whole, including data on:

- Participant engagement and participation in the programme
- Demographic characteristics of participants
- Analysis of participants' characteristics at the start of the programme ('baseline') across all outcome measures

The 'Demographic Characteristics of Participants' tables also include comparisons with a peer group to contextualise findings. Where possible to source, the comparison figures are the percentage of over-50s in Ageing Better areas, and where that was not available, the percentage of over-50s in England, and where that was not available, to over-50s in the UK. The comparison figures should be used as a general guide rather than a fully accurate comparison. Ageing Better focused on people who were identified as being lonely or at risk of being lonely, while the comparison data covers a sample of the general older population regardless of their loneliness, and in some cases in England or the UK rather than the Ageing Better programme areas.

Section 2.8.4 looks at how participants' demographics and outcome measures differ by sub-group. This includes by gender, ethnicity and sexuality, as well as by measures of wellbeing, loneliness and social contact.

Section 2.8.5 illustrates the change in Ageing Better participants' loneliness, wellbeingand social contact over 6 months (122-243 days) and 12 months (273-456 days) of involvement with the Ageing Better programme. As noted, this data shows the change that occurred during the time participants took part in Ageing Better and should not be interpreted as suggesting that any change is necessarily linked to the programme (this analysis is provided in Chapter 3.0).

Please note all tables are single code unless otherwise stated.

2.8.1 Engagement and participation in the Ageing Better programme

The following tables provide details on how participants engaged with the programme, showing how participants became involved in the programme, and how many projects they took part in.

Table 4 How participants became involved in Ageing Better

Method of engagement	Number of participants	Percentage of participants (%)
Project staff/ volunteer	5795	27
Friend or family	4209	19
Leaflet or poster	2363	11
Adult social care or social services	1201	6
GP surgery	1320	6
Website	862	4
Sheltered accommodation/residential care home	640	3
Came across it	375	2
Pharmacist	44	<1
Other	4780	22
Base size	*21589*	

Table 5 Proportion of participants in one or more projects

Number of projects	Number of participants	Percentage of participants (%)
1	32856	93
2	1939	5
3	396	1
4	112	<1
5	45	<1
6	34	<1
Base size	*35382*	

2.8.2 Demographic characteristics of participants

The following tables outline the demographic characteristics of Ageing Better participants, including those with and without follow-up data. Comparison data is provided, showing demographic characteristics of over-50s among the general regional or national population.

Table 6 Demographic characteristics of Ageing Better participants, with peer group comparator where relevant.

Characteristic	Ageing Better participants		Peer group comparator
	Number	Percentage (%)	Percentage of over 50s in Ageing Better Areas (a)[19], England (b)[20], or the UK (c)[21] (%)
Gender			
Male	10786	32	48[a]
Female	22979	68	52[a]
Base size	*33765*		
Ethnicity			
Asian/Asian UK	4763	15	6[a]
Black/African/Caribbean/ Black UK	2218	7	3[a]
White	24603	75	89[a]
Mixed Ethnic	304	1	1[a]
Other Ethnic Group	857	3	1[a]
Base size	*32745*		
Sexuality			
Heterosexual	25923	96	99[b]
Gay/Lesbian	815	3	<1[b]
Bisexual	292	1	<1[b]
Other Sexuality	77	<1	<1[b]
Base size	*27107*		
Age Categories 1			
Under 50[22]	(229)	-	-
50-54	2128	9	19[a]
55-59	2818	11	17[a]
60-64	3641	15	17[a]
65-69	3992	16	13[a]
70-74	3867	15	11[a]
75-79	3201	13	9[a]
80-84	2573	10	7[a]
85 and over	2734	11	7[a]

[19] (a) Source: National Census (2011). For more information, see: '2011 census data on Nomis', Nomis Official Labour Market Statistics. Available at: https://www.nomisweb.co.uk/census/2011. Accessed on 23 July 2021.
[20] (b) Source: Annual Population Survey (2017). For more information, see: 'Sexual identity, subnational', Office for National Statistics. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/datasets/sexualidentitysubnational. Accessed on 23 July 2021.
[21] (c) Source: Annual Population Survey (2019). Data available on request.
[22] Under-50 age group not included in base size and percentage calculations to allow peer group comparison.

Characteristic	Ageing Better participants		Peer group comparator
	Number	Percentage (%)	Percentage of over 50s in Ageing Better Areas (a)[19], England (b)[20], or the UK (c)[21] (%)
Base size	*24954 (25183)*		
Age Categories 2			
Under 64	8076	32	
64 and over	17107	68	
Base size	*24954 (25183)*		
Living Arrangements			
Living Alone	11498	49	27[a] (*)
With Spouse/Partner	7271	31	
With Family	3796	16	
In Residential Accommodation	524	2	
Other Living Arrangement	418	2	
Base size	*23507*		
Longstanding Illness / Disability			
Longstanding Illness / Disability	13734	59	54[c]
No Longstanding Illness / Disability	9686	41	46[c]
Base size	*23420*		
Carer status			
Carer	4823	21	17[a]
Not Carer	18017	79	83[a]
Base size	*22840*		

(*) Difference between Ageing Better cohort and peer group significant at significance level $p < 0.05$. Other differences were not significance tested.

2.8.3 Outcome measures for participants at baseline

The following tables provide details on the outcome measures (described fully in Chapter 2.0) of Ageing Better participants on entry to the programme. The tables include full-scale and summary analysis for selected outcome measures and, where possible, comparisons to nationally representative averages.

Table 7 Loneliness, wellbeing, and health; at baseline. Key statistics for loneliness (UCLA and DJG), wellbeing (SWEMWBS) and health (EQ-5D and EQ-VAS) measures[23]

Measure	Ageing Better Participants
DJG social and emotional loneliness scale (0 to 6)	
Mean score	3.14
Standard deviation	2.11
Lonely (scored 2 or more) (%)	72
Base size	*18465*
UCLA loneliness scale (3 to 9)	
Mean score	5.45
Standard deviation	2.04
Lonely (scored 6 or more) (%)	50
Base size	*18425*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)	
Mean score	21.54
Standard deviation	5.00
Low wellbeing (scored below 20) (%)	25
Scoring 7 to 19 (%)	25
Scoring 20 to 24 (%)	32
Scoring 25 to 29 (%)	29
Scoring 30 to 35 (%)	14
Base size	*18818*
Health: EQ-5D	
Mean score	0.59
Median score	0.69
Standard deviation	0.35
Base size	*9996*
Health: EQ-VAS	
Mean score	61.82
Median score	65.00
Standard deviation	22.95
Base size	*9885*

Table 8 Key outcome measures at baseline and nationally relevant comparators

Measure	Ageing Better participants	Peer group comparator, Ageing Better Areas (a), England (b) or the UK (c)
DJG social and emotional loneliness scale (0-6)		
Mean score	3.14	1.60 [b.24]
Lonely (scored 2 or more) (%)	72	37 [b.24]
Base size	*18465*	
UCLA loneliness scale (3-6)		
Mean score	5.45	4.00 [b.25]
Lonely (scored 6 or more) (%)	50	17 [b.26]

Measure	Ageing Better participants	Peer group comparator, Ageing Better Areas (a), England (b) or the UK (c)
Base size	*18425*	
Short Warwick-Edinburgh Mental Wellbeing Scale (7 to 35)		
Aged 55-64, mean score	20.64	25.24 [c.27]
Base size	*4822*	
Aged 65-74, mean score	22.26	26.42 [c.27]
Base size	*5386*	
Aged over 75, mean score	21.97	25.91 [c.27]
Base size	*5460*	
Contact with family and friends		
In person, at least weekly (%)	34	74 [b.28]
Base size	*21046*	
Club, society, or organisation membership		
1 or more (%)	62	71 [b.29]
Base size	*20842*	
Taking part relative to peers		
More than most	20	19 [b.30]
About the same	30	37 [b.30]
Less than most	50	44 [b.30]
Base size	*20602*	

2.8.4 Baseline outcome measures by demographic characteristics

The following tables provide details on the outcome measures (described fully in Chapter 2.0) of Ageing Better participants from different participant groups, on entry to the programme.

[23] Defined as follows: UCLA highly lonely = score of 6 or more; DJG highly lonely = score of 2 or more; SWEMWBS low wellbeing = score of 19 or lower.
[24] Source: TNS Omnibus 2016 (not published).
[25] Source: English Longitudinal Survey of Ageing, 2015/16, www.elsa-project.ac.uk
[26] Source: TNS Omnibus 2016 (not published).
[27] Source: 'Measuring national well-being: Domains and measures dataset', Office for National Statistics. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/measuringnationalwellbeingdomainsandmeasures. Accessed on 4 February 2022.
[28] Source: 'Community life survey 2019', GOV.UK. Available at: https://www.gov.uk/government/statistics/community-life-survey-2018-19. Accessed on 4 February 2022.
[29] Source: English Longitudinal Survey of Ageing, 2015/16, www.elsa-project.ac.uk
[30] Source: TNS Omnibus 2016 (not published).

Table 9 Mean loneliness score (UCLA loneliness scale) by demographic groups, at baseline

Characteristic	UCLA mean score	Standard deviation	Base size
Gender			
Female	5.45	2.03	*12184*
Male	5.43	2.05	*5736*
Ethnicity			
Asian	5.69	1.93	*2258*
Black	5.26	1.89	*1267*
Mixed	5.72	2.22	*173*
Other	5.56	1.82	*415*
White	5.41	2.07	*13553*
Sexuality			
Bisexual	6.08	2.13	*132*
Gay/Lesbian	5.55	1.97	*418*
Heterosexual	5.43	2.05	*14813*
Other	5.62	2.37	*52*
Age Range			
Under 50	5.57	1.89	*167*
50-54	6.03	2.08	*1640*
55-59	5.91	2.05	*2094*
60-64	5.68	2.11	*2607*
65-69	5.23	2.01	*2766*
70-74	5.10	2.01	*2665*
75-79	5.18	1.96	*2061*
80-84	5.23	1.96	*1619*
85 and over	5.49	1.93	*1663*
Living Arrangements			
Alone	5.87	2.06	*7930*
In residential accommodation	5.24	1.83	*325*
With Family	5.50	1.96	*2570*
With Spouse, partner	4.79	1.90	*5245*
Other	5.84	2.05	*276*
Longstanding Illness / Disability			
Without Longstanding Illness / Disability	4.80	1.84	*6602*
With Longstanding Illness / Disability	5.89	2.06	*9534*
Carer Status			
Not Carer	5.45	2.06	*12651*
Carer	5.42	2.01	*3461*

Table 10 Mean loneliness score (DJG social and emotional loneliness scale) by demographic group, at baseline

Characteristic	DJG mean score	Standard deviation	*Base size*
Gender			
Female	3.09	2.13	*12078*
Male	3.21	2.07	*5906*
Ethnicity			
Asian	3.68	1.99	*2066*
Black	3.17	2.15	*1161*
Mixed	3.53	2.11	*167*
Other	3.59	2.05	*386*
White	3.03	2.11	*13971*
Sexuality			
Bisexual	3.88	2.05	*132*
Gay/Lesbian	3.29	2.12	*409*
Heterosexual	3.10	2.12	*15022*
Other	3.33	2.21	*49*
Age Range			
Under 50	3.66	2.02	*153*
50-54	3.78	2.09	*1691*
55-59	3.64	2.11	*2152*
60-64	3.40	2.14	*2630*
65-69	2.97	2.13	*2733*
70-74	2.80	2.08	*2629*
75-79	2.84	2.07	*2017*
80-84	2.73	2.04	*1615*
85 and over	2.93	1.93	*1779*
Living Arrangements			
Alone	3.46	2.06	*8055*
In residential accommodation	2.93	1.95	*321*
With Family	3.33	2.11	*2525*
With Spouse, partner	2.52	2.09	*5332*
Other	3.62	2.04	*299*
Longstanding Illness / Disability			
Without Longstanding Illness / Disability	2.51	2.05	*6563*
With Longstanding Illness / Disability	3.51	2.07	*9787*
Carer Status			
Not Carer	3.10	2.12	*12803*
Carer	3.18	2.11	*3538*

Table 11 Mean wellbeing score (Short Warwick Edinburgh Mental Wellbeing Scale) by demographic group, at baseline

Characteristic	SWEMWBS mean score	Standard deviation	*Base size*
Gender			
Female	21.58	4.93	*12212*
Male	21.51	5.11	*5909*
Ethnicity			
Asian	21.22	5.04	*2125*
Black	22.05	5.02	*1169*
Mixed	21.56	5.16	*172*
Other	21.41	5.23	*385*
White	21.55	4.98	*14030*
Sexuality			
Bisexual	20.19	4.22	*126*
Gay/Lesbian	21.06	4.96	*407*
Heterosexual	21.57	5.00	*15142*
Other	21.51	5.42	*49*
Age Range			
Under 50	21.07	5.02	*152*
50-54	19.98	5.00	*1692*
55-59	20.31	5.03	*2156*
60-64	20.91	5.19	*2666*
65-69	22.12	4.99	*2749*
70-74	22.41	4.82	*2637*
75-79	22.14	4.83	*2074*
80-84	22.21	4.81	*1629*
85 and over	21.56	4.48	*1757*
Living Arrangements			
Alone	21.04	5.02	*8075*
In residential accommodation	21.51	4.47	*315*
With Family	21.12	4.99	*2492*
With Spouse, partner	22.53	4.85	*5439*
Other	20.19	4.91	*298*
Longstanding Illness / Disability			
Without Longstanding Illness / Disability	23.20	4.85	*6597*
With Longstanding Illness / Disability	20.45	4.84	*9826*
Carer Status			
Not Carer	21.57	5.08	*12805*
Carer	21.47	4.81	*3606*

Table 12 Social contact indicators (with family and friends and locally) by demographic group, at baseline

Characteristic	Contact with family friends								Contact with anyone locally		
	In person, at least once a week (%)	Base size	By phone, at least once a week (%)	Base size	In writing, at least once a week (%)	Base size	By text, at least once a week (%)	Base size	At least three-time week (%)	Everyday (%)	Base size
Gender											
Female	73	*13970*	81	*13807*	32	*12514*	57	*12835*	64	42	*13780*
Male	66	*6541*	70	*6457*	30	*6023*	45	*6091*	61	41	*6494*
Ethnicity											
Asian	73	*2648*	79	*2602*	18	*2225*	39	*2318*	49	27	*2639*
Black	68	*1388*	80	*1358*	31	*1201*	52	*1255*	61	40	*1384*
Mixed	66	*192*	77	*186*	42	*175*	67	*181*	53	38	*192*
Other	67	*514*	76	*504*	26	*440*	50	*467*	51	27	*507*
White	71	*15498*	77	*15349*	34	*14270*	55	*14465*	66	45	*15277*
Sexuality											
Bisexual	67	*146*	72	*141*	36	*132*	60	*129*	62	40	*141*
Gay/Lesbian	63	*449*	70	*448*	50	*434*	64	*431*	62	41	*2495*
Heterosexual	71	*16981*	78	*16788*	31	*15523*	53	*15834*	63	41	*16731*
Other	67	*60*	81	*58*	33	*54*	57	*54*	71	42	*647*
Age Range											
Under 50	68	*171*	74	*167*	39	*153*	70	*157*	55	35	*168*
50-54	62	*1832*	70	*1820*	31	*1732*	67	*1775*	52	33	*1773*
55-59	63	*2366*	70	*2339*	33	*2211*	65	*2254*	55	35	*2289*
60-64	67	*2931*	75	*2899*	34	*2699*	64	*2783*	60	38	*2872*
65-69	73	*3113*	78	*3093*	38	*2862*	63	*2953*	66	43	*3088*
70-74	75	*3039*	82	*2997*	37	*2699*	57	*2824*	69	47	*3022*

Characteristic	Contact with family friends								Contact with anyone locally		
	In person, at least once a week (%)	Base size	By phone, at least once a week (%)	Base size	In writing, at least once a week (%)	Base size	By text, at least once a week (%)	Base size	At least three-time week (%)	Everyday (%)	Base size
75-79	75	*2397*	81	*2355*	30	*2131*	45	*2149*	69	47	*2393*
80-84	75	*1942*	83	*1909*	24	*1683*	31	*1693*	67	45	*1938*
85 and over	73	*2035*	80	*2024*	14	*1785*	16	*1753*	63	42	*2032*
Living Arrangements											
Alone	71	*9164*	79	*9039*	28	*8246*	49	*8432*	63	42	*9029*
In residential accommodation	63	*356*	59	*343*	12	*323*	20	*327*	75	66	*351*
With Family	68	*2927*	75	*2881*	27	*2636*	53	*2698*	55	33	*2897*
With Spouse, partner	73	*6060*	78	*6008*	41	*5528*	62	*5686*	66	43	*6017*
Other	62	*328*	73	*325*	29	*297*	54	*296*	61	45	*323*
Longstanding Illness / Disability											
Without Longstanding Illness / Disability	76	*7540*	82	*7422*	42	*6831*	64	*6996*	70	48	*7475*
With Longstanding Illness / Disability	67	*11030*	75	*10918*	24	*9982*	46	*10202*	58	37	*10854*
Carer Status											
Not Carer	71	*14523*	78	*14344*	31	*13178*	51	*13458*	63	42	*14351*
Carer	70	*4040*	78	*3997*	35	*3663*	60	*3756*	63	41	*3995*

2.8.5 Change in loneliness, wellbeing and social contact

The following tables show key outcome measures for Ageing Better participants at baseline, after six months (122 – 243 days) of engagement, and after 12 months (273 – 456 days) of engagement. They show participants' change in outcome measures over time.

Table 13 Change participants' loneliness, wellbeing and social contact measures during the Ageing Better programme

Measure	Baseline	6 months	12 months
DJG social and emotional loneliness scale (0 to 6)			
Mean score	3.33	2.99	3.07
Lonely (scored 2 or more) (%)	77	71	70
Base size		*519*	
UCLA loneliness scale (3 to 9)			
Mean score	5.65	5.21	5.18
Lonely (scored 6 or more) (%)	53	44	45
Base size		*525*	
Short Warwick-Edinburgh Mental Wellbeing Scale			
Mean score	21.19	22.38	22.34
Low wellbeing (scored below 20) (%)	46	36	37
Base size		*554*	
Contact with family or friends			
At least once a week, in person (%)	71	80	79
At least once a week, by phone (%)	79	80	81
At least once a week, in writing (%)	27	30	33
At least once a week, by text (%)	46	51	54
Base size		*481*	
Contact with anyone locally			
Three times a week or more, speak with (%)	40	44	45
Base size		*639*	
Number of club, society, or organisation memberships			
0 (%)	34	25	25
1 (%)	35	37	32
2 (%)	18	21	23
3 (%)	7	11	11
4 (%)	4	4	6
5 or more (%)	2	3	4
Base size		*631*	

Impact evaluation

3.0 Impact evaluation

3.1 Overview of the impact evaluation

A core aim of the Ageing Better evaluation was to measure the impact on older people of participating in Ageing Better activities. This has been addressed by taking data showing the change in outcomes for a treatment group of Ageing Better participants constructed mainly using CMF data (Chapter 2.0) and comparing it to similar data from a comparison survey of people who were unlikely to have taken part in Ageing Better.

The comparison survey was used to construct two comparison groups, the primary group being one of people who did not take part in any other activities (the 'no activity' group), and a secondary group of people who did not take part in Ageing Better (the 'other activity' group). Anyone who took part in Ageing Better was moved into the treatment group of those who had taken part in Ageing Better. Propensity score matching (PSM) was used to make sure that the Ageing Better treatment group was similar to both comparison groups.

This impact data is used in the accompanying Impact Evaluation Report to answer two questions:

- Did the change in outcomes for the treatment group of Ageing Better participants differ to the change in outcomes for a comparison group who did not engage in any organised activities?
- Did the change in outcomes for the treatment group of Ageing Better participants differ to the change in outcomes for a comparison group who did not take part in Ageing Better but did take part in other similar activities or projects?

The comparison survey was carried out in three waves (1, 2 and 3) to measure change over time. Participants were sampled for Wave 1 based on whether they had taken part in a previous survey conducted for Ageing Better by Ecorys (see Section 3.3.2), lived in areas in each of the 14 Ageing Better partnerships where substantial Ageing Better delivery had not taken place and had agreed to be recontacted. Those who took part in Wave 1 and agreed to be recontacted were then asked if they wanted to take part in Wave 2 and 3.

3.2 Comparison survey fieldwork period

To measure change, three waves of comparison surveys took place, with intervals of approximately six months between each wave. Wave 1 took place from June to August 2018, Wave 2 from January to February 2019 and Wave 3 from July to August 2019.

3.3 Comparison survey questionnaires and data collection

Comparison survey data collection was carried out face-to-face at home by Ecorys, with surveys administered primarily using Computer Assisted Personal Interviewing with back-up pen and paper questionnaires available. Respondents could complete more sensitive questions themselves if they wished, using either a paper version of the questionnaire or on the tablet provided by the interviewer. Some respondents preferred the interviewer to ask them these questions and fill in this section on their behalf.

All potential participants were sent a postcard prior to each wave. This explained that they had been selected for interview as they had taken part in a previous wave and that they had agreed to potentially take part in future research. It explained that an interviewer would be visiting to ask them to take part in another survey[31] and provided contact details if they had any queries. Taking part in the survey was voluntary. Opt-out procedures were implemented by phone, online and email. Informed consent was obtained before interviews were completed.

Interviewers were briefed before starting fieldwork for each wave. The briefing covered the rationale of the study, the fieldwork procedures and the questionnaire content, and allowed interviewers to practice conducting the survey.

All those who completed a survey were given a £10 shopping voucher as a thank you for their time.

3.3.1 Comparison survey questionnaire design

A questionnaire was developed for all three waves (see Annex for Wave 1 questionnaire). This covered the same standard questions as included in the Ageing Better participant questionnaire (see Chapter 2.0) to allow direct

[31] All selected addresses in the target areas were visited up to four times to cover daytime and evenings

comparison across all key variables. An additional module was included to establish whether respondents had taken part in Ageing Better projects, so that anyone who attended Ageing Better services could be included in the Ageing Better treatment group and those who did not could be included in the comparison group. The module included questions covering:

- **Awareness of TNLCF logo**, included as a warm-up question
- **Knowledge of local Ageing Better activities** from a list of activities for each area, with separate questions on awareness, usage and frequency of use;
- **Knowledge of general activities** from a list of general types of clubs (e.g. sport, hobbies/culture, etc.), with separate questions on usage and frequency of use

To reduce the possibility of false recall with respondents stating they attended Ageing Better activities when they hadn't (or vice versa), all interviewers were asked to carefully check details of attendance with respondents. Interviewers were provided with a list of activities so they could read out the details if respondents were unsure whether they had attended a certain event. A bespoke list was provided for each Ageing Better area based on information provided by each partnership. The list covered information on the location, times, dates and/or nature of any activity.

3.3.2 Comparison survey sampling

The sample frame for the comparison survey was constructed using the achieved sample from a 2015-16 survey in the 14 Ageing Better partnership areas. This large-scale survey aimed to measure population-level change for the programme. This provided a foundation for comparison survey sampling based on random probability sampling of the Post Office's Postcode Address File data to achieve a representative spread of residential addresses in each selected ward in each of the 14 Ageing Better partnership areas. The 2015-16 survey was limited to people aged 64 to meet the original survey objective of identifying population-level impact but without requiring a much larger sample. People living in care homes were not included.

The sample for the comparison survey was older people in the original 2015-16 survey who broadly matched the profile of participants completing the CMF. Stratified sampling was adopted to reduce the amount of weighting required later,

using the social isolation scores of respondents in the 2015-16 survey, sampling 100% of people from the most socially isolated stratum and with reducing sampling fractions as social isolation scores decreased. This gave a sample for Wave 1 of the comparison survey that was deliberately skewed towards those most likely to be isolated to match the similar skew among Ageing Better participant questionnaire respondents.

Wards were selected for the comparison survey where there had been little or no Ageing Better activity according to local partnerships, aiming to increase the chance that respondents could be used in the comparison group. In total, 33 wards were selected across 8 of the 14 programme areas. The eight programme areas covered were Bristol, Camden, Cheshire, East Lindsey, Hackney, Leeds, Leicester and Torbay. In total, 1,270 of the original 4,550 respondents providing consent for recontact in the 2015-16 survey respondents were selected for the initial Wave 1 comparison survey. The sample size of 1,270 was based on an assumed response rate of approximately 65% at Wave 1, and then a response rate of 70% at each of the two subsequent waves, resulting in a target of 400 respondents at the end of Wave 3.[32] As outlined in Table 14, 422 interviews were achieved in the final Wave 3, therefore surpassing the 400 target.

Table 14 Achieved sample, response rate, and fieldwork period for each survey wave

Wave	Achieved sample	Response rate from previous wave	Fieldwork period
1	879	NA	June – August 2018
2	697	79%	January – February 2019
3	422	61%	June – August 2019

3.4 Impact data quality checks and analysis

Data checks for the comparison survey followed the approach taken for the Ageing Better participant survey (see Chapter 2.0).

Analysis focused on measuring the impact of Ageing Better by comparing any change for Ageing Better participants to any change for a matched comparison of very similar older people not involved in Ageing Better provision.

[32] A final sample of 400 was considered large enough to allow for the data to be analysed across multiple sub-groups. For example, analysis of 200 CMF respondents compared to just 200 of the comparison group respondents would allow for effect sizes of around 0.28 standard deviations to be detected.

Ageing Better participants were matched to non-participants in the comparison group using PSM (see 3.4.4). For the Ageing Better participants and the comparison group, the following are compared:

- The change in each outcome between baseline and approximately 6 months later
- The change in each outcome between baseline and approximately 12 months later

It is reasonable to assume that any change among the matched comparison groups might occur naturally over time. So, if the change among Ageing Better participants is significantly greater or smaller than the change among the comparison group, then that difference is regarded as an impact of Ageing Better participation.[33]

3.4.1 'No activity' and 'other activity' comparison groups

Two comparison groups were constructed from the comparison survey:

- **The 'no activity' comparison group** is the primary comparison group, comprising those who reported no Ageing Better participation and no involvement in other activities in the months at and since their baseline interview. This comparison shows the potential intrinsic value of older people participating in activities.
- **The 'other non-Ageing Better activity' comparison group** is the secondary comparison group, comprising those who reported no Ageing Better participation but some involvement in other events, clubs or activities at or since their baseline interview. This comparison shows the potential value of Ageing Better participation relative to other events, clubs or activities available in the local areas that were surveyed.

Comparison survey respondents were allocated to the 'no activity' and 'other' groups based on their responses to a series of questions about 'other events, clubs or activity you may have attended in the last six months'.[34] For the 'other activity' group at the six-month follow-up interview, 21% said they had taken part in sports or exercise classes, 18% had taken part in clubs focusing on particular hobbies or

[33] Likewise, if the comparison group had progressed more than the Ageing Better participants, this could be taken as evidence of Ageing Better having a negative impact on participants.
[34] These questions followed a question about involvement in Ageing Better.

cultural activities, 66% had been on holidays or days out, 58% had been to social events based around meeting other people, and 14% said 'other'.

3.4.2 Treatment group

The treatment group of Ageing Better participants was constructed using the achieved sample from the CMF dataset and adding anyone in the comparison survey respondents who stated that they had attended the programme.

To provide comparable data to that collected in the comparison survey, the treatment group only included respondents who provided a full set of demographic and outcomes data at baseline and again either 5 to 7 months later (the '6-month' group or follow-up) or around 10 to 14 months later (the '12-month' group or follow-up).

For the treatment group of Ageing Better participants, the baseline was when they entered an Ageing Better project, and for the comparison group it was at the point of their first survey. Both 6- and 12-month treatment groups were broadly representative of all CMF baseline respondents (see Table 7 and Table 8 for outcome data at baseline for all CMF participants, and Table 16 for the restricted cohort used for impact analysis). Tests showed there was no variation in outcomes over these wider ranges (e.g. change at six months was similar to change at five or seven months).

3.4.3 Achieved sample for treatment and comparison groups

The six-month impacts are based on data from 1,198 Ageing Better participants and 605 comparison group respondents who provided data both at baseline and at the six-month follow-up. Likewise, the 12-month impacts are based on 623 Ageing Better participants and 339 comparison group respondents who participated at both baseline and the 12-month follow-up (Table 15). It was not necessary to have completed a 6-month follow-up to be included in the 12-month follow-up group. The size of the comparison group at 6 and 12 months is slightly smaller than the size of the achieved sample at Wave 2 and Wave 3 as only a few Wave 2 or 3 respondents said they had taken part in Ageing Better projects and were moved to the treatment group.

Table 15 Sample sizes for 6 and 12-month impact analysis

	Ageing Better participants	Other activity comparison group	No activity comparison group
6-month impacts	1198	305	300
12-month impacts	623	186	153

3.4.4 Propensity score matching overview

PSM was used so that the two comparison groups of Ageing Better participants were similar to each other and to the treatment group. This was required as the unmatched profile of the three groups was quite different at baseline. This was expected as Ageing Better reached older people who have, on average, higher levels of loneliness and lower levels of wellbeing than the general older person population (see Impact Evaluation Report). Likewise, among the impact study sample, the treatment group sample of Ageing Better participants is different at baseline to the two comparison groups (Table 16).

Table 16 Baseline outcomes for the three groups: six-month analysis

	Ageing Better participants (%)	Other activity comparison group (%)	No activity comparison group (%)
Low wellbeing on the Short Warwick Edinburgh Mental Wellbeing scale	19	3	8
Lonely on the UCLA loneliness scale	44	12	19
Lonely on the DJG loneliness scale	70	37	49
Contact with family and friends, in-person, at least weekly	74	81	78
Contact with anyone locally, speaking, at least three times a week	65	86	80
Base size	*1198*	*305*	*300*

Because of these baseline differences, PSM was used to pull out (via weights) those individuals in the two comparison groups who were most similar to the Ageing Better participants in the treatment group.

For the impact analysis, Ageing Better participants and the two comparison groups were matched on gender, age, whether they lived alone, whether they were

disabled, whether they were White or from a Black, Asian or minority ethnic background (BAME), as well as on the baseline outcome measures.

The matching does not rule out the possibility that there are other residual differences between the groups. For instance, there may be different levels of motivation between the groups – but because there are no data on motivation, this cannot be used for matching. However, the matching ought to make the groups reasonably similar. Full details of the PSM is provided in Section 3.5.1.

3.4.5 Outcome measures

The impact of Ageing Better participation has been measured in relation to the main outcomes collected in the CMF and reported in the Impact Evaluation Report. Full information on each of the measures, including the thresholds used in the impact evaluation, can be found in Chapter 2.0.

This chapter also includes secondary outcomes not included in the Evaluation Report, including:

- **Frequency of texting with family or friends**: a binary split between texting at least weekly versus less frequently, using a 6-point scale from 'three times a week or more' to 'less than once a year or never'
- **Frequency of writing to or receiving letters or family and friends**: a binary split between writing or receiving letters at least weekly versus less frequently, using a 6-point scale from 'three times a week or more' to 'less than once a year or never'
- **EQ-5D health scale**, a standardised measure of health status[35]
- People's perceptions of how much they took part in social activities compared to others (4-point scale)[36]

The impact for each outcome has been tested for statistical significance, using the same approach as outlined in Chapter 2.0.

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[35] 'EuroQol—a new facility for the measurement of health-related quality of life', EuroQol Group, *Health Policy*, December 1990, 16(3), pages 199–208.
[36] We exclude impacts on perceived comparisons with others in levels of social activity because the data suggests that people may have misinterpreted the question. Among the 'no activity' comparison group, 84% said at baseline that they did the 'same or more than others'; in the comparison group (who were doing activities), 69% said at baseline that they did the 'same or more than others'.

3.5 Approach to matching and analysis

This section covers the approach to matching and analysis, including the PSM approach, the sensitivity tests used on the matching and the significance tests used for estimating impact.

3.5.1 Propensity score matching analysis

The impact estimates compare change in outcomes for participants at 6 months and 12 months with those of two matched comparison groups: the 'no activity' comparison group and the 'other non-Ageing Better activity' comparison group. The matched comparison groups are essentially weighted versions of the raw comparison data, designed to generate weighted samples that, at baseline, have a similar profile to the Ageing Better participants. Any difference in the degree of change between the participant and matched comparison groups is then assumed to give an estimate of impact.

The matched comparison groups were generated using PSM. The main steps in the matching process are listed below.

- The probability (or propensity) of an individual being in the participant group (rather than the comparison group) is estimated from a logistic regression model of the data. The group is the binary outcome variable in the model (1=participant; 0=comparison). The predictors are:
  - The baseline version of the outcomes (entered as categorical variables). That is SWEMWBS (four-group version as in Table 17 below; UCLA score, DJG social score; DJG emotional score; frequency of face-to-face contact; frequency of contact with others; frequency of phone contact; frequency of text contact; frequency of written contact)
  - Gender (male/other/not recorded vs. female)
  - Age group (entered as a categorical variable)
  - Ethnic group (BAME vs. White)
  - Whether live alone or with others
  - Whether have a longstanding illness or disability.
- The comparison group is then weighted so that the distribution of propensity scores in the comparison group is the same as in the participant group

The technical details of the matching are as follows:

- The logistic regression model was fitted within SPSS with the predictors entered forward stepwise. A p-value of 0.1 was set for inclusion, and 0.2 for exclusion
- The weights for the comparison group were calculated as inverse propensity weights (i.e., p/1-p). Comparison group members that are very similar to participants, and hence have a high propensity score are given a large weight; comparison group members that are not very similar to participants, and hence have a low propensity score, are given a small weight[37]

The matching did not include some potential matching variables, in particular carer status. Carer status was excluded because of its high correlation with living with a spouse or partner, and because analysis did not identify carer status as being predictive of outcomes once we controlled for the other variables included in the PSM model. The EQ-5D health variables were also excluded as they were not predictive of outcomes and as only a sub-set of Ageing Better participants completed the EQ-5D questions, meaning this would have further reduced the overall sample size. For the impacts on EQ-5D outcomes presented in Section 3.7 of this report, separate PSM models were run on the reduced dataset and with the EQ-5D baseline scores included in the model.

The simplest test of whether the PSM is successful is that any pre-existing differences between the participant treatment group and the comparison group are largely removed, or at least markedly reduced, after the propensity score weights have been applied. Table 17 below demonstrates that this was the case for the six-month comparison groups. For example, 19% of the Ageing Better participants score 7 to 19 on the SWEMWBS scale at baseline (first data column). The percentage in the 'other non-Ageing Better activities' comparison group was just 3% at baseline (second column), but this increases to 21% once the propensity score weights are added (third column). The percentage in the 'no activities' comparison group was 8% at baseline (fourth column), and this increases to 19%

[37] The PSM weights have not been trimmed. It is reasonably common for extremely large PSM weights to be trimmed, so the cases with very large weights do not influence the estimates excessively. However, in this instance, the weights that would be trimmed are the comparison group members with low baseline wellbeing. Trimming leads to the Ageing Better and comparison groups being poorly balanced, which creates bias in the estimates of impact because change since baseline is highly correlated with baseline score. That is, there is evidence of marked regression to the mean for those starting from the worst position. If Ageing Better participants are compared with a comparison group who, because of the trimming, start from a better position, impact would be over-estimated.

once the propensity score weights are added (fifth column). Not all the matching variables are shown, but the same pattern applies across all the variables at both 6 and 12 months.

Table 17 Baseline matching variables before and after propensity score matching

	Ageing Better participants (%)	Older people participating in other activities: raw data (%)	Older people participating in other activities: after PSM (%)	Older people not participating in activities: raw data (%)	Older people not participating in activities: after PSM (%)
Short Warwick Edinburgh Mental Wellbeing Scale					
1.00 7 to 19	19	3	21	8	19
2.00 20 to 24	33	15	30	20	30
3.00 25 to 29	33	41	35	38	37
4.00 30+	15	41	14	34	14
UCLA loneliness scale					
3.00 least lonely	27	67	28	57	29
4.00	13	12	15	13	13
5.00	15	9	12	11	15
6.00	20	5	24	9	18
7.00	7	2	6	4	7
8.00	6	3	5	3	10
9.00 most lonely	11	3	9	3	9
DJG social and emotional loneliness scale					
0 no loneliness					
1	17	42	20	32	17
2	13	22	12	19	12
3	16	18	17	17	14
4	14	8	13	16	18
5	13	6	18	6	8
6 severe loneliness	12	4	15	6	14
Frequency of meetings with family or friends					
1.00 Three times a week or more	38	48	25	41	38
2.00 Once or twice a week	37	33	48	37	35
3.00 Once or twice a month or every few months	21	15	22	16	23
4.00 Less often	5	4	5	6	4

	Ageing Better participants (%)	Older people participating in other activities: raw data (%)	Older people participating in other activities: after PSM (%)	Older people not participating in activities: raw data (%)	Older people not participating in activities: after PSM (%)
Frequency of speaking to anyone locally (non-family member)					
1.00 Every day or almost every day	42	68	47	60	48
2.00 Three times a week or more	23	19	29	21	19
3.00 Once or twice a week	22	9	13	12	20
4.00 Less often	13	5	11	7	13
Gender					
1. Male	35	41	37	44	42
2.Female	65	59	63	56	58
Age group					
1. 64-69	29	19	20	18	28
2. 70-74	25	28	24	26	27
3. 75-79	17	20	23	18	18
4. 80-84	14	18	15	22	14
5. 85 and over	15	15	17	16	12
Base size	*1198*	*305*		*300*	

3.5.1 Sensitivity testing for matching

The main analysis has been run in several ways to test the sensitivity of the estimates to the PSM. Table 18 below shows the odds ratio associated with the two comparison groups (relative to the Ageing Better group) for four different methods:

- PSM with no extra controls
- PSM with the full baseline version of the outcome included as a control variable (this is closest to the reported estimates)
- Logistic regression without PSM, but with the full baseline version of the outcome included as a control variable (i.e. a very simple regression)
- Logistic regression without PSM, and with a range of control variables (baseline wellbeing, UCLA loneliness, baseline contact variables, age, gender, ethnic group, disability status, whether live alone)

Although the odds ratios do vary notably, they are reasonably consistent in terms of direction (i.e. above or below 1). Comparing the second and fourth methods – the

second being close to the reported estimates and the fourth being a plausible regression alternative – changing the method would not change the interpretation of the findings.

Table 18 Odds ratios for the difference between the Ageing Better participant group and the two comparison groups

	Comparison group	PSM only	PSM + baseline outcome	No PSM, baseline only	No PSM, baseline + other covariates
6 months: Odds ratios					
Short Warwick Edinburgh Mental Wellbeing Scale (1=higher wellbeing)	No activity	0.660	0.584	0.495	0.416
	Other activities	0.668	0.632	0.99	0.894
UCLA loneliness scale (1=lonely)	No activity	1.042	1.094	0.846	0.919
	Other activities	0.779	0.705	0.491	0.560
Contact with family, face to face (1=at least weekly)	No activity	0.590	0.569	0.681	0.562
	Other activities	0.614	0.648	1.095	0.808
Contact locally (non-family), speaking with (1=three times a week or more)	No activity	0.69	0.624	0.593	0.554
	Other activities	1.008	0.892	0.804	0.671
12 months: Odds ratios					
Short Warwick Edinburgh Mental Wellbeing Scale (1=higher wellbeing)	No activity	0.483	0.455	0.442	0.384
	Other activities	1.896	2.581	1.868	1.771
UCLA loneliness scale (1=lonely)	No activity	1.024	0.980	1.015	1.146
	Other activities	0.747	0.649	0.474	0.541
Contact with family, face to face (1=at least weekly)	No activity	0.458	0.428	0.707	0.575
	Other activities	1.305	1.390	2.231	1.757
Contact locally (non-family), speaking with (1=3 time a week or more)	No activity	0.917	0.700	0.703	0.723
	Other activities	2.319	2.123	1.325	1.234

3.5.2 Significance tests for estimating impact

The p-values around the estimates of impact have been calculated using the complex samples module of SPSS. The statistics generated account for the clustering of the participants' data within projects (and, therefore, the variation in impacts across the projects in the sample), and the weights attached to the comparison groups from the PSM. In most instances, the tests are carried out via a regression, controlling for the baseline version of the outcome of interest.

In testing whether any impacts are statistically significant, and generating confidence intervals around the estimates, we would ideally assume that the Ageing Better projects approximated a random sample of all Ageing Better projects, and that the participants completing the outcome surveys per project are a random sample of all participants for that project. In practice, neither of these assumptions is likely to be valid (see Chapter 2.0). This implies that the inference from findings should be to participants from a similar profile of projects and to similar sub-sets of participants within those projects. The lack of management information data on projects and participants in Ageing Better (as opposed to those taking part in the CMF as part of the evaluation) makes it difficult to assess how our results would be affected had different projects and participants been evaluated.

3.6 Impact data limitations

As the impact analysis uses data from the CMF some of the data limitations for the CMF data (Chapter 2.0) also apply to the impact analysis.

- The CMF does not include information on whether the Ageing Better participants *only* participated in Ageing Better or whether they also participated in other age-related activities or events. In the reporting, where a difference is identified between the Ageing Better participants and the comparison groups, this has been attributed to Ageing Better. However, some of that impact may be attributable to other non-Ageing Better activities.
- The longitudinal CMF data does not cover all of the Ageing Better projects funded. When this Methods note or the Impact Evaluation Report refer to 'Ageing Better impacts' based on this data, the inference is that these impacts apply to the projects in the dataset and to other, similar Ageing Better

projects.[38] Inferences cannot be drawn in relation to projects where longitudinal data was not collected and where the activities offered were very different.

- There may have been unintentional bias in the way individual projects asked certain people to take part. This is likely to mean that CMF data does not completely represent the experiences of everyone taking part in Ageing Better.

In addition, there are certain limitations that apply to the impact analysis alone:

- The sample size for the comparison groups is fairly low, especially at 12 months (605 for the 6-month group, with 305 attending other activities and 300 not attending any activities, with respective totals of 605, 305 and 300 for those not attending any other activities). This, coupled with the fact that the comparison data was weighted (via the PSM) to make it more comparable to the Ageing Better participants, means that the Ageing Better impacts must be quite large to be statistically significant; it is a crude approximation, but impacts must be around 10 percentage points at 6 months, and 13 percentage points at 12 months to reach significance.[39] Real, but smaller, impacts of Ageing Better will not be detectable.
- The data collection method was different for the two datasets. CMF data was self-completed by participants, whereas comparison survey data was collected by survey interviewers in respondents' homes. The differences in mode and setting may have affected how some of the outcome questions were answered.
- The CMF data was collected all year round, so baseline and follow-up surveys span all seasons of the year. In contrast, the comparison survey data was collected at fixed points. This could slightly bias the impact estimates to the extent that there is any seasonality in the reporting of outcomes. In particular, if outcomes are more positive in summer than in winter, then there might be a decline in positive outcomes between baseline and the six-month follow-up for the comparison group that is attributable to these timings. Analysis of the CMF data does not suggest that there are any strong seasonal effects that might lead to serious bias, but the possibility of some bias remains. The most

[38] The 1,198 Ageing Better participants in the 6-month dataset come from a total of 165 projects; the 623 Ageing Better participants in the 12-month dataset come from 124 projects.
[39] In effect size terms, these equate to an effect size of 0.22 standard deviations at 6 months and 0.27 standard deviations at 12 months.

likely direction of any such bias is that impacts will be slightly over-estimated at six months, because change in the comparison group is under-estimated.[40]

- The baseline data per person gives 'point in time' measures of wellbeing, loneliness and social contact. There is no data on the duration of those measures. For example, if a person has low wellbeing at baseline there is no information on whether this is a longstanding issue for them. Matching the groups on their baseline scores may still give groups that are poorly matched on their recent histories.
- The impact analysis covers only those aged 64 and over due to the sampling being based on the 2015- 16 survey, which interviewed people only in that age bracket. The impact on younger Ageing Better participants cannot be estimated because there is no comparison data for younger age groups.[41]

3.7 Impact data tables

The rest of this chapter is structured as follows.

Section 3.7.1 provides background information on how to interpret the impact tables that follow.

Section 3.7.2 gives the outcome statistics for the Ageing Better participant group and the two comparison groups at 6 months and 12 months. The full scales are shown in certain tables as well as the binary variables used in the Evaluation Report. The comparison group statistics are for the 'matched' comparison groups, after applying the PSM weights.

Section 3.7.3 shows the results of regression analysis comparing changes in outcomes for Ageing Better participants to those who took part in no activities, for different participant groups.

3.7.1 Interpreting impact

The data and findings from comparing Ageing Better participants in the treatment group to the primary comparison group of those not taking part in any activities are

[40] To test this more systematically, we would need to reduce the CMF sample to those completing the baseline CMF in the summer with a follow-up in early spring. This would severely reduce the sample size (to around 300).
[41] This was a deliberate decision. The comparison group data collected was restricted to those aged 64 and over to focus on the age groups where most of the Ageing Better recruitment would happen. This helped make the comparison group surveys more efficient.

relatively straightforward to interpret. If participation in Ageing Better activities has a positive impact on outcomes for older people, then *greater* improvements in outcomes would be expected for the Ageing Better participants than in the 'no activity' comparison group.

The data and findings from comparing Ageing Better participants to the secondary comparison group of those not taking part in any activities are less straightforward to interpret. There are two ways of thinking about what the data from the second comparison group might be expected to show us.

If the Ageing Better programme's approach represents 'best practice', then we might expect to see similar, or even greater, improvement in outcomes in the Ageing Better treatment group relative to the 'other activity' comparison group.

Alternatively, if the Ageing Better programme has successfully engaged 'harder to reach' people over 50 who would normally not participate, then we might not expect the Ageing Better treatment group to achieve the same level of positive outcomes as are observed for more general population programmes/activities that have broader reach. There is some evidence that this might be the case as only one in five Ageing Better participants think they take part in more social activities than their peers (Table 11). If Ageing Better participants are 'harder to reach', then if their outcomes improve (i.e. more than the 'no activity' group) but not quite as much as the 'other activity' group, this might still be evidence of success.

3.7.2 Baseline, 6-month and 12-month statistics for the full outcome scales and means

The following tables show the outcome statistics for Ageing Better participants and two comparison groups – those who took part in no activities, and those who took part in other activities – at baseline, after 6 months (122-243 days) of engagement, and after 12 months (273-456 days) of engagement. They include full-scale and binary variable analysis (Table 3), the latter being used in the Evaluation Report. The comparison group statistics are for the 'matched' comparison groups, after applying the PSM weights.

Table 19 Baseline and 6-month follow-up scores for the full outcome scales, Ageing Better and matched comparison groups

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
Short Warwick Edinburgh Mental Wellbeing Scale							0.724	0.481
1.00 7 to 19	19	12	21	16	19	17		
2.00 20 to 24	33	30	30	23	30	18		
3.00 25 to 29	33	38	35	37	37	40		
4.00 30-35	15	20	14	24	14	25		
% with low well-being (7 to 19)	19	12	21	16	19	17	0.293	0.040*
UCLA loneliness scale							0.847	0.703
3.00 least lonely	27	31	28	38	29	37		
4.00	13	17	15	17	13	12		
5.00	15	15	12	14	15	14		
6.00	20	19	24	6	18	9		
7.00	7	7	6	4	7	16		
8.00	6	5	5	14	10	6		
9.00 most lonely	11	6	9	7	9	7		
% lonely (6 to 9)	44	37	44	31	43	38	0.212	0.663
DJG social and emotional loneliness scale							0.372	0.062
0 no loneliness	17	19	20	24	17	22		
1	13	18	12	18	12	17		
2	16	13	17	14	14	19		
3	14	15	13	14	18	14		

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
4	13	12	18	15	8	10		
5	12	11	15	4	14	10		
6 severe loneliness	15	12	5	11	18	8		
% lonely (2 to 6)	70	63	68	58	71	61	0.527	0.546
DJG social loneliness scale							0.213	0.011*
0 no loneliness	33	36	35	46	33	53		
1	16	18	18	17	19	12		
2	17	17	13	8	17	16		
3 severe loneliness	34	29	33	29	32	19		
% lonely (1 to 3)	67	64	65	54	67	47	0.045*	0.010*
DJG emotional loneliness scale							0.570	0.909
0 no loneliness	30	35	36	38	29	34		
1	25	26	25	27	21	19		
2	22	19	26	17	19	28		
3 severe loneliness	23	20	14	18	31	19		
% lonely (1 to 3)	70	65	64	62	71	66	0.911	0.780
Frequency of meetings with family or friends							0.379	0.014*
1.00 Three times a week or more	38	42	25	39	38	36		
2.00 Once or twice a week	37	38	48	32	35	34		
3.00 Once or twice a month	15	13	16	19	12	15		
4.00 Every few months	5	4	6	5	11	7		

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
5.00 Once or twice a year	2	2	1	3	2	1		
6.00 Less than once a year or never	3	2	4	3	2	7		
% meeting at least weekly	74	80	73	71	73	70	0.200	0.013*
Frequency of speaking to anyone locally (non-family member)							0.663	0.015*
1.00 Every day or almost every day	42	47	47	48	48	40		
2.00 Three times a week or more	23	24	29	23	19	23		
3.00 Once or twice a week	22	19	13	19	20	26		
4.00 A few times a month	7	6	4	6	7	3		
5.00 Once a month	2	1	4	1	2	3		
6.00 Once every two months	1	1	2	1	-	2		
7.00 Every few months	1	1	1	-	3	1		
8.00 Once or twice a year	1	1	-	1	1	1		
9.00 Less than once a year	2	1	-	-	-	-		
% speaking at least three times a week	65	71	76	71	67	63	0.587	0.058
Frequency of speaking on the phone with family or friends							0.290	0.980
1.00 Three times a week or more	48	52	49	49	48	53		
2.00 Once or twice a week	32	31	33	34	32	30		

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
3.00 Once or twice a month	11	10	8	8	9	4		
4.00 Every few months	4	2	5	5	4	5		
5.00 Once or twice a year	1	1	-	1	2	2		
6.00 Less than once a year or never	3	3	5	4	4	4		
% speaking at least weekly	81	84	82	83	80	84	0.710	0.731
Frequency of texting with family or friends							0.681	0.347
1.00 Three times a week or more	30	30	30	27	31	27		
2.00 Once or twice a week	14	15	13	16	11	13		
3.00 Once or twice a month	9	9	7	6	4	3		
4.00 Every few months	3	3	2	2	1	3		
5.00 Once or twice a year	2	2	-	2	1	1		
6.00 Less than once a year or never	42	41	47	46	52	52		
% texting at least weekly	44	46	43	43	42	40	0.890	0.531
Frequency of writing to or receiving letters from family or friends							0.440	0.006*
1.00 Three times a week or more	19	19	21	18	18	9		
2.00 Once or twice a week	11	14	11	13	10	13		
3.00 Once or twice a month	12	11	8	8	8	7		
4.00 Every few months	7	8	5	3	3	4		

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
5.00 Once or twice a year	6	7	2	9	3	3		
6.00 Less than once a year or never	45	43	53	50	58	64		
% writing at least weekly	30	32	32	31	28	22	0.672	0.082
EQ5D1 mobility							0.791	0.579
1.00 I have no problems in walking about	50	49	47	49	48	46		
2.00 I have some problems in walking about	49	50	53	51	51	52		
3.00 I am confined to bed	1	1	-	-	1	2		
EQ5D2 self-care							0.842	0.277
1.00 I have no problems with self- care	83	81	83	80	82	79		
2.00 I have some problems with self-care	16	18	16	18	15	19		
3.00 I am unable to wash or dress myself	1	1	1	2	2	3		
EQ5D3 usual activities							0.267	0.800
1.00 I have no problems performing my usual activities	58	58	58	67	58	59		
2.00 I have some problems performing my usual activities	36	38	37	27	36	34		

	Ageing Better participants: baseline (%)	Ageing Better participants: 6-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 6-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 6-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*
3.00 I am unable to perform my usual activities	5	4	5	6	6	7		
EQ5D4 pain							0.073	0.451
1.00 I have no pain or discomfort	34	36	27	44	38	37		
2.00 I have moderate pain or discomfort	56	54	61	47	50	50		
3.00 I have extreme pain or discomfort	10	9	12	9	12	13		
EQ5D5 anxiety and depression							0.015*	0.191
1.00 I am not anxious or depressed	55	56	58	71	62	67		
2.00 I am moderately anxious or depressed	38	39	39	26	30	26		
3.00 I am extremely anxious or depressed	6	5	3	3	8	7		
Base size	*1198*		*305*		*300*			

** The p-values are based on logistic regressions for binary outcomes and ordinal regressions for ordinal outcomes. For the latter the test is for a consistent change in the distribution across categories. The baseline version of the outcome is controlled for.*

Table 20 Baseline and 6-month follow-up mean scores for the SWEMWBS, UCLA and DJG scales, Ageing Better and matched comparison groups

	Ageing Better participants: baseline	Ageing Better participants: 6- month follow-up	Older people participating in other activities: baseline	Older people participating in other activities: 6-months follow-up	Older people not participating in activities: baseline	Older people not participating in activities: 6-month follow-up	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*	Effect size: Ageing Better v other activity group	Effect size: Ageing Better v no activity group
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)							0.526	0.929	0.08	0.00
Mean	24.19	25.46	24.55	25.52	23.99	25.42				
Standard deviation	5.41	5.63	4.84	5.89	5.93	5.95				
UCLA loneliness scale (3 to 9)							0.879	0.346	-0.06	-0.05
Mean	5.28	4.92	5.16	4.93	5.26	5.00				
Standard deviation	1.98	1.81	1.92	2.08	1.99	1.98				
DJG social and emotional loneliness scale (0 to 6)							0.326	0.102	0.00	0.19
Mean	2.91	2.62	2.63	2.35	2.99	2.34				
Standard deviation	2.04	2.01	1.89	1.97	2.09	1.91				
EQ-VAS							0.327	0.916	0.13	-0.02
Mean	67.0	69.1	71.2	70.9	62.5	65.1				
Standard deviation	20.3	18.7	18.3	19.0	25.0	24.0				
Base size	*1198*		*305*		*300*					

** The p-values are based on linear regressions. The baseline version of the outcome is controlled for.*

Table 21 Baseline and 12-month follow-up scores for the full outcome scales, Ageing Better and matched comparison groups

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
Short Warwick Edinburgh Mental Wellbeing Scale							0.005*	0.604
1.00 7 to 19	18	11	24	6	20	21		
2.00 20 to 24	30	28	27	13	29	20		
3.00 25 to 29	35	38	29	39	33	25		
4.00 30+	18	23	19	41	18	34		
% low well-being (7 to 19)	18	11	24	6	20	21	0.033*	0.152
UCLA loneliness scale							0.024*	0.640
3.00 least lonely	30	36	28	45	30	38		
4.00	12	13	15	14	12	15		
5.00	13	15	18	12	11	11		
6.00	21	20	13	19	24	13		
7.00	9	6	7	5	9	2		
8.00	7	4	5	1	7	10		
9.00 most lonely	7	5	13	4	8	11		
% lonely (6 to 9)	45	36	39	29	47	36	0.236	0.964
DJG social and emotional loneliness scale							0.215	0.309
0 no loneliness	18	18	26	26	22	17		
1	14	16	14	21	12	20		
2	15	15	16	10	8	14		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
3	14	16	9	11	19	13		
4	14	14	11	18	9	5		
5	11	10	9	11	19	12		
6 severe loneliness	14	11	15	3	10	18		
% lonely (2 to 6)	68	66	60	53	66	63	0.212	0.504
DJG social loneliness scale							0.555	0.550
0 no loneliness	36	36	42	43	39	46		
1	16	16	21	20	13	12		
2	15	16	8	11	24	10		
3 severe loneliness	34	32	29	26	24	32		
% lonely (1 to 3)	64	64	58	57	61	54	0.639	0.079
DJG emotional loneliness scale							0.102	0.046*
0 no loneliness	30	34	39	44	30	26		
1	26	28	18	28	23	27		
2	22	19	18	14	21	18		
3 severe loneliness	22	19	25	14	27	30		
% lonely (1 to 3)	70	66	61	56	70	74	0.107	0.123
Frequency of meetings with family or friends							0.081	0.031*
1.00 Three times a week or more	36	41	32	50	35	32		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
2.00 Once or twice a week	39	36	41	32	42	29		
3.00 Once or twice a month	14	15	9	15	15	27		
4.00 Every few months	6	4	16	1	4	3		
5.00 Once or twice a year	2	2	1	2	1	1		
6.00 Less than once a year or never	3	2	2	1	3	7		
% meeting at least weekly	76	78	73	82	77	61	0.362	0.006*
Frequency of speaking to anyone locally (non-family member)							0.058	0.659
1.00 Every day or almost every day	46	48	52	50	59	57		
2.00 Three times a week or more	20	25	24	36	17	14		
3.00 Once or twice a week	20	18	8	13	13	16		
4.00 A few times a month	9	5	4	1	5	7		
5.00 Once a month	2	2	4	-	3	4		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
6.00 Once every two months	1	1	-	-	2	2		
7.00 Every few months	1	-	8	-	-	-		
8.00 Once or twice a year	-	-	-	-	-	-		
9.00 Less than once a year	1	1	-	-	1	-		
% speaking at least three times a week	66	73	76	86	76	71	0.058	0.257
Frequency of speaking on the phone with family or friends							0.471	0.328
1.00 Three times a week or more	53	52	52	54	46	40		
2.00 Once or twice a week	31	33	36	36	28	39		
3.00 Once or twice a month	9	9	8	7	14	11		
4.00 Every few months	2	3	3	-	5	5		
5.00 Once or twice a year	1	1	-	-	3	1		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
6.00 Less than once a year or never	3	2	1	3	4	5		
% speaking at least weekly	84	85	89	90	73	79	0.241	0.623
Frequency of texting with family or friends							0.144	0.004*
1.00 Three times a week or more	27	30	36	34	18	14		
2.00 Once or twice a week	17	16	12	13	14	11		
3.00 Once or twice a month	10	9	9	5	4	1		
4.00 Every few months	2	1	1	-	2	1		
5.00 Once or twice a year	3	2	1	-	-	2		
6.00 Less than once a year or never	41	42	41	47	63	71		
% texting at least weekly	45	46	48	47	31	25	0.473	0.022*
Frequency of writing to or receiving letters from family or friends							0.002*	0.009*
1.00 Three times a week or more	16	17	18	15	16	11		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
2.00 Once or twice a week	14	14	11	8	13	5		
3.00 Once or twice a month	15	16	13	7	5	6		
4.00 Every few months	8	7	5	6	1	1		
5.00 Once or twice a year	5	6	3	7	3	8		
6.00 Less than once a year or never	42	40	50	56	61	70		
% writing at least weekly	30	31	29	24	30	16	0.038*	0.008*
EQ5D1 – mobility							0.902	0.900
1.00 I have no problems in walking about	46	45	37	41	41	42		
2.00 I have some problems in walking about	53	55	63	59	56	55		
3.00 I am confined to bed	1	-	-	-	3	3		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
EQ5D2 – self-care							0.249	0.284
1.00 I have no problems with self-care	82	78	84	89	78	74		
2.00 I have some problems with self-care	17	19	14	4	19	17		
3.00 I am unable to wash or dress myself	1	3	2	7	4	9		
EQ5D3 – usual activities							0.051	0.704
1.00 I have no problems performing my usual activities	56	54	49	64	52	56		
2.00 I have some problems performing my usual activities	38	41	43	33	41	30		
3.00 I am unable to perform my usual activities	6	4	8	3	7	14		
EQ5D4 – pain							0.697	0.227
1.00 I have no pain or discomfort	32	33	23	31	31	31		

	Ageing Better participants: baseline (%)	Ageing Better participants: 12-month follow-up (%)	Older people participating in other activities: baseline (%)	Older people participating in other activities: 12-months follow-up (%)	Older people not participating in activities: baseline (%)	Older people not participating in activities: 12-month follow-up (%)	p-value for difference in follow-up scores: Ageing Better v other activity group* (%)	p-value for difference in follow-up scores: Ageing Better v no activity group* (%)
2.00 I have moderate pain or discomfort	56	58	58	47	53	49		
3.00 I have extreme pain or discomfort	12	10	19	22	16	20		
EQ5D5 – anxiety and depression							0.445	0.169
1.00 I am not anxious or depressed	54	61	48	66	61	55		
2.00 I am moderately anxious or depressed	38	34	45	29	35	38		
3.00 I am extremely anxious or depressed	7	5	7	5	4	7		
Base size	*623*		*186*		*153*			

** The p-values are based on logistic regressions for binary outcomes and ordinal regressions for ordinal outcomes. For the latter the test is for a consistent change in the distribution across categories. The baseline version of the outcome is controlled for.*

Table 22 Baseline and 12-month follow-up mean scores for the SWEMWBS, UCLA and DJG scales, Ageing Better and matched comparison groups

	Ageing Better participants: baseline	Ageing Better participants: 12- month follow-up	Older people participating in other activities: baseline	Older people participating in other activities: 12-months follow-up	Older people not participating in activities: baseline	Older people not participating in activities: 12-month follow-up	p-value for difference in follow-up scores: Ageing Better v other activity group*	p-value for difference in follow-up scores: Ageing Better v no activity group*	Effect size: Ageing Better v other activity group	Effect size: Ageing Better v no activity group
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)							0.042*	0.673	-0.38	0.03
Mean	24.54	25.67	24.48	27.80	24.18	25.14				
Standard deviation	5.51	4.91	5.63	4.94	6.18	6.48				
UCLA loneliness scale (3 to 9)							0.054	0.484	0.20	-0.09
Mean	5.17	4.79	5.23	4.45	5.22	5.01				
Standard deviation	1.92	1.77	2.03	1.66	1.93	2.14				
DJG social and emotional loneliness scale (0 to 6)							0.200	0.567	0.09	-0.08
Mean	2.82	2.66	2.52	2.17	2.77	2.78				
Standard deviation	2.04	1.97	2.16	1.86	2.07	2.15				
EQ-VAS							0.899	0.383	-0.11	0.06
Mean	66.3	69.0	62.6	67.8	65.4	66.7				
Standard deviation	20.1	18.7	23.4	19.0	24.9	22.9				
Base size	*623*		*186*		*153*					
**The p-values are based on linear regressions. The baseline version of the outcome is controlled for.*										

3.7.3 Outcomes for demographic groups, Ageing Better participants compared to non-participants

The following tables compare outcomes for the Ageing Better group and the non-participants after PSM. The p-values are from logistic regressions that take into account the propensity score weights and control for the baseline version of the outcome under consideration (Section 3.4.4).

In the tables below, the comparison made (difference and p-value) is between the baseline to six-month change for Ageing Better participants and the baseline to six-month change for the non-participant group.

Table 23 Regression analysis of changes in key outcomes of Ageing Better participants and 'non-participants', by gender

	Men						Women					
	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months			Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	16	12	16	15	3	0.527	21	11	21	18	6	0.046*
Who are lonely (scored 6 or more)	39	32	20	34	-9	0.718	47	39	39	40	9	0.376
Meeting family or friends at least weekly	72	76	67	66	5	0.231	76	82	77	73	10	0.046*
Speaking with someone locally at least three times a week	70	74	68	66	7	0.154	63	70	66	61	12	0.081
Base size	*414*		*131*				*784*		*169*			

Table 24 Regression analysis of changes in key outcomes of Ageing Better participants and 'non-participants', for those living with a longstanding illness or disability

	With longstanding illness or disability					
	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	25	14	25	20	5	0.098
Who are lonely (scored 6 or more)	53	44	49	48	8	0.204
Meeting family or friends at least weekly	72	78	72	66	13	0.006*
Speaking with someone locally at least three times a week	61	68	62	60	9	0.123

Table 25 Regression analysis of changes in key outcomes of Ageing Better participants and 'non-participants', for those with low or mid wellbeing and high wellbeing at baseline

	Low-mid wellbeing at baseline (scored 7-27)						High wellbeing at baseline (scored 28-35)					
	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months			Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	27	16	28	23	6	0.063	0	1	0	2	2	0.119
Who are lonely (scored 6 or more)	56	44	53	47	6	0.315	14	17	22	16	-9	0.069
Meeting family or friends at least weekly	72	78	68	63	10	0.004*	81	85	84	85	4	0.875
Speaking with someone locally at least three times a week	59	67	62	57	14	0.021*	82	81	78	72	<0.5	0.537
Base size	*864*		*147*				*334*		*153*			

Table 26 Regression analysis of changes in key outcomes of Ageing Better participants and 'non-participants', for those who had some loneliness (UCLA score between 4 and 9) and those who had no loneliness (UCLA score 3) at baseline

	Any loneliness at baseline (scoring 4-9)						No loneliness at baseline (3)					
	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value	Ageing Better Participants (%)		Non-participants (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months			Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	25	14	26	22	7	0.029*	4	5	2	4	1	0.819
Who are lonely (scored 6 or more)	61	47	61	51	3	0.506	0	9	0	5	-4	0.147
Meeting family or friends at least weekly	70	76	70	67	9	0.092	88	90	80	77	5	0.031*
Speaking with someone locally at least three times a week	58	67	63	59	13	0.078	84	83	77	74	2	0.215
Base size	*869*		*128*				*329*		*172*			

Project types

4.0 Project types

4.1 Overview

In 2019, TNLCF commissioned research[42] to develop a new way of classifying Ageing Better projects into different types. Detailed data on the nature of each project was collected from all 14 programme areas for 374 projects. This project typology data was then merged with the CMF data on Ageing Better participants and basic details of the project they attended to create a single dataset.

4.2 Project typology questionnaire and sample

A questionnaire was developed to collect information about the project types. Categories were developed (Table 27) in consultation with TNLCF, national evaluation, other academic organisations and Ageing Better projects. The questionnaire was piloted with 3 partnerships before being launched as an online survey for all 14 partnerships.

Table 27 Project types

Project type	Description	Options
Target Group	The target group of older people that each of the projects aims to support. A primary and secondary target group were identified for each project.	All older people Older people at risk of social isolation/loneliness Older people currently experiencing social isolation/loneliness Demographic focus Living situation Health focus Transitions Non-demographic groups
Type of intervention	The nature of the intervention taking place.	IT intervention Asset-based community development (ABCD) Creative activity Social intervention Culture change Knowledge sharing or building knowledge Social prescribing Mental health

[42] 'Categorisations of Ageing Better programme interventions designed to reduce loneliness and/or social isolation', S. Gibson et al., University of Sheffield/University of Kent (unpublished).

Project type	Description	Options
		Physical health Transport
Aim of intervention	The main aim of the project / intervention. This included a primary and secondary aim for each project.	Empowering older people to become more involved Improving mental health Improving physical health Learning or improving skills Promoting a positive image of ageing
Level of impact	The level at which the project aims to influence change.	Individuals Interpersonal Community Organisational Public policy
Method of delivery	The way in which the project is delivered.	Face-to-face Telephone Internet
Type of support	The type of support the projects offer.	Group One-to-one support
Location of delivery	The type(s) of location where the project is delivered.	Business venue Community venue Outdoor space Public transport Provider's venue Participant's home

Partnerships were asked to complete the questionnaire, including details for all their funded projects, except for very small projects or projects that had finished. The final sample therefore resembled a census of substantial projects existing at that time.

4.3 Project typology data quality checks and analysis

The national evaluation team matched the data for projects in the project types dataset (374 projects) with data in the CMF dataset (366 projects) so that the participant characteristics and outcome data could be analysed using this new list of project types.

Data was checked to take account of potential differences in project names in the two datasets. In most cases, project names were easily amended so that projects could be correctly linked. In a few cases, there were different names that could not

be linked (or other minor anomalies). As a result, the final matched dataset contains matched data for 297 of the 366 projects in the CMF dataset (79%) (Table 28).

The analysis of project typology data presented in the following tables includes some analysis involving CMF data. The CMF data is explained in Chapter 2.0, and includes information on outcome measures and the thresholds for outcome measures applied for the typology analysis.

Table 28 Matching CMF projects with projects in the project types dataset

	Matched	Total	%
Projects matched	297	366	81%
Records matched	27926	35920	78%
...including demographics (based on gender)	25852	33765	77%
...including outcomes at follow-up (based on contact with family and friends)	7533	8085	93%[43]

This matched dataset was used to explore the types of projects that different sub-groups participated in and the link between project types and participant outcomes.

4.4 Project typology data limitations

As the matched dataset includes both CMF data and project typology data, the same limitations that apply to the CMF dataset (see Chapter 2.0) also apply here, as well as two additional limitations that relate specifically to the project typology data.

The project types refer to the characteristics of projects as a whole, such as the types of activities that a project generally offers and the way that projects are generally delivered. As a result, a project may fit within a certain type, without every participant necessarily having experienced that particular approach. For example, a project could have generally delivered sessions in a business venue and community venue, but certain participants may have attended only one of these types of venue.

The project types information was collected at a single point in time, meaning that any changes before or after this information was provided are not available.

[43] Projects with outcomes data were more likely to be included in the exercise (93%) because they tended to be larger projects (small projects could be excluded from CMF data collection). For example, 51 of the 69 projects that could not be matched had fewer than 40 participant records.

4.5 Project typology descriptive data tables

In the following sections, tables present the project typology data analysis.

Section 4.5.1 shows data on overall participation in project types. This section presents the overall proportions of Ageing Better participants in each project type.

Section 3.5.1 shows data on the characteristics of project type participants in terms of their demographic characteristics, and Section 4.5.3 in relation to key outcome measures: namely those who were lonely, had low wellbeing or had low social contact.

4.5.1 Project types participation

The following table shows the percentage of projects of different types and the percentage of Ageing Better participants in each project type.

Table 29 Proportions of participants and projects by type[44]

Project type (multi-code)	Participants (%)	Projects (%)
Type of Intervention		
IT Interventions	24	16
Asset Based Community Development	28	26
Creative Activity Projects	42	32
Social Interventions	59	55
Culture Change	15	9
Knowledge sharing or building knowledge	29	16
Social Prescribing	26	11
Mental Health Interventions	22	20
Physical Health Interventions	47	29
Transport related projects	12	6
Other	3	3
Base Size	*27382*	*297*
Mean number of intervention types per participant/project	3.38	3.20
Primary Aim		
Empowering older people	34	40
Improving mental health	36	29
Improving physical health	6	8
Promoting positive images of ageing	18	6
Learning or improving skills and knowledge	6	13
Other	1	3

[44] The percentages can sum to greater than 100 as participants could select multiple project types. The reason why proportions by project type differ between participants and projects is because not all projects have the same number of participants.

Project type (multi-code)	Participants (%)	Projects (%)
Base Size	*27382*	*297*
Target Group		
All older people	30	26
Older people at risk of social isolation or loneliness	12	13
Older people experiencing social isolation or loneliness	29	16
Demographic focus	16	19
Living situation focus	1	2
Health focus	6	11
Transition focus	1	1
Non-demographic groups	6	11
Other	1	3
Base Size	*27276*	*296*
Level of intervention (multi-code)		
Individuals	98	95
Interpersonal	76	67
Community	49	48
Organisational	30	24
Policy	16	14
Other	<1	1
Base Size	*27299*	*294*
Method of delivery (multi-code)		
Face to face	100	99
Telephone	26	25
Online	14	12
Other	1	1
Base Size	27382	297
Type of support (multi-code)		
One to one	47	51
Group support	74	76
Other	5	5
Base Size	*27382*	*297*
Delivery location (multi-code)		
Business venue	44	30
Community venue	83	73
Outdoors	37	29
Public transport	10	5
Provider's venue	59	50
Participant's Home	34	30
Other	<1	<1
Base Size	*27382*	*297*

4.5.2 Project types participation: demographic characteristics

The following tables show the demographic characteristics of participants in different project types.

Table 30 Proportion of participants in projects of different intervention types, by demographic group

Characteristic	Type of intervention (multi-code)										
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)
Age											
74 and under	70	65	69	68	77	70	64	70	68	56	75
75 and over	30	35	31	32	23	30	36	30	32	44	25
Base Size	*6069*	*6611*	*10087*	*13969*	*3688*	*7259*	*7188*	*4726*	*10833*	*2423*	*997*
Gender											
Male	30	32	30	32	30	31	31	37	31	32	38
Female	70	68	70	68	70	69	69	63	69	68	62
Base Size	*6568*	*8022*	*11881*	*16692*	*4322*	*8364*	*7710*	*5629*	*13032*	*3554*	*1002*
Ethnicity											
Asian/Asian UK	9	20	15	16	11	12	6	17	19	15	1
Black/African/Caribbean/Black UK	7	8	8	6	3	6	3	11	7	5	1
White	80	69	73	74	84	79	89	66	69	75	96
Mixed Ethnic	1	1	1	1	1	1	1	2	1	1	2
Other Ethnic Group	3	2	3	3	1	1	1	4	3	4	1
Any ethnic minority	20	31	27	26	16	21	11	34	31	25	4
Base Size	*6391*	*7675*	*11439*	*16239*	*4211*	*7909*	*7423*	*5579*	*12539*	*3331*	*984*
Sexuality											
Heterosexual	92	93	97	95	95	98	98	88	94	98	97

Characteristic	Type of intervention (multi-code)										
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)
Gay/Lesbian	7	5	2	4	4	2	1	10	5	1	2
Bisexual	1	1	1	1	1	1	1	1	1	1	1
Other Sexuality	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	0
Base Size	*5179*	*6186*	*9034*	*13443*	*3684*	*6674*	*6651*	*4354*	*9940*	*2772*	*887*
Living Arrangements											
Living Alone	47	51	47	48	36	47	52	49	47	62	47
With Spouse/Partner	37	27	33	31	47	35	33	25	31	21	35
With Family	13	17	16	17	14	15	12	22	18	12	14
In Residential Accommodation	2	3	2	2	2	2	1	2	2	2	2
Other Living Arrangement	2	2	1	2	2	2	2	2	1	3	3
Base Size	*5644*	*6166*	*9522*	*13047*	*3511*	*6744*	*6981*	*4484*	*10279*	*2245*	*984*
Longstanding Illness / Disability											
With Longstanding Illness / Disability	53	56	55	56	55	62	68	54	56	68	72
Without Longstanding Illness / Disability	47	44	45	44	45	38	32	46	44	32	28
Base Size	*5570*	*6181*	*9557*	*12990*	*3434*	*6645*	*6852*	*4533*	*10391*	*2219*	*967*
Carer Status											
Carer	22	20	21	21	26	22	20	24	21	16	35
Not Carer	78	80	79	79	74	78	80	76	79	84	65
Base Size	*5400*	*5822*	*9125*	*12509*	*3390*	*6372*	*6691*	*4308*	*9817*	*2024*	*969*

Table 31 Proportion of participants in projects with different target groups, by demographic group

Characteristic	Target group								
	All older people (%)	Older people at risk of social isolation or loneliness (%)	Older people experiencing social isolation or loneliness (%)	Demographic focus (%)	Living situation focus (%)	Health focus (%)	Transition focus (%)	Non-demographic groups (%)	Other (%)
Gender									
Male	31	29	30	44	34	33	36	26	40
Female	69	71	70	57	66	67	64	74	60
Base Size	*8211*	*3445*	*8237*	*4563*	*307*	*1817*	*163*	*1841*	*225*
Ethnicity									
Asian/Asian UK	16	12	7	42	1	11	49	9	2
Black/African/Caribbean/Black UK	6	9	3	15	1	2	1	17	0
White	75	76	88	36	98	81	50	71	96
Mixed Ethnic	1	1	1	1	1	1	0	1	1
Other Ethnic Group	2	2	1	6	0	5	1	2	0
Base Size	*7969*	*3250*	*7943*	*4414*	*303*	*1794*	*161*	*1804*	*223*
Sexuality									
Heterosexual	97	97	97	87	99	98	98	96	98
Gay/Lesbian	1	2	2	11	0	1	1	3	2
Bisexual	1	1	1	1	1	0	1	1	1
Other Sexuality	<1	<1	<1	<1	0	1	0	<1	0
Base Size	*6380*	*2485*	*6985*	*3575*	*254*	*1583*	*143*	*1541*	*174*
Living Arrangements									
Living Alone	53	56	54	38	56	55	49	39	34
With Spouse/Partner	28	25	32	27	26	28	27	38	45
With Family	14	14	11	32	6	14	23	19	18

Characteristic	Target group								
	All older people (%)	Older people at risk of social isolation or loneliness (%)	Older people experiencing social isolation or loneliness (%)	Demographic focus (%)	Living situation focus (%)	Health focus (%)	Transition focus (%)	Non-demographic groups (%)	Other (%)
In Residential Accommodation	3	3	2	1	10	1	0	2	1
Other Living Arrangement	2	1	2	1	2	2	1	2	3
Base Size	*5972*	*2853*	*7148*	*3846*	*297*	*1726*	*154*	*1558*	*199*
Longstanding Illness / Disability									
With Longstanding Illness / Disability	58	55	65	50	57	71	51	57	34
Without Longstanding Illness / Disability	42	45	35	50	43	29	49	43	66
Base Size	*5938*	*2902*	*7034*	*3886*	*292*	*1714*	*150*	*1524*	*185*
Carer Status									
Carer	18	16	19	20	12	23	24	48	29
Not Carer	82	85	81	80	88	77	76	52	71
Base Size	*5742*	*2716*	*6825*	*3681*	*292*	*1701*	*148*	*1560*	*192*

The following table shows participation in different 'sub-categories' of projects that targeted demographic groups (Table 312). The numbers shown are the percentage of people who took part in projects that targeted 'demographic groups', rather than the percentage of all Ageing Better participants.

Table 32 Demographic characteristics of participants in projects that targeted different demographic groups

Characteristic	Target group: demographics						
	Gender (%)	Ethnicity (%)	LGBTQ+ (%)	Carer (%)	Living Alone (%)	Longstanding Illness / Disability (%)	Other (%)
Gender							
Male	63	34	73	100	57	50	45
Female	37	66	27	0	43	50	55
Base Size	*689*	*2533*	*451*	*58*	*219*	*112*	*242*
Ethnicity							
Asian/Asian UK	23	58	4	0	13	8	18
Black/African/Caribbean/Black UK	9	21	4	0	6	1	13
White	62	15	87	100	80	88	51
Mixed Ethnic	2	1	2	0	1	0	2
Other Ethnic Group	3	6	2	0	1	4	16
Base Size	*649*	*2453*	*437*	*57*	*214*	*112*	*236*
Sexuality							
Heterosexual	97	98	7	92	99	99	99
Gay/Lesbian	2	0	85	8	0	0	1
Bisexual	1	1	7	0	1	1	1
Other Sexuality	<1	<1	1	0	1	0	0
Base Size	*462*	*1909*	*435*	*52*	*194*	*103*	*163*
Living Arrangements							
Living Alone	58	30	65	NA	41	60	37

Characteristic	Target group: demographics						
	Gender (%)	Ethnicity (%)	LGBTQ+ (%)	Carer (%)	Living Alone (%)	Longstanding Illness / Disability (%)	Other (%)
With Spouse/Partner	25	28	25	NA	40	30	23
With Family	14	40	7	NA	15	10	36
In Residential Accommodation	1	1	1	NA	1	0	2
Other Living Arrangement	1	1	3	NA	3	0	3
Base Size	*563*	*2141*	*351*	*0*	*213*	*108*	*126*
Longstanding Illness / Disability							
With Longstanding Illness / Disability	50	51	46	NA	62	68	47
Without Longstanding Illness / Disability	50	49	54	NA	38	32	53
Base Size	*552*	*2175*	*381*	*NA*	*214*	*98*	*124*
Carer Status							
Carer	12	24	18	NA	13	16	14
Not Carer	88	76	82	NA	87	84	86
Base Size	*479*	*2120*	*315*	*0*	*208*	*98*	*125*

4.5.3 Project types participation: those who are lonely, have low wellbeing and low social contact

The following tables show the percentage of those who were lonely, had low wellbeing or had low social contact who attended different types of projects.

Table 33 Participation by those who are lonely, have low wellbeing or have low social contact in projects offering different types of intervention

Characteristic	Type of Intervention (multi-code)										
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)											
Lonely (scored 2 and above)	66	71	69	72	65	71	73	79	69	77	83
Base Size	*2892*	*3040*	*4923*	*7540*	*1942*	*3872*	*4182*	*2613*	*5431*	*1240*	*762*
UCLA loneliness scale (3 to 9)											
Lonely (scored 6 and above)	42	49	47	52	41	51	53	58	47	58	64
Base Size	*1868*	*2263*	*3492*	*5375*	*1222*	*2773*	*2843*	*1920*	*3849*	*957*	*534*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)											
Low wellbeing (scored under 20)	38	43	42	45	36	47	50	54	41	51	70
Base Size	*1669*	*1889*	*3064*	*4803*	*1110*	*2611*	*2892*	*1783*	*3301*	*862*	*620*
Contact with family and friends											
Low social contact (in person, less than once a week)	30	26	29	30	31	31	34	31	28	33	43

Characteristic	Type of Intervention (multi-code)										
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)
Base Size	*1459*	*1284*	*2320*	*3453*	*986*	*1861*	*2108*	*1145*	*2407*	*591*	*418*
Contact with anyone locally											
Low social contact (speak three times a week or less)	30	36	33	37	29	37	37	43	35	41	43
Base Size	*1454*	*1733*	*2661*	*4190*	*950*	*2105*	*2249*	*1484*	*2982*	*687*	*414*

Table 34 Participation by those who are lonely, have low wellbeing or have low social contact in projects with different primary aims

Characteristic	Primary Aim					
	Empowering older people (%)	Improving mental health (%)	Improving physical health (%)	Promoting positive images of ageing (%)	Learning or improving skills and knowledge (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)						
Lonely (scored 2 and above)	73	79	67	66	74	76
Base Size	*4458*	*3898*	*759*	*2888*	*737*	*231*
UCLA loneliness scale (3 to 9)						
Lonely (scored 6 and above)	52	59	47	44	52	48
Base Size	*3405*	*2821*	*413*	*1842*	*501*	*123*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)						
Low wellbeing (scored under 20)	45	53	43	42	43	52
Base Size	*2784*	*2666*	*496*	*1882*	*427*	*160*
Contact with family and friends						
Low social contact (in person, less than once a week)	28	31	30	31	26	34
Base Size	*2024*	*1710*	*408*	*1462*	*288*	*117*
Contact with anyone locally						
Low social contact (speak three times a week or less)	39	40	39	33	36	34
Base Size	*2798*	*2144*	*523*	*1571*	*321*	*117*

Table 35 Participation by those who are lonely, have low wellbeing or have low social contact in projects with different target groups

Characteristic	Target groups								
	All older people (%)	Older people at risk of social isolation or loneliness (%)	Older people experiencing social isolation or loneliness (%)	Demographic focus (%)	Living situation focus (%)	Health focus (%)	Transition focus (%)	Non-demographic groups (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)									
Lonely (scored 2 and above)	72	69	74	75	57	74	76	71	59
Base Size	*3251*	*1399*	*4434*	*1940*	*115*	*962*	*50*	*913*	*78*
UCLA loneliness scale (3 to 9)									
Lonely (scored 6 and above)	52	50	53	50	41	53	51	50	43
Base Size	*2311*	*1115*	*3094*	*1334*	*56*	*556*	*51*	*625*	*58*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)									
Low wellbeing (scored under 20)	47	40	48	44	30	50	37	46	40
Base Size	*2191*	*807*	*2977*	*1129*	*61*	*663*	*35*	*592*	*58*
Contact with family and friends									
Low social contact (in person, less than once a week)	29	27	32	27	19	31	22	28	30
Base Size	*1519*	*595*	*2111*	*836*	*49*	*473*	*24*	*415*	*45*
Contact with anyone locally									
Low social contact (speak three times a week or less)	36	37	36	44	25	41	33	32	35
Base Size	*1775*	*830*	*2308*	*1380*	*65*	*643*	*36*	*486*	*53*

The following table shows participation in different 'sub-categories' of projects that targeted demographic groups (Table 35). The numbers shown are the percentage of people who took part in projects that targeted 'demographic groups', rather than the percentage of all Ageing Better participants.

Table 36 Participation of those who are lonely, have low wellbeing or have low social contact in projects targeting different demographic groups

Characteristic	Target Group: demographic						
	Gender	Ethnicity	LGBTQ+	Carer	Living Alone	Longstanding Illness / Disability	Other
DJG social and emotional loneliness scale (0 to 6)							
Lonely (scored 2 or more) (%)	66	79	75	62	66	65	69
Base Size	*202*	*1135*	*188*	*33*	*121*	*64*	*102*
UCLA loneliness scale (3 to 9)							
Lonely (scored 6 or more) (%)	43	52	50	43	38	30	52
Base Size	*138*	*771*	*137*	*24*	*66*	*31*	*46*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)							
Low wellbeing (scored under 20)	36	47	39	29	30	29	44
Base Size	*109*	*662*	*100*	*16*	*60*	*29*	*65*
Contact with family and friends							
Low social contact (in person, less than once a week)	23	25	33	42	34	20	25
Base Size	*81*	*430*	*94*	*24*	*71*	*21*	*40*
Contact with anyone locally							
Low social contact (speak three times a week or less)	30	48	41	25	34	28	38
Base Size	*110*	*843*	*115*	*14*	*73*	*31*	*61*

4.6 Project typology and activity outcomes regression analysis

4.6.1 Overview

Regression analysis was used to identify whether some project types and activities are more successful in improving outcomes. This analysis focused on whether outcomes differed across four sets of project characteristics, using the following project typologies data:

- Types of interventions
- Target groups
- Levels of impact intended by each project
- Aims of projects (including whether characterised as primary or secondary)

Regression analysis was also run on a fifth set of project characteristics, the types of activity in each project, using data from the CMF database about the activities that participants engaged in.

Information on the project type data, collected by the project type research, can be found in Section 4.1, and project activity data, collected via the CMF, in Section 2.4.

The regression analysis used four outcomes:

- Wellbeing, measured by the SWEMWBS
- Loneliness, measured by the UCLA loneliness scale
- Frequency of meeting with family or friends
- Frequency of speaking to anyone who is not a family member

The analysis draws on CMF data about Ageing Better participants, comparing across participants rather than against either the primary or secondary comparison groups of people not taking part in Ageing Better.

Without needing to match follow-up periods to the 6- and 12-month follow-up periods for the comparison survey, this analysis includes any participants providing baseline outcomes and at least one set of follow-up outcomes, provided they have linked data on the project characteristics. Participants are included regardless of the time interval (provided it was at least one month). In addition, those aged 50 to

63 have been included in this analysis. This provides a larger sample size of participants than was used for the impact analysis of around 6,444 participants across 193 projects.

The contributions of the project-level characteristics and the participants' activities are measured using linear regression models. Separate models were run for each outcome and for each set of project characteristics. The outcomes in the linear regression models were the changes between entry and follow-up data along the full outcome scale, rather than the binary outcomes used in Chapter 3.0. For instance, 'improved' wellbeing is a movement up the SWEMWBS scale running from 7 to 35 with higher wellbeing having a higher score; 'improved' loneliness is a movement down the UCLA scale running from 3 to 9 where less loneliness is represented by a lower score. On the UCLA scale, a negative change score normally represents an improvement. Here, the change score was multiplied by -1 so that improvements equate to positive change scores, in line with the other outcomes

Each regression model tests for the contribution of project characteristics to an improvement in outcomes, having controlled for differences in participants' profiles and, using a basic measure, their level of involvement in the project. Furthermore, the coefficients associated with individuals' characteristics indicate how outcomes change across those characteristics.

The variables included in the models are: participants' baseline scores on each of the four outcomes; their age, ethnicity, gender, living status, disability and carer status; how long they have been involved in the activity (where known) and whether their involvement is ongoing; the interval between baseline and follow-up; whether the support offered was in a group or one-to-one; and a crude measure of project intensity. The outputs from the model are included in the tables below.

Each change score has been divided by its standard deviation to give a 'standardised change score', the implication being that the regression coefficients can then be interpreted as 'effect sizes'. That is, a regression coefficient of 0.5 would equate to a movement along the change score of 0.5 standard deviations.

Table 37 Mean and standard deviations for the four change scores before and after standardisation

Outcome	Before standardisation		After standardisation (and multiplying UCLA change by minus 1)	
	Mean	Standard deviation	Mean	Standard deviation
Change in WEMWBS score	1.76	5.35	0.33	1
Change in UCLA score	-0.44	1.75	0.25	1
Change in frequency of meeting with family or friends	0.17	1.29	0.13	1
Change in frequency of speaking to anyone who is not a family member	0.23	1.67	0.14	1

As noted in Section 4.1, the project types data provides valuable information at an overall project level at a single point in time. The CMF data provides equally valuable individual participant-level data at what may be a different point in time. The regression analysis used both sets of data, requiring careful analysis. The results should be carefully interpreted as showing, for example, the impact on people who attended a project that generally aimed to empower older people rather than the impact on people who the project specifically aimed to empower.

4.6.2 Project types regression data tables

The following tables present the output from the linear regression models used to identify the project characteristics associated with improvement in outcomes, by project types (Section 1.1.1 looks at project activities). There are four sets of models: project type (Table 38), project aims (primary or secondary) (Table 39) and primary target group for the project (Table 40).

The regressions were run in the SPSS complex samples models. The standard errors account for the clustering of the data within projects and the inclusion in the data more than once of those participants who had more than one follow-up.

A positive beta coefficient reflects greater than average change; a negative coefficient suggests lower than average change, although the change may still be positive.[45] A p-value of less than 5% is conventionally taken to indicate a statistically significant difference ($p<0.05$).[46]

[45] The effect size in all tables is both the standardised and unstandardised coefficients as these are equivalent.
[46] The p-values take into account the fact that the Ageing Better participant data is clustered within a number of projects, plus the fact that the PSM adds weights to the comparison group data.

Table 38 Regression analysis for project types

	Improvement in WEMWBS well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in contact with non-family locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
N		6,444			6,538			6,064			6,820	
R-squared		0.273			0.303			0.344			0.297	
Intercept	-0.776	0.127	0.000	0.833	0.153	0.000	1.789	0.192	0.000	1.391	0.142	0.000
Project type												
IT interventions relating to technology	-0.094	0.068	0.167	0.002	0.063	0.979	-0.018	0.058	0.751	-0.010	0.046	0.819
Asset Based Community Development	0.205*	0.060	0.001*	0.132	0.051	0.010*	0.092	0.050	0.069	0.053	0.043	0.214
Creative Activity projects	-0.187	0.061	0.003*	-0.113	0.056	0.045*	-0.109	0.049	0.027*	-0.162	0.044	0.000*
Social Intervention	0.112	0.070	0.110	0.088	0.061	0.150	0.052	0.054	0.338	0.096	0.043	0.027*
Culture change campaign	-0.072	0.079	0.362	-0.029	0.076	0.705	-0.068	0.076	0.373	0.021	0.048	0.655
Information sharing or building knowledge	-0.144	0.090	0.111	-0.049	0.081	0.549	-0.030	0.056	0.590	0.009	0.041	0.817
Social prescribing-type projects	-0.003	0.047	0.947	-0.010	0.048	0.844	-0.045	0.042	0.282	-0.035	0.030	0.255
Mental health interventions	-0.150	0.061	0.016*	-0.106	0.059	0.074	-0.148	0.061	0.016*	-0.046	0.043	0.283
Physical health interventions	0.082	0.048	0.090	0.020	0.047	0.672	0.110	0.045	0.015*	0.013	0.039	0.730
Transport-related interventions	-0.059	0.074	0.426	-0.094	0.070	0.181	-0.174	0.077	0.024*	-0.132	0.066	0.045*
Type of engagement												
Not a one-off activity	0.136	0.086	0.113	0.084	0.112	0.452	-0.005	0.108	0.963	-0.014	0.049	0.779
One-off activity	.000			.000			.000			.000		
Period between baseline and follow-up												
Up to three months	-0.127	0.065	0.052	-0.028	0.059	0.642	0.105	0.070	0.133	-0.015	0.044	0.739

	Improvement in WEMWBS well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in contact with non-family locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
3 to 6 months	-0.031	0.065	0.633	0.034	0.059	0.572	0.106	0.067	0.117	0.054	0.045	0.226
6 to 9 months	-0.062	0.052	0.239	0.043	0.053	0.415	0.080	0.066	0.226	0.011	0.039	0.779
10 to 12 months	-0.103	0.062	0.100	0.009	0.055	0.865	0.103	0.071	0.150	0.013	0.046	0.781
12 to 15 months	-0.120	0.073	0.103	0.015	0.059	0.804	0.074	0.079	0.348	0.025	0.052	0.629
15 to 18 months	-0.024	0.062	0.700	0.042	0.072	0.560	0.162	0.068	0.019*	-0.024	0.054	0.659
18 or more months	.000			.000			.000			.000		
Project model												
Group/mixed intervention	-0.126	0.054	0.020*	-0.041	0.053	0.437	-0.051	0.061	0.404	-0.050	0.043	0.240
One to one intervention	.000			.000			.000			.000		
Duration of involvement for individual												
Unknown	0.059	0.059	0.316	0.078	0.050	0.121	0.053	0.060	0.380	-0.010	0.042	0.808
Up to one month	0.196	0.060	0.001*	0.147	0.055	0.008*	0.022	0.064	0.729	-0.053	0.056	0.348
1 to 3 months	0.160	0.058	0.006*	0.145	0.051	0.005*	0.018	0.054	0.734	0.009	0.042	0.839
3 to 6 months	0.087	0.067	0.198	0.111	0.047	0.018*	-0.003	0.051	0.946	-0.005	0.041	0.911
6 to 12 months	0.061	0.060	0.310	0.093	0.049	0.059	0.094	0.044	0.033	0.055	0.046	0.233
Over a year	.000			.000			.000			.000		
Typical project intensity per person												
Unknown	0.118	0.079	0.139	0.103	0.082	0.212	0.116	0.074	0.118	0.171	0.068	0.012*
Up to 3 months duration; no info on session numbers	0.076	0.082	0.353	0.176	0.076	0.021*	0.187	0.080	0.021	0.230	0.082	0.006*
Longer than 3 months duration; no info on session numbers	-0.069	0.058	0.232	-0.047	0.059	0.424	-0.058	0.063	0.357	0.021	0.040	0.591
1 to 5 sessions	-0.011	0.096	0.913	-0.040	0.069	0.564	-0.066	0.094	0.483	-0.032	0.059	0.594

	Improvement in WEMWBS well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in contact with non-family locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
6 to 10 sessions; up to 3 months duration	0.265	0.098	0.007*	0.150	0.098	0.127	-0.017	0.073	0.818	0.090	0.052	0.087
6 to 10 sessions; more than 3 months duration	0.126	0.100	0.209	0.186	0.103	0.072	0.110	0.088	0.215	0.104	0.054	0.058
11 or more sessions	.000			.000			.000			.000		
Baseline WEWMBS score												
7 to 19	1.508	0.102	0.000*	-0.324	0.057	0.000*	-0.019	0.052	0.720	-0.088	0.041	0.036*
20 to 24	0.825	0.064	0.000*	-0.215	0.039	0.000*	-0.066	0.037	0.073	-0.038	0.034	0.260
25 to 29	0.455	0.040	0.000*	-0.051	0.034	0.135	-0.030	0.033	0.355	-0.017	0.025	0.486
30 to 35	.000			.000			.000			.000		
Baseline UCLA score												
3	0.071	0.058	0.221	-1.826	0.072	0.000*	0.153	0.057	0.008*	0.119	0.058	0.040*
4	0.046	0.062	0.455	-1.541	0.064	0.000*	0.098	0.055	0.074	0.113	0.057	0.049*
5	0.030	0.062	0.633	-1.244	0.067	0.000*	0.094	0.060	0.121	0.092	0.049	0.062
6	-0.007	0.051	0.897	-0.987	0.060	0.000*	0.079	0.047	0.095	0.043	0.048	0.374
7	-0.056	0.060	0.356	-0.609	0.067	0.000*	0.054	0.063	0.391	-0.033	0.065	0.617
8	-0.105	0.061	0.089	-0.357	0.063	0.000*	-0.069	0.064	0.283	-0.022	0.057	0.699
9	.000			.000			.000			.000		
Baseline frequency of local social contact												
Every day or almost every day	0.093	0.040	0.020*	0.111	0.038	0.004*	0.114	0.050	0.024*	-1.639	0.078	0.000*
Three times a week or more	0.030	0.040	0.453	0.032	0.042	0.450	0.099	0.047	0.038*	-1.359	0.068	0.000*
Once or twice a week	0.086	0.037	0.022*	0.081	0.043	0.060	-0.003	0.044	0.942	-1.027	0.066	0.000*
Less often	.000			.000			.000			.000		

	Improvement in WEMWBS well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in contact with non-family locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Baseline frequency of face-to-face contact												
Three times a week or more	-0.003	0.049	0.957	0.135	0.066	0.042*	-2.286	0.140	0.000*	-0.067	0.090	0.454
Once or twice a week	0.006	0.041	0.890	0.091	0.064	0.161	-1.857	0.129	0.000*	-0.075	0.084	0.375
Once or twice a month or every few months	0.030	0.046	0.516	0.139	0.054	0.011*	-1.182	0.095	0.000*	-0.117	0.085	0.171
Less often or never	.000			.000			.000			.000		
Age												
50-63	0.014	0.060	0.819	0.062	0.060	0.307	-0.083	0.046	0.071	0.012	0.052	0.812
64-69	0.077	0.055	0.168	0.093	0.050	0.064	-0.068	0.042	0.107	0.029	0.058	0.622
70-74	0.113	0.054	0.037*	0.187	0.051	0.000*	-0.045	0.055	0.419	0.097	0.057	0.090
75-79	0.035	0.046	0.448	0.111	0.047	0.018*	-0.041	0.047	0.387	0.059	0.061	0.333
80-84	0.046	0.056	0.409	0.136	0.054	0.012*	-0.077	0.062	0.211	0.034	0.058	0.557
85+	.000			.000			.000			.000		
Gender												
Male	-0.032	0.029	0.282	-0.012	0.031	0.696	-0.140	0.025	0.000*	-0.051	0.028	0.070
Female	.000			.000			.000			.000		
Ethnicity												
Ethnic minorities	0.113	0.084	0.179	0.023	0.073	0.750	0.072	0.056	0.199	-0.068	0.049	0.169
White	.000			.000			.000			.000		
Living arrangements												
Do not live alone	0.058	0.027	0.036*	0.164	0.031	0.000*	-0.037	0.027	0.161	-0.035	0.027	0.193
Live alone	.000			.000			.000			.000		

	Improvement in WEMWBS well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in contact with non-family locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Carer status												
Not a carer	0.042	0.035	0.223	0.074	0.032	0.021*	-0.034	0.032	0.291	-0.011	0.030	0.709
Carer	.000			.000			.000			.000		
Longstanding illness / disability												
Without longstanding illness / disability	0.089	0.025	0.000*	0.095	0.023	0.000*	0.059	0.024	0.016*	0.038	0.023	0.100
With longstanding illness / disability	.000			.000			.000			.000		

Table 39 Regression analysis for project aims (primary or secondary)

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
N		6,444			6,538			6,064			6,820	
R-squared		0.263			0.301			0.343			0.296	
Intercept	-0.816	0.126	0.000	0.781	0.141	0.000	1.655	0.185	0.000	1.367	0.132	0.000
Project aims (primary or secondary)												
Empowering older people	0.108	0.057	0.060	0.067	0.048	0.165	0.129	0.044	0.004*	0.047	0.033	0.152
Improving mental health	0.007	0.071	0.919	-0.019	0.051	0.704	-0.025	0.044	0.576	0.064	0.036	0.079
Improving physical health	-0.158	0.058	0.007*	-0.007	0.045	0.884	-0.087	0.038	0.022*	-0.109	0.038	0.004*
Learning or improving skills	0.039	0.057	0.494	0.096	0.051	0.060	0.062	0.044	0.153	0.084	0.036	0.018*
Promoting positive images of ageing	-0.076	0.056	0.177	-0.079	0.052	0.132	-0.059	0.050	0.242	-0.102	0.037	0.007*

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Type of engagement												
Not a one-off activity	0.170	0.075	0.024*	0.108	0.080	0.179	0.046	0.083	0.582	-0.017	0.045	0.704
One-off activity	.000			.000			.000			.000		
Period between baseline and follow-up												
Up to three months	-0.103	0.081	0.206	-0.017	0.066	0.800	0.128	0.074	0.084	-0.024	0.047	0.602
3 to 6 months	-0.002	0.078	0.983	0.048	0.066	0.467	0.123	0.072	0.090	0.047	0.046	0.308
6 to 9 months	-0.044	0.064	0.499	0.052	0.061	0.399	0.094	0.071	0.185	0.011	0.040	0.786
10 to 12 months	-0.083	0.075	0.267	0.027	0.065	0.681	0.122	0.079	0.122	0.018	0.049	0.712
12 to 15 months	-0.105	0.079	0.183	0.022	0.064	0.732	0.093	0.083	0.267	0.020	0.052	0.696
15 to 18 months	-0.028	0.060	0.639	0.041	0.071	0.566	0.157	0.070	0.025	-0.032	0.053	0.550
18 or more months	.000			.000			.000			.000		
Project model												
Group/mixed intervention	-0.123	0.055	0.027*	-0.014	0.044	0.745	-0.055	0.052	0.290	-0.050	0.038	0.196
One to one intervention	.000			.000			.000			.000		
Duration of involvement for individual												
Unknown	0.040	0.066	0.539	0.084	0.052	0.107	0.051	0.061	0.406	0.013	0.044	0.767
Up to one month	0.170	0.070	0.017*	0.124	0.058	0.035*	0.040	0.063	0.533	-0.023	0.058	0.687
1 to 3 months	0.132	0.069	0.057	0.120	0.057	0.035*	0.035	0.054	0.510	0.033	0.047	0.477
3 to 6 months	0.091	0.091	0.319	0.117	0.051	0.023*	0.025	0.052	0.632	-0.012	0.042	0.771
6 to 12 months	0.065	0.065	0.322	0.093	0.052	0.075	0.112	0.047	0.018*	0.059	0.046	0.195
Over a year	.000			.000			.000			.000		
Typical project intensity per person												
Unknown	0.045	0.073	0.534	0.071	0.078	0.363	0.072	0.063	0.256	0.114	0.057	0.047*

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Up to 3 months duration; no info on session numbers	0.185	0.094	0.050*	0.159	0.072	0.028*	0.177	0.071	0.014	0.152	0.056	0.007
Longer than 3 months duration; no info on session numbers	-0.043	0.070	0.533	-0.039	0.055	0.477	-0.034	0.053	0.521	0.024	0.042	0.566
1 to 5 sessions	-0.045	0.103	0.661	-0.050	0.071	0.479	-0.065	0.088	0.460	-0.048	0.063	0.442
6 to 10 sessions; up to 3 months duration	0.078	0.067	0.247	0.044	0.069	0.522	-0.101	0.055	0.068	0.041	0.045	0.366
6 to 10 sessions; more than 3 months duration	0.065	0.106	0.540	0.153	0.099	0.126	0.100	0.080	0.214	0.119	0.059	0.045*
11 or more sessions	.000			.000			.000			.000		
Baseline WEWMBS score												
7 to 19	1.507	0.101	0.000*	-0.322	0.058	0.000*	-0.021	0.051	0.689	-0.090	0.041	0.030*
20 to 24	0.828	0.063	0.000*	-0.214	0.038	0.000*	-0.065	0.037	0.075	-0.039	0.033	0.250
25 to 29	0.460	0.041	0.000*	-0.051	0.033	0.122	-0.030	0.032	0.347	-0.015	0.024	0.529
30 to 35	.000			.000			.000			.000		
Baseline UCLA score												
3	0.059	0.063	0.350	-1.841	0.075	0.000*	0.157	0.061	0.011*	0.107	0.059	0.068
4	0.040	0.064	0.532	-1.551	0.066	0.000*	0.102	0.056	0.068	0.105	0.058	0.070
5	0.014	0.068	0.837	-1.257	0.070	0.000*	0.096	0.063	0.130	0.077	0.050	0.127
6	-0.005	0.057	0.930	-0.989	0.063	0.000*	0.091	0.051	0.074	0.035	0.049	0.477
7	-0.067	0.064	0.297	-0.618	0.071	0.000*	0.048	0.065	0.455	-0.045	0.067	0.496
8	-0.124	0.066	0.063	-0.374	0.066	0.000*	-0.077	0.065	0.240	-0.042	0.057	0.469
9	.000			.000			.000			.000		

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Baseline frequency of local social contact												
Every day or almost every day	0.094	0.039	0.018*	0.114	0.039	0.004*	0.118	0.050	0.019*	-1.640	0.079	0.000*
Three times a week or more	0.034	0.040	0.394	0.037	0.043	0.393	0.101	0.048	0.035*	-1.359	0.068	0.000*
Once or twice a week	0.094	0.037	0.012*	0.087	0.044	0.049*	0.003	0.044	0.954	-1.023	0.066	0.000*
Less often	.000			.000			.000			.000		
Baseline frequency of face-to-face contact												
Three times a week or more	-0.012	0.048	0.808	0.123	0.066	0.065	-2.296	0.140	0.000*	-0.077	0.090	0.394
Once or twice a week	0.003	0.040	0.949	0.082	0.065	0.209	-1.862	0.128	0.000*	-0.078	0.084	0.358
Once or twice a month or every few months	0.027	0.046	0.561	0.130	0.055	0.019*	-1.184	0.094	0.000*	-0.120	0.086	0.161
Less often or never	.000			.000			.000			.000		
Age												
50-63	0.004	0.061	0.943	0.061	0.061	0.323	-0.086	0.046	0.063	0.012	0.051	0.811
64-69	0.068	0.058	0.243	0.093	0.051	0.071	-0.070	0.044	0.112	0.029	0.057	0.618
70-74	0.104	0.055	0.063	0.185	0.051	0.000*	-0.043	0.055	0.441	0.094	0.057	0.101
75-79	0.041	0.047	0.382	0.114	0.046	0.014*	-0.032	0.047	0.504	0.061	0.061	0.316
80-84	0.053	0.057	0.352	0.137	0.054	0.012*	-0.067	0.060	0.273	0.035	0.059	0.551
85+	.000			.000			.000			.000		
Gender												
Male	-0.026	0.030	0.383	-0.009	0.032	0.777	-0.137	0.024	0.000*	-0.051	0.028	0.066
Female	.000			.000			.000			.000		
Ethnicity												
Ethnic minorities	0.083	0.087	0.343	0.013	0.072	0.851	0.069	0.057	0.230	-0.078	0.048	0.110

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
White	.000			.000			.000			.000		
Living arrangements												
Do not live alone	0.054	0.027	0.051	0.163	0.030	0.000*	-0.039	0.026	0.140	-0.035	0.026	0.171
Live alone	.000			.000			.000			.000		
Carer status												
Not a carer	0.050	0.035	0.152	0.067	0.030	0.028*	-0.035	0.032	0.266	-0.004	0.029	0.901
Carer	.000			.000			.000			.000		
Longstanding illness / disability												
Without longstanding illness / disability	0.093	0.027	0.001*	0.101	0.024	0.000*	0.059	0.024	0.016*	0.049	0.024	0.043*
With longstanding illness / disability	.000			.000			.000			.000		

Table 40 Regression analysis for primary target group[47]

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
N	7,940			8,096			7,458			8,455		
R-squared	0.258			0.291			0.355			0.280		

[47] This model does not control for the characteristics of participants (in terms of age, gender, etc.) as this would obscure the project-level effects. For this model, because each project was asked to identify only one target group, the categories are mutually exclusive. The target group 'all older people' is used as a reference category in this model, against which the effects of other target group categories are compared.

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Intercept	-0.620	0.151	0.000	1.181	0.134	0.000	1.759	0.172	0.000	1.382	0.138	0.000
Primary target group												
Older people at risk of experiencing social isolation/loneliness	-0.163	0.102	0.110	-0.095	0.091	0.299	-0.098	0.077	0.207	-0.051	0.049	0.290
Older people experiencing social isolation/loneliness	-0.090	0.108	0.407	-0.096	0.094	0.312	-0.077	0.068	0.261	-0.003	0.045	0.954
Particular demographic groups	-0.262	0.153	0.088	-0.194	0.139	0.166	-0.108	0.090	0.230	-0.197	0.072	0.007*
Particular living situations	-0.162	0.133	0.227	-0.337	0.191	0.079	-0.088	0.090	0.330	-0.095	0.077	0.215
Particular health conditions	-0.085	0.087	0.332	-0.141	0.076	0.065	-0.118	0.065	0.071	-0.101	0.048	0.036*
Those experiencing transitions	-0.429	0.136	0.002*	-0.107	0.158	0.497	-0.009	0.198	0.962	0.099	0.153	0.519
Non-demographic groups (e.g. carers, substance users)	0.079	0.135	0.559	-0.014	0.098	0.883	-0.011	0.080	0.888	-0.023	0.059	0.701
Other	-0.296	0.098	0.003*	-0.260	0.114	0.023*	0.031	0.127	0.808	0.143	0.104	0.168
All older people	.000			.000			.000			.000		
Type of engagement												
Not a one-off activity	0.184	0.071	0.010*	0.123	0.058	0.033*	-0.007	0.071	0.922	0.017	0.046	0.715
One-off activity	.000			.000			.000			.000		
Period between baseline and follow-up												
Up to three months	-0.070	0.065	0.284	-0.040	0.058	0.492	0.132	0.065	0.044*	-0.017	0.044	0.694
3 to 6 months	0.031	0.069	0.655	0.016	0.066	0.813	0.119	0.067	0.077	0.063	0.043	0.144
6 to 9 months	-0.030	0.063	0.631	-0.002	0.064	0.971	0.098	0.068	0.152	0.009	0.034	0.801
10 to 12 months	-0.033	0.071	0.642	-0.014	0.067	0.832	0.114	0.077	0.140	0.011	0.044	0.808
12 to 15 months	-0.056	0.072	0.437	0.005	0.060	0.930	0.120	0.081	0.141	-0.010	0.056	0.855
15 to 18 months	0.020	0.074	0.784	0.005	0.096	0.955	0.148	0.067	0.029*	-0.025	0.067	0.712

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
18 or more months	.000			.000			.000			.000		
Project model												
Group/mixed intervention	-0.063	0.074	0.391	0.001	0.054	0.980	-0.034	0.055	0.538	-0.056	0.039	0.156
One to one intervention	.000			.000			.000			.000		
Duration of involvement for individual												
Unknown	0.006	0.059	0.915	0.036	0.052	0.487	-0.013	0.057	0.820	-0.015	0.041	0.708
Up to one month	0.089	0.052	0.090	0.115	0.053	0.030*	0.006	0.049	0.906	-0.087	0.051	0.092
1 to 3 months	0.088	0.054	0.104	0.140	0.050	0.006*	0.011	0.045	0.813	-0.008	0.044	0.863
3 to 6 months	0.054	0.080	0.505	0.052	0.052	0.313	0.000	0.046	0.995	-0.022	0.038	0.563
6 to 12 months	0.037	0.051	0.463	0.087	0.043	0.042*	0.038	0.043	0.380	0.025	0.044	0.577
Over a year	.000			.000			.000			.000		
Typical project intensity per person												
Unknown	0.098	0.119	0.412	0.107	0.126	0.397	0.040	0.090	0.653	0.007	0.078	0.929
Up to 3 months duration; no info on session numbers	0.097	0.086	0.260	0.197	0.088	0.026*	0.135	0.085	0.115	0.115	0.048	0.018*
Longer than 3 months duration; no info on session numbers	-0.044	0.059	0.462	0.004*	0.062	0.945	-0.014	0.057	0.801	0.012	0.038	0.756
1 to 5 sessions	0.068	0.117	0.562	0.025	0.081	0.760	0.006	0.097	0.947	-0.080	0.064	0.217
6 to 10 sessions; up to 3 months duration	0.049	0.064	0.446	0.088	0.065	0.177	-0.125	0.051	0.015*	0.016	0.046	0.731
6 to 10 sessions; more than 3 months duration	0.101	0.141	0.474	0.186	0.130	0.155	0.144	0.098	0.145	0.054	0.063	0.395
11 or more sessions	.000			.000			.000			.000		
Baseline WEWMBS score												

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
7 to 19	1.480	0.086	0.000*	-0.358	0.057	0.000*	-0.075	0.045	0.095	-0.122	0.040	0.003*
20 to 24	0.824	0.058	0.000*	-0.231	0.035	0.000*	-0.105	0.034	0.002*	-0.051	0.030	0.096
25 to 29	0.446	0.038	0.000*	-0.065	0.027	0.017*	-0.038	0.029	0.188	-0.006	0.021	0.798
30 to 35	.000			.000			.000			.000		
Baseline UCLA score												
3	0.114	0.061	0.063	-1.760	0.077	0.000*	0.135	0.057	0.019*	0.100	0.059	0.093
4	0.077	0.061	0.205	-1.518	0.075	0.000*	0.097	0.052	0.061	0.107	0.065	0.102
5	0.056	0.064	0.383	-1.194	0.066	0.000*	0.105	0.057	0.069	0.078	0.053	0.146
6	0.047	0.055	0.388	-0.927	0.062	0.000*	0.119	0.047	0.012*	0.051	0.047	0.283
7	-0.018	0.056	0.752	-0.618	0.063	0.000*	0.071	0.061	0.249	0.001	0.064	0.990
8	-0.084	0.060	0.163	-0.353	0.063	0.000*	-0.075	0.058	0.198	0.006	0.052	0.908
9	.000			.000			.000			.000		
Baseline frequency of local social contact												
Every day or almost every day	0.013	0.054	0.808	0.046	0.045	0.302	0.075	0.051	0.141	-1.588	0.072	0.000*
Three times a week or more	-0.026	0.052	0.625	-0.015	0.045	0.743	0.064	0.050	0.197	-1.309	0.059	0.000*
Once or twice a week	-0.004	0.055	0.936	0.021	0.048	0.669	-0.045	0.043	0.305	-0.985	0.056	0.000*
Less often	.000			.000			.000			.000		
Baseline frequency of face-to-face contact												
Three times a week or more	0.013	0.044	0.764	0.120	0.055	0.030*	-2.260	0.114	0.000*	-0.040	0.077	0.605
Once or twice a week	0.002	0.040	0.957	0.075	0.054	0.164	-1.835	0.104	0.000*	-0.068	0.074	0.358
Once or twice a month or every few months	0.054	0.047	0.252	0.147	0.051	0.005*	-1.172	0.078	0.000*	-0.112	0.072	0.123
Less often or never	.000			.000			.000			.000		

4.6.3 Project activity regression data tables

The following tables present the output from the linear regression models used to identify the project characteristics associated with improvement in outcomes, by project activities (Section 4.6.2 considers project types).

The regressions were run in the SPSS complex samples models and the standard errors account for the clustering of the data within projects and the inclusion in the data more than once of some participants who had more than one follow-up. A positive beta coefficient reflects greater than average change; a negative coefficient suggests lower than average change, although the change may still be positive.[48]

[48] The effect size in all tables is both the standardised and unstandardised coefficients as they are equivalent.

Table 41 Regression analysis of project activity effect on loneliness, wellbeing, social contact with family/friends and locally, for women participants

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.065	0.358	-0.04	-0.662	0.010*	-0.13	-0.031	0.510	-0.03	-0.062	0.265	-0.04
Skills development	0.084	0.276	0.05	0.091	0.683	0.02	0.026	0.602	0.02	0.065	0.196	0.04
Physical activities and healthy living	0.206	0.003*	0.12	0.397	0.208	0.08	0.038	0.392	0.03	0.096	0.029*	0.06
Therapy or counselling	0.159	0.123	0.09	0.513	0.199	0.10	-0.022	0.796	-0.02	0.079	0.344	0.05
Community research	0.068	0.735	0.04	0.850	0.151	0.16	-0.046	0.719	-0.04	0.082	0.530	0.05
Designing or delivering services	0.126	0.244	0.07	0.112	0.757	0.02	0.011	0.877	0.01	-0.079	0.250	-0.05
Intergenerational activities	-0.048	0.771	-0.03	-0.159	0.799	-0.03	0.016	0.833	0.01	0.129	0.224	0.08
Social activities	0.087	0.280	0.05	-0.103	0.724	-0.02	0.003	0.954	0.00	0.054	0.443	0.03
Transport	0.048	0.783	0.03	0.130	0.733	0.02	-0.014	0.907	-0.01	-0.041	0.826	-0.02
Community development	0.061	0.530	0.03	0.383	0.222	0.07	0.139	0.060	0.11	0.127	0.073	0.08
Practical services	-0.071	0.542	-0.04	-0.101	0.815	-0.02	-0.148	0.026*	-0.12	-0.062	0.497	-0.04
Technology	-0.175	0.225	-0.10	-0.817	0.071	-0.15	-0.113	0.257	-0.09	0.083	0.410	0.05
Other activities	0.014	0.910	0.01	0.175	0.693	0.03	0.095	0.216	0.08	0.013	0.884	0.01
Base size	*4961*											

Table 42 Regression analysis of project activity effect on loneliness, wellbeing, social contact with family/friends and locally, for men participants

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.153	0.120	-0.09	-0.622	0.035*	-0.11	-0.090	0.287	-0.06	-0.001	0.989	0.00
Skills development	-0.014	0.871	-0.01	-0.162	0.615	-0.03	0.279	0.000*	0.19	0.097	0.336	0.06
Physical activities and healthy living	0.216	0.021*	0.12	0.218	0.587	0.04	0.023	0.761	0.02	0.019	0.816	0.01
Therapy or counselling	0.123	0.476	0.07	0.341	0.483	0.06	0.085	0.374	0.06	-0.005	0.979	0.00
Community research	0.166	0.275	0.09	0.508	0.296	0.09	0.148	0.221	0.10	-0.335	0.059	-0.19
Designing or delivering services	0.127	0.319	0.07	0.971	0.022*	0.18	0.203	0.052	0.14	0.168	0.169	0.10
Intergenerational activities	-0.244	0.094	-0.14	-0.335	0.496	-0.06	-0.040	0.704	-0.03	-0.238	0.174	-0.14
Social activities	0.025	0.774	0.01	0.135	0.631	0.02	0.003	0.964	0.00	0.046	0.553	0.03
Transport	0.212	0.338	0.12	0.855	0.114	0.16	0.322	0.039*	0.22	0.329	0.136	0.19
Community development	0.088	0.501	0.05	-0.282	0.585	-0.05	-0.093	0.391	-0.06	-0.014	0.886	-0.01
Practical services	0.076	0.669	0.04	-0.393	0.427	-0.07	0.043	0.670	0.03	-0.019	0.888	-0.01
Technology	0.414	0.009*	0.23	-0.067	0.890	-0.01	-0.230	0.086	-0.16	-0.058	0.808	-0.03
Other activities	0.034	0.777	0.02	0.349	0.343	0.06	0.284	0.009*	0.20	0.053	0.692	0.03
Base size	*2271*											

Table 43 Regression analysis of project activity effect on loneliness, wellbeing, social contact with family/friends and locally, for participants who are carers

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.150	0.176	-0.09	-0.374	0.289	-0.07	-0.069	0.312	-0.06	-0.055	0.513	-0.03
Skills development	0.132	0.167	0.08	0.025	0.937	0.00	0.040	0.606	0.03	-0.073	0.431	-0.04
Physical activities and healthy living	0.312	0.002*	0.18	0.422	0.385	0.08	0.129	0.095	0.11	0.124	0.349	0.08
Therapy or counselling	0.147	0.309	0.09	0.299	0.449	0.06	-0.106	0.288	-0.09	0.093	0.461	0.06
Community research	0.086	0.741	0.05	0.955	0.337	0.18	0.140	0.618	0.12	0.088	0.657	0.05
Designing or delivering services	0.089	0.549	0.05	0.298	0.567	0.06	-0.018	0.877	-0.01	-0.161	0.320	-0.10
Intergenerational activities	0.282	0.223	0.17	0.509	0.398	0.10	0.216	0.036*	0.18	0.104	0.636	0.06
Social activities	0.186	0.114	0.11	-0.263	0.489	-0.05	0.079	0.329	0.07	0.092	0.308	0.06
Transport	0.328	0.168	0.19	0.108	0.842	0.02	-0.023	0.890	-0.02	0.335	0.108	0.20
Community development	-0.178	0.148	-0.11	0.095	0.837	0.02	-0.084	0.455	-0.07	-0.037	0.746	-0.02
Practical services	-0.132	0.338	-0.08	-0.098	0.812	-0.02	0.030	0.768	0.03	-0.212	0.157	-0.13
Technology	-0.159	0.355	-0.09	-0.965	0.112	-0.19	-0.415	0.010*	-0.34	0.090	0.667	0.05
Other activities	0.063	0.644	0.04	-0.015	0.974	0.00	0.073	0.423	0.06	0.003	0.984	0.00
Base size	*1687*											

Table 44 Regression analysis of project activity effect on loneliness, wellbeing, social contact with family/friends and locally, for participants with high loneliness at baseline (UCLA score between 7 and 9)

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.442	0.000*	-0.24	-1.257	0.002*	-0.22	-0.196	0.031*	-0.13	-0.162	0.160	-0.08
Skills development	0.342	0.005*	0.19	0.388	0.223	0.07	0.262	0.004*	0.17	0.232	0.014*	0.11
Physical activities and healthy living	0.271	0.071	0.15	0.467	0.332	0.08	0.031	0.694	0.02	-0.095	0.322	-0.05
Therapy or counselling	0.224	0.215	0.12	0.474	0.370	0.08	-0.029	0.766	-0.02	0.039	0.797	0.02
Community research	0.586	0.147	0.32	2.333	0.022*	0.41	0.313	0.107	0.20	0.349	0.201	0.17
Designing or delivering services	0.298	0.164	0.16	0.914	0.193	0.16	0.319	0.028*	0.21	0.142	0.443	0.07
Intergenerational activities	-0.264	0.240	-0.14	-1.417	0.055	-0.25	0.254	0.066	0.16	0.069	0.790	0.03
Social activities	-0.031	0.812	-0.02	-0.285	0.519	-0.05	-0.090	0.235	-0.06	-0.061	0.605	-0.03
Transport	0.236	0.469	0.13	0.322	0.753	0.06	0.179	0.316	0.12	0.104	0.655	0.05
Community development	-0.188	0.314	-0.10	-1.342	0.018*	-0.24	-0.054	0.711	-0.03	-0.040	0.844	-0.02
Practical services	0.087	0.669	0.05	-0.098	0.854	-0.02	-0.143	0.216	-0.09	-0.329	0.065	-0.16
Technology	-0.527	0.193	-0.29	-2.532	0.031*	-0.45	-0.405	0.107	-0.26	0.340	0.075	0.17
Other activities	-0.027	0.863	-0.01	-0.192	0.740	-0.03	0.131	0.194	0.08	-0.099	0.417	-0.05
Base size	*2150*											

Table 45 Regression analysis of project activity effect on loneliness, wellbeing, social contact with family/friends and locally, for participants with low wellbeing at baseline (SWEMWBS score between 7 and 19)

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.488	0.00*	-0.25	-1.222	0.007*	-0.22	-0.207	0.053	-0.13	-0.210	0.053	-0.10
Skills development	0.150	0.262	0.08	-0.310	0.494	-0.05	0.084	0.471	0.05	0.089	0.515	0.04
Physical activities and healthy living	0.416	0.005*	0.21	0.409	0.510	0.07	0.071	0.432	0.05	0.129	0.269	0.06
Therapy or counselling	0.212	0.304	0.11	0.717	0.228	0.13	-0.089	0.475	-0.06	-0.032	0.846	-0.02
Community research	0.231	0.637	0.12	1.218	0.470	0.22	-0.117	0.746	-0.08	-0.013	0.969	-0.01
Designing or delivering services	0.289	0.221	0.15	1.105	0.150	0.20	0.389	0.017*	0.25	0.165	0.463	0.08
Intergenerational activities	-0.184	0.383	-0.09	0.182	0.819	0.03	0.046	0.776	0.03	-0.197	0.340	-0.09
Social activities	0.065	0.666	0.03	-0.560	0.287	-0.10	-0.074	0.454	-0.05	-0.059	0.575	-0.03
Transport	-0.143	0.723	-0.07	0.927	0.490	0.16	0.279	0.131	0.18	0.104	0.698	0.05
Community development	-0.037	0.856	-0.02	-0.576	0.492	-0.10	-0.052	0.707	-0.03	-0.113	0.616	-0.05
Practical services	-0.065	0.757	-0.03	-0.693	0.241	-0.12	-0.284	0.017*	-0.18	-0.296	0.082	-0.14
Technology	0.231	0.481	0.12	-2.542	0.018*	-0.45	-0.411	0.127	-0.26	0.076	0.803	0.04
Other activities	-0.152	0.404	-0.08	-0.089	0.886	-0.02	0.199	0.057	0.13	-0.013	0.921	-0.01
Base size	*1893*											

Appendixes A–C

Appendix A: Common Measurement Framework

Engagement and participation in Ageing Better

The following table provides details on how participants engaged with the programme. The table relates to Methods note Section 2.8.1.

Table 46 Time from entry to most recent follow-up[49]

Duration of involvement	Number of participants	Percentage of participants with duration data (%)	Percentage of all participants (%)
0-3 months	3032	28	8
4-6 months	2035	19	6
7-9 months	2043	19	6
10-12 months	1048	10	3
12+ months	2832	26	8
Unknown (baseline data only)	24930	-	69
Base size (without unknown)	*10990*	*10990*	-
Base size (with unknown)	*35920*	-	*35920*

Demographic characteristics of participants

The following tables outline the demographic characteristics of Ageing Better participants, including those with and without follow-up data. Comparison data is provided, showing demographic characteristics of over-50s among the general regional or national population. These tables relate to Methods note Section 2.8.2.

[49] The median amount of time participants were engaged with the programme was just over six months (191 days). The mean amount of time participants were engaged with the programme was around eight and a half months (258 days). Length of time engaged was calculated by the difference between the date of entry and latest follow-up date.

Table 47 Demographic characteristics of Ageing Better participants with baseline data only and those with any follow up data

Characteristic	Participants with baseline data only		Participants with any follow up data	
	Number of participants	Proportion of participants (%)	Number of participants	Proportion of participants (%)
Gender				
Male	7423	32	3363	31
Female	15576	68	7403	69
Base size	*22999*		*10766*	
Ethnicity				
Asian/Asian UK	3344	15	1419	13
Black/African/Caribbean/Black UK	1535	7	683	6
White	16410	74	8193	77
Mixed Ethnic	206	1	98	1
Other Ethnic Group	648	3	209	2
Base size	*22143*		*10602*	
Sexuality				
Heterosexual	16938	95	8985	97
Gay/Lesbian	599	3	216	2
Bisexual	215	1	77	1
Other Sexuality	49	<1	28	<1
Base size	*17801*		*9306*	
Age Categories				
Under 50	170	1	59	1
50-54	1243	8	885	8
55-59	1576	11	1242	12
60-64	2102	14	1539	15
65-69	2269	16	1723	16
70-74	2208	15	1659	16
75-79	1868	13	1333	13
80-84	1527	10	1046	10
85 and over	1672	11	1062	10
Base size	*14635*		*10548*	
Living Arrangements				
Living Alone	6575	48	4923	50
With Spouse/Partner	4041	30	3230	33
With Family	2374	17	1422	14
In Residential Accommodation	340	3	184	2
Other Living Arrangement	240	2	178	2

Characteristic	Participants with baseline data only		Participants with any follow up data	
	Number of participants	Proportion of participants (%)	Number of participants	Proportion of participants (%)
Base size	*13570*		*9937*	
Longstanding Illness / Disability				
Longstanding Illness / Disability	7844	57	5890	60
No Longstanding Illness / Disability	5816	43	3870	40
Base size	*13660*		*9760*	
Carer status				
Carer	2628	20	2195	22
Not Carer	10441	80	7576	78
Base size	*13069*		*9771*	

Outcome measures for participants at baseline

The following tables give details on the outcomes measures (described fully in Chapter 2.0) of Ageing Better participants on entry to the programme. The tables include full-scale and summary analysis for selected outcome measures and, where possible, comparisons to nationally representative averages. These table relate to Methods note Section 2.8.3.

Table 48 Loneliness (UCLA and DJG scales) and wellbeing (SWEMWBS) scores of Ageing Better participants at baseline

Score	Number of participants	Percentage of participants (%)
DJG social and emotional loneliness scale		
0 no loneliness	2896	16
1	2356	13
2	2285	12
3	2465	13
4	2323	13
5	2504	14
6 severe loneliness	3636	20
Base size		*18465*
UCLA loneliness scale		
3 least lonely	4905	27
4	2135	12
5	2200	12
6	4045	22
7	1630	9
8	1188	6
9 most lonely	2322	13
Base size		*18425*
Short Warwick Edinburgh Mental Wellbeing Scale		
7 to 19	4740	*25*
20 to 24	6001	*32*
25 to 29	5420	*29*
30 to 35	2657	*14*
Base size		*18818*

Table 49 Loneliness, wellbeing, and health; at baseline and follow-up

Measure	Number of participants, without follow up data	Percentage of participants, without follow up data (%)	Number of participants, with follow up data	Percentage of participants, with follow up data (%)
DJG social and emotional loneliness scale				
0 no loneliness	1498	16	1398	16
1	1232	13	1124	12
2	1194	13	1091	12
3	1260	13	1205	13
4	1200	13	1123	12
5	1258	13	1246	14
6 severe loneliness	1805	19	1831	20
Base size	*9447*		*9018*	
UCLA loneliness scale				
3 least lonely	2628	27	2277	26
4	1088	11	1047	12
5	1115	12	1085	12
6	2143	22	1902	21
7	849	9	781	9
8	591	6	597	7
9 most lonely	1147	12	1175	13
Base size	*9561*		*8864*	
Short Warwick Edinburgh Mental Wellbeing Scale				
7 to 19	2365	25	2375	26
20 to 24	3047	32	2954	32
25 to 29	2797	29	2623	28
30 to 35	1382	14	1275	14
Base size	*9591*		*9227*	

Table 50 Frequency of Ageing Better participants' social contact at baseline

Measure	Number of participants	Percentage of participants (%)
Contact with family or friends, in person		
Three times a week	7109	34
Once or twice a week	7779	37
Once or twice a month	3141	15
Every few months	1543	7
Once or twice a year	667	3
Less than once a year or never	807	4
Base size		*21046*
Contact with family or friends, by phone		
Three times a week	9814	47
Once or twice a week	6312	30
Once or twice a month	2436	12
Every few months	940	5
Once or twice a year	383	2
Less than once a year or never	905	4
Base size		*20790*
Contact with family or friends, in writing		
Three times a week	3421	18
Once or twice a week	2589	14
Once or twice a month	2235	12
Every few months	1596	8
Once or twice a year	1287	7
Less than once a year or never	7882	41
Base size		*19010*
Contact with family or friends, by text		
Three times a week	7199	37
Once or twice a week	3133	16
Once or twice a month	1465	8
Every few months	708	4
Once or twice a year	402	2
Less than once a year or never	6489	33
Base size		*19396*
Contact with anyone locally (non-family), speak with		
Every day or almost every day	8636	41
Three or more times a week	4475	21
Once or twice a week	4356	21
A few times a month	1657	8
Once a month	520	3
Once every two months	204	1
Every few months	368	2
Once or twice a year	199	1
Less than once a year	409	2

Measure	Number of participants	Percentage of participants (%)
Base size	*20824*	

Table 51 Volunteering; at baseline. Number of types and type of volunteering activities taken part in by Ageing Better participants in the past 12 months, and whether they would volunteer in the future

Measure	Number of participants	Percentage of participants (%)
Number of types of volunteering activity		
0	8089	54
1	3324	22
2	1425	9
3	900	6
4	482	3
5	302	2
6	221	1
7	121	1
8 or more	163	1
Base size	*15027*	
Type of volunteering activity (multi-code)		
Visiting people	2789	19
Organising or helping to run an activity or event	2462	16
Leading a group/member of a committee	1565	10
Raising or handling money / taking part in sponsored events	1500	10
Giving advice / information / counselling	1456	10
Befriending or mentoring people	1374	9
Other practical help (e.g. helping out at school, shopping)	1153	8
Providing transport/driving	1067	7
Other	834	6
Secretarial, admin or clerical work	762	5
Representing	523	4
Campaigning	514	3
Base size	*15027*	
Likely to volunteer in the future		
Yes	4456	30
Maybe/Don't Know	5592	38
No	4780	32
Base size	*14828*	

Table 52 Co-design; at baseline. Number of types and type of co-design activities taken part in by Ageing Better participants

Measure	Number of participants	Percentage of participants (%)
Number of co-design activities		
0	13	<1
1	2811	59
2	748	16
3	479	10
4	467	10
5	274	6
Base size		*4792*
Type of activity (multi-code)		
Sharing ideas to help plan a new activity	3270	68
Deciding how an activity will be delivered	1684	35
Helping to run an activity for other people	1909	40
Gathering information to see if an activity is making a difference for people	1114	23
Been consulted about policies and services	1028	21
Base size		*4792*

Table 53 Local influence; at baseline. Degree to which Ageing Better participants agree they have influence over decisions effecting their local area

Influence over local decisions	Number of participants	Percentage of participants (%)
Definitely agree	1516	11
Tend to agree	3393	25
Don't know	4125	30
Tend to disagree	2516	19
Definitely disagree	2029	15
Base size		*13579*

Table 54 Social participation; at baseline. Number of types of club, organisation or society memberships held by Ageing Better participants

Measure	Number of participants	Percentage of participants (%)
Number of club, organisation, or society memberships		
0	7973	38
1	7418	36
2	3159	15
3	1438	7

Measure	Number of participants	Percentage of participants (%)
4	568	3
5 or more	203	1
Base size		*20759*
Type of club, organisation, or society (multi-code)		
Church or other religious groups	3824	18
Social clubs	3796	18
Sports clubs, gyms, or exercise classes	3478	17
Charitable organisation	3055	15
Any other organisations, clubs, or societies	2833	14
Education, arts or music groups or evening classes	2345	11
Tenants' groups, neighbourhood groups, Neighbourhood Watch	1544	7
Political party, trade union or environmental group	1076	5
Base size		*20759*

Table 55 Taking part in social activities; at baseline. Degree to which Ageing Better participants feel they take part in social activities compared to others their age

Taking part relative to peers	Number of participants	Percentage of participants (%)
Much more than most	1162	6
More than most	2980	14
About the same	6154	30
Less than most	5012	24
Much less than most	5294	26
Base size		*20602*

Demographic characteristics crosstabs

The following tables give more detail on the demographic characteristics of Ageing Better participants from different participant groups (for instance the sexuality, ethnicity and living arrangements of female and male participants).

Table 56 Demographic characteristics of female and male Ageing Better participants

Characteristic	Participant gender	
	Female (%)	Male (%)
Age		
Mean Age (years)	70	69
Ethnicity		
Asian/Asian UK	15	13
Black/African/Caribbean/Black UK	7	7
White	74	77
Mixed Ethnic	1	1
Other Ethnic Group	3	2
Base size	*21945*	*10237*
Sexuality		
Heterosexual	97	93
Gay/Lesbian	1	6
Bisexual	1	1
Other Sexuality	<1	<1
Base size	*17919*	*8804*
Living Arrangements		
Living Alone	50	46
With Spouse/Partner	28	37
With Family	18	13
In Residential Accommodation	2	2
Other Living Arrangement	2	2
Base size	*15714*	*7333*
Longstanding Illness / Disability		
Longstanding Illness / Disability	58	60
No Longstanding Illness / Disability	42	40
Base size	*15609*	*7309*
Carer status		
Carer	22	19
Not Carer	78	81
Base size	*15300*	*7098*

Table 57 Demographic characteristics of Ageing Better participants identifying as Asian, Black, mixed ethnicity, white and any other ethnic group

Characteristic	Participant ethnicity				
	Asian/Asian UK (%)	Black / African /Caribbean / Black UK (%)	Mixed Ethnic (%)	White (%)	Other Ethnic Group (%)
Age					
Mean Age (years)	67	68	65	70	68
Gender					
Male	29	33	26	33	32
Female	71	67	74	67	68
Base size	*4712*	*2174*	*834*	*24163*	*299*
Sexuality					
Heterosexual	98	97	97	90	95
Gay/Lesbian	1	1	2	7	3
Bisexual	1	2	1	2	1
Other Sexuality	<1	<1	<1	<1	<1
Base size	*3468*	*1698*	*610*	*20716*	*230*
Living Arrangements					
Living Alone	29	49	37	53	53
With Spouse/Partner	29	21	25	24	33
With Family	40	26	33	17	10
In Residential Accommodation	1	3	2	3	2
Other Living Arrangement	2	1	3	2	2
Base size	*3182*	*1652*	*673*	*16983*	*224*
Longstanding Illness / Disability					
Longstanding Illness / Disability	54	59	55	61	60
No Longstanding Illness / Disability	46	41	45	39	40
Base size	*3221*	*1646*	*678*	*16810*	*223*
Carer status					
Carer	24	22	19	23	21
Not Carer	76	78	81	77	79
Base size	*3062*	*1640*	*649*	*16584*	*218*

Table 58 Demographic characteristics of Ageing Better participants identifying as heterosexual or LGBTQ+

Characteristic	Participant sexuality	
	Heterosexual (%)	LGBTQ+ (%)
Age		
Mean Age (years)	70	65
Gender		
Male	32	58
Female	68	42
Base size	*25583*	*1140*
Ethnicity		
Asian/Asian UK	13	5
Black/African/Caribbean/Black UK	7	4
White	77	87
Mixed Ethnic	1	2
Other Ethnic Group	2	2
Base size	*25580*	*1142*
Living Arrangements		
Living Alone	48	62
With Spouse/Partner	33	27
With Family	16	7
In Residential Accommodation	2	2
Other Living Arrangement	2	3
Base size	*18874*	*756*
Longstanding Illness / Disability		
Longstanding Illness / Disability	60	54
No Longstanding Illness / Disability	40	46
Base size	*18603*	*770*
Carer status		
Carer	21	18
Not Carer	79	82
Base size	*18500*	*707*

Baseline outcomes measures by demographic characteristics

The following tables present the outcome measures (described fully in Chapter 2.0) of Ageing Better participants from different groups on entry to the programme. These tables relate to Methods note Section 2.8.4.

Table 59 Health measures (EQ-5D, EQ-VAS) by demographic groups; at baseline

Characteristic	EQ-5D mean score	EQ-5D median score	EQ-5D standard deviation	Base size	EQ-VAS mean score	EQ-VAS median score	EQ-VAS standard deviation	Base size
Gender								
Female	0.58	0.69	0.35	*6451*	61.97	64	22.76	*6359*
Male	0.62	0.73	0.34	*3196*	61.85	65	23.11	*3174*
Ethnicity								
Asian	0.61	0.69	0.36	*627*	59.51	60	21.03	*635*
Black	0.54	0.66	0.37	*652*	60.37	60	23.24	*653*
Mixed	0.60	0.73	0.35	*109*	61.97	70	26.04	*115*
Other	0.51	0.62	0.37	*236*	55.07	50	22.56	*239*
White	0.60	0.69	0.34	*7940*	62.29	65	22.97	*7803*
Sexuality								
Bisexual	0.59	0.69	0.32	*84*	61.27	70	22.16	*78*
Gay/Lesbian	0.66	0.73	0.30	*240*	66.08	70	22.05	*247*
Heterosexual	0.59	0.69	0.35	*7933*	61.82	65	22.85	*7818*
Other	0.68	0.80	0.35	*24*	66.47	73	23.86	*19*
Age Range								
Under 50	0.56	0.69	0.36	*64*	59.53	60	25.19	*64*
50-54	0.55	0.69	0.39	*851*	56.39	60	24.66	*813*
55-59	0.55	0.69	0.39	*1132*	57.27	60	25.18	*1083*
60-64	0.59	0.71	0.37	*1339*	60.92	63	24.19	*1334*
65-69	0.64	0.73	0.34	*1381*	64.94	70	22.42	*1374*
70-74	0.63	0.73	0.32	*1446*	65.52	70	21.99	*1433*
75-79	0.59	0.69	0.32	*1175*	63.10	65	21.41	*1184*
80-84	0.59	0.69	0.31	*973*	62.56	60	21.72	*975*

Characteristic	EQ-5D mean score	EQ-5D median score	EQ-5D standard deviation	Base size	EQ-VAS mean score	EQ-VAS median score	EQ-VAS standard deviation	Base size
85 and over	0.55	0.62	0.30	*1188*	59.33	60	20.39	*1188*
Living Arrangements								
Alone	0.56	0.66	0.34	*4401*	59.98	60	22.79	*4353*
In residential accommodation	0.54	0.62	0.32	*220*	59.54	60	21.39	*213*
With Family	0.58	0.69	0.37	*1190*	60.09	60	22.92	*1167*
With Spouse, partner	0.67	0.73	0.33	*2538*	66.53	70	22.23	*2512*
Other	0.56	0.69	0.35	*147*	58.07	60	24.35	*149*
Longstanding Illness/ Disability								
Without Longstanding Illness / Disability	0.79	0.80	0.23	*3415*	72.97	80	19.79	*3345*
With Longstanding Illness / Disability	0.45	0.59	0.35	*5065*	54.50	50	21.81	*5018*
Carer Status								
Not Carer	0.59	0.69	0.35	*6599*	61.87	65	23.07	*6540*
Carer	0.61	0.73	0.33	*1733*	62.42	65	21.98	*1704*

Table 60 Living arrangements, loneliness, wellbeing, and social contact; at baseline. Mean loneliness score, mean wellbeing score, and levels of social contact of participants with different living arrangements

Measure	Participant living arrangement				
	Alone	In residential accommodation	With Family	With Spouse, partner	Other
DJG social and emotional loneliness scale (0 to 6)					
Mean score	3.46	2.93	3.33	2.52	3.65
Standard deviation	2.06	1.95	2.11	2.09	2.04
Lonely (scored 2 or more) (%)	78	72	74	60	79
Base size	*8132*	*321*	*2623*	*5410*	*305*
UCLA loneliness scale (3 to 9)					
Mean score	5.87	5.24	5.50	4.79	5.86
Standard deviation	2.06	1.83	1.96	1.90	2.05
Lonely (scored 6 or more) (%)	58	44	53	36	58
Base size	*8009*	*326*	*2669*	*5311*	*282*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)					
Mean score	22.57	23.36	22.74	24.44	21.47
Standard deviation	5.02	4.47	4.99	4.85	4.91
Low wellbeing (scored below 20) (%)	49	38	51	36	58
Base size	*8141*	*316*	*2581*	*5503*	*302*
Contact with family or friends					
At least once a week, in person (%)	71	63	68	73	62
Base size	*9471*	*364*	*3122*	*6276*	*342*
Contact with anyone locally					
At least every day or almost every day (%)	42	66	33	43	45
Base size	*9029*	*351*	*2897*	*3017*	*323*

Table 61 Ethnicity subgroups: loneliness, wellbeing and social contact; at baseline. Mean loneliness score, mean wellbeing score, and levels of social contact of participants identifying as different ethnicities

Measure	Asian/Asian UK					Black / African / Caribbean / Black UK			Mixed Ethnic	Other Ethnic Group		White			
	Bangladeshi	Chinese	Indian	Pakistani	Any other Asian ethnicity	African	Caribbean	Any other Black ethnicity	Mixed Ethnicity	Arab	Any other ethnic group	English / Scottish / Welsh / Northern Irish / UK	Gypsy or Irish Traveller	Irish	Any Other White ethnicity
DJG social and emotional loneliness scale (0 to 6)															
Mean score	4.01	3.51	3.47	4.05	3.39	3.31	3.01	3.40	3.53	3.29	3.85	3.02	3.40	3.06	3.23
Standard deviation	1.94	1.90	2.03	1.82	2.21	2.19	2.12	2.08	2.11	2.04	2.05	2.11	2.20	2.08	2.11
Lonely (scored 2 or more) (%)	85	82	80	88	73	72	68	76	77	76	83	70	76	70	74
Base size	*162*	*316*	*966*	*580*	*214*	*385*	*669*	*131*	*167*	*131*	*323*	*13058*	*25*	*418*	*470*
UCLA loneliness scale (3 to 9)															
Mean score	6.17	4.96	5.79	5.70	5.47	5.33	5.15	5.31	5.72	5.41	5.65	5.41	5.87	5.47	5.35
Standard deviation	1.91	1.66	2.13	1.58	1.91	1.90	1.89	1.88	2.22	1.88	1.68	2.07	1.89	2.11	1.99
Lonely (scored 6 or more) (%)	67	43	56	61	52	51	45	49	54	53	57	49	57	48	48
Base size	*169*	*288*	*1097*	*639*	*220*	*429*	*715*	*144*	*173*	*144*	*349*	*12638*	*23*	*431*	*461*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)															
Mean score	22.87	24.83	22.84	21.52	23.56	24.07	23.89	23.75	23.04	24.02	22.36	23.16	24.68	23.87	24.27

Measure	Asian/Asian UK					Black / African / Caribbean / Black UK			Mixed Ethnic	Other Ethnic Group		White			
	Bangladeshi	Chinese	Indian	Pakistani	Any other Asian ethnicity	African	Caribbean	Any other Black ethnicity	Mixed Ethnicity	Arab	Any other ethnic group	English / Scottish / Welsh / Northern Irish / UK	Gypsy or Irish Traveller	Irish	Any Other White ethnicity
Standard deviation	5.13	4.82	5.26	4.70	4.31	5.15	5.00	4.81	5.16	5.07	5.45	4.96	4.97	5.05	5.28
Low wellbeing (scored below 20) (%)	50	39	48	64	42	42	39	42	53	44	50	45	27	39	40
Base size	*157*	*288*	*1044*	*564*	*216*	*390*	*669*	*131*	*172*	*128*	*317*	*13131*	*22*	*402*	*475*
Contact with family or friends															
At least once a week in person (%)	75	78	72	71	69	62	72	66	66	74	64	45	31	45	40
Base size	*187*	*356*	*1373*	*754*	*250*	*473*	*829*	*167*	*201*	*169*	*385*	*14254*	*26*	*466*	*531*
Contact with anyone locally (non-family)															
Every day or almost every day (%)	18	26	30	22	32	38	42	36	38	32	26	71	67	69	69
Base size	*174*	*334*	*1256*	*641*	*234*	*452*	*779*	*153*	*192*	*140*	*367*	*14896*	*28*	*484*	*546*

Appendix B - Impact

The following tables compare outcomes for the Ageing Better group and the non-participants after PSM. The p-values are from logistic regressions that take into account the propensity score weights and control for the baseline version of the outcome under consideration (Section 3.4.4).

In the tables below, the comparison made (difference and p-value) is between the baseline to six-month change for Ageing Better participants and the baseline to six-month change for the non-participant group. These tables relate to Methods note Section 3.7.3.

Outcomes for groups (participants, non-participants)

Table 62 Regression analysis of changes (from baseline to 6 months) in wellbeing, loneliness, and social contact of Ageing Better participants and 'non-participants', for those living alone

	Living alone					
	Ageing Better Participants (%)		Non-participants (no activities) (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	23	14	31	22	<1	0.147
Who are lonely (scored 6 or more)	55	44	65	53	-2	0.444
Meeting family or friends at least weekly	76	80	71	69	6	0.076
Speaking with someone locally at least three times a week	65	72	66	60	13	0.027*
Base size	*660*		*123*			

Table 63 Regression analysis of changes (from baseline to 6 months) in wellbeing, loneliness, and social contact of Ageing Better participants and 'non-participants', for those aged under 80 and those 80 and over

	Aged under 80						Aged 80 and over					
	Ageing Better Participants (%)		Non-participants (no activities) (%)		Difference (pp)	p-value	Ageing Better Participants (%)		Non-participants (no activities) (%)		Difference (pp)	p-value
	Baseline	6 months	Baseline	6 months			Baseline	6 months	Baseline	6 months		
With low wellbeing (scored below 20)	19	12	20	17	4	0.065	20	12	16	14	7	0.330
Who are lonely (scored 6 or more)	43	36	45	39	1	0.809	47	39	39	35	4	0.983
Meeting family or friends at least weekly	74	80	74	70	10	0.014*	74	79	69	69	4	0.188
Speaking with someone locally at least three times a week	67	73	66	64	8	0.131	60	67	70	61	15	0.243
Base size	*853*		*187*				*343*		*113*			

Appendix C: Project types

Project types participation: demographic characteristics

The following tables show the demographic characteristics of participants in different project types. These tables relate to Methods note Section 4.5.2.

Table 64 Proportion of participants in projects, by primary aim and demographic group

Characteristic	Primary aim					
	Empowering older people (%)	Improving mental health (%)	Improving physical health (%)	Promoting positive images of ageing (%)	Learning or improving skills and knowledge (%)	Other (%)
Gender						
Male	31	33	38	31	32	32
Female	69	67	62	69	68	68
Base Size	*9765*	*9581*	*1656*	*5251*	*1874*	*374*
Ethnicity						
Asian/Asian UK	21	15	9	9	21	4
Black/African/Caribbean/Black UK	6	10	4	6	6	3
White	69	69	86	83	70	86
Mixed Ethnic	1	1	1	1	1	1
Other Ethnic Group	2	4	1	1	2	7
Base Size	*9577*	*8986*	*1628*	*5146*	*1860*	*369*
Sexuality						
Heterosexual	98	91	99	98	97	99
Gay/Lesbian	1	7	1	2	1	1
Bisexual	1	1	1	1	2	<1
Other Sexuality	<1	1	1	<1	<1	0
Base Size	*8153*	*6969*	*1397*	*4577*	*1384*	*320*
Living Arrangements						
Living Alone	52	55	52	41	52	21
With Spouse/Partner	29	21	34	42	29	48
With Family	16	19	11	13	13	26
In Residential Accommodation	2	3	2	1	4	1
Other Living Arrangement	2	2	2	2	2	4
Base Size	*8113*	*7622*	*1346*	*4916*	*1082*	*285*

Characteristic	Primary aim					
	Empowering older people (%)	Improving mental health (%)	Improving physical health (%)	Promoting positive images of ageing (%)	Learning or improving skills and knowledge (%)	Other (%)
Longstanding Illness / Disability						
With Longstanding Illness / Disability	58	62	59	57	58	45
Without Longstanding Illness / Disability	42	38	41	43	42	55
Base Size	*7957*	*7767*	*1349*	*4826*	*1097*	*265*
Carer Status						
Carer	19	20	18	23	18	68
Not Carer	81	80	82	77	82	32
Base Size	*7958*	*7031*	*1334*	*4839*	*1059*	*274*

Table 65 Proportion of participants in projects, by level of intervention and demographic group

Characteristic	Level of intervention (multi-code)					
	Individuals (%)	Interpersonal (%)	Community (%)	Organisational (%)	Policy (%)	Other (%)
Gender						
Male	32	31	32	32	34	35
Female	68	69	68	68	66	65
Base Size	*27778*	*21301*	*13858*	*8677*	*4519*	*115*
Ethnicity						
Asian/Asian UK	16	12	13	11	19	5
Black/African/Caribbean /Black UK	7	7	8	6	10	41
White	73	77	76	80	66	52
Mixed Ethnic	1	1	1	1	2	0
Other Ethnic Group	3	3	2	2	4	2
Base Size	*26847*	*20570*	*13596*	*8389*	*4278*	*113*
Sexuality						
Heterosexual	96	95	94	96	93	96
Gay/Lesbian	3	4	5	3	5	0
Bisexual	1	1	1	1	1	4
Other Sexuality	0	0	0	0	0	0
Base Size	*22254*	*16976*	*11443*	*7078*	*3360*	*96*
Living Arrangements						
Living Alone	50	51	46	45	52	48
With Spouse/Partner	30	30	34	37	26	27
With Family	16	15	16	13	17	22
In Residential Accommodation	2	2	3	2	3	3
Other Living Arrangement	2	2	2	2	2	0
Base Size	*22888*	*17621*	*11135*	*7579*	*3495*	*103*
Longstanding Illness / Disability						
With Longstanding Illness / Disability	59	58	54	56	63	52
Without Longstanding Illness / Disability	41	42	46	44	37	48
Base Size	*22798*	*17557*	*11132*	*7563*	*3605*	*102*
Carer Status						
Carer	21	20	20	22	22	18
Not Carer	79	80	80	78	78	82
Base Size	*22021*	*16878*	*10744*	*7320*	*3303*	*102*

Table 66 Proportion of participants in projects, by method of delivery and demographic group

Characteristic	Method of delivery (multi-code)			
	Face to face (%)	Telephone (%)	Online (%)	Other (%)
Gender				
Male	32	32	31	28
Female	68	68	69	72
Base Size	*28355*	*7665*	*4020*	*218*
Ethnicity				
Asian/Asian UK	16	11	13	25
Black/African/Caribbean/Black UK	7	6	7	1
White	73	79	77	72
Mixed Ethnic	1	1	1	1
Other Ethnic Group	3	3	3	0
Base Size	*27423*	*7352*	*3974*	*214*
Sexuality				
Heterosexual	96	97	97	99
Gay/Lesbian	3	2	2	1
Bisexual	1	1	1	0
Other Sexuality	<1	<1	<1	0
Base Size	*22692*	*6114*	*3303*	*170*
Living Arrangements				
Living Alone	50	58	52	43
With Spouse/Partner	29	25	32	42
With Family	16	13	13	11
In Residential Accommodation	2	2	2	2
Other Living Arrangement	2	2	2	2
Base Size	*23224*	*5533*	*2796*	*213*
Longstanding Illness / Disability				
With Longstanding Illness / Disability	59	68	55	44
Without Longstanding Illness / Disability	41	32	45	56
Base Size	*23125*	*5466*	*2744*	*204*
Carer Status				
Carer	21	20	24	17
Not Carer	79	80	76	83
Base Size	*22353*	*5263*	*2733*	*212*

Table 67 Proportion of participants in projects, by type of support and demographic group

Characteristic	Type of support (multi-code)		
	One to one (%)	Group support (%)	Other (%)
Gender			
Male	33	32	31
Female	67	68	69
Base Size	*13394*	*21049*	*1474*
Ethnicity			
Asian/Asian UK	13	17	13
Black/African/Caribbean/Black UK	5	9	1
White	79	70	84
Mixed Ethnic	1	1	1
Other Ethnic Group	2	3	0
Base Size	*13022*	*20563*	*1453*
Sexuality			
Heterosexual	97	95	98
Gay/Lesbian	2	4	1
Bisexual	1	1	1
Other Sexuality	<1	<1	<1
Base Size	*10878*	*16866*	*1216*
Living Arrangements			
Living Alone	58	47	50
With Spouse/Partner	25	31	35
With Family	13	18	11
In Residential Accommodation	2	2	2
Other Living Arrangement	2	2	2
Base Size	*10400*	*17252*	*1182*
Longstanding Illness / Disability			
With Longstanding Illness / Disability	68	55	51
Without Longstanding Illness / Disability	32	45	49
Base Size	*10257*	*17290*	*1150*
Carer Status			
Carer	20	21	20
Not Carer	80	79	80
Base Size	*9949*	*16730*	*1158*

Table 68 Proportion of participants in projects, by delivery location and demographic group

Characteristic	Delivery location (multi-code)						
	Business venue (%)	Community venue (%)	Outdoors (%)	Public transport (%)	Provider's venue (%)	Participant's Home (%)	Other (%)
Gender							
Male	34	32	31	32	32	33	35
Female	66	68	69	68	68	67	65
Base Size	*12269*	*23444*	*10693*	*2907*	*17068*	*9819*	*1074*
Ethnicity							
Asian/Asian UK	13	15	14	15	15	9	2
Black/African/Caribbean/Black UK	6	7	6	6	7	3	1
White	78	75	77	75	74	86	96
Mixed Ethnic	1	1	1	1	1	1	1
Other Ethnic Group	2	2	1	2	3	2	0
Base Size	*11915*	*22670*	*10395*	*2803*	*16728*	*9592*	*1066*
Sexuality							
Heterosexual	93	95	96	97	95	97	99
Gay/Lesbian	5	3	2	1	4	1	1
Bisexual	1	1	1	1	1	1	0
Other Sexuality	<1	<1	<1	<1	<1	<1	<1
Base Size	*10088*	*18949*	*8612*	*2241*	*13959*	*8187*	*918*
Living Arrangements							
Living Alone	49	51	48	62	46	59	49
With Spouse/Partner	32	29	34	23	32	25	39
With Family	15	16	14	10	18	12	8
In Residential Accommodation	2	2	2	3	2	2	3
Other Living Arrangement	2	2	2	2	2	2	2
Base Size	*9995*	*19272*	*8391*	*1518*	*13749*	*7878*	*860*
Longstanding Illness / Disability							
With Longstanding Illness / Disability	58	60	58	64	55	69	56
Without Longstanding Illness / Disability	42	40	42	36	45	31	44
Base Size	*9858*	*19075*	*8309*	*1549*	*13833*	*7786*	*837*
Carer Status							
Carer	23	21	20	15	23	19	23
Not Carer	77	79	80	85	77	81	77
Base Size	*9659*	*18491*	*8130*	*1433*	*13408*	*7551*	*842*

Project types participation by baseline outcomes

The following tables show the percentage of those who were lonely, had low wellbeing or had low social contact who attended different types of projects. These tables relate to Methods note Section 4.5.3.

Table 69 Participation in projects of those who are lonely, have low wellbeing or low social contact, by level of intervention

Characteristic	Level of intervention (multi-code)					
	Individuals (%)	Interpersonal (%)	Community (%)	Organisational (%)	Policy (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)						
Lonely (scored 2 and above)	73	72	69	69	79	61
Base Size	*12748*	*9343*	*6069*	*4185*	*1975*	*38*
UCLA loneliness scale (3 to 9)						
Lonely (scored 6 and above)	51	51	48	45	55	49
Base Size	*8946*	*6476*	*4247*	*2735*	*1358*	*30*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)						
Low wellbeing (scored under 20)	47	45	42	43	53	27
Base Size	*8273*	*5866*	*3686*	*2576*	*1285*	*17*
Contact with family and friends						
Low social contact (in person, less than once a week)	30	29	29	31	36	29
Base Size	*5862*	*4251*	*2884*	*2083*	*1000*	*18*
Contact with anyone locally						
Low social contact (speak once a week or less)	38	36	35	33	41	25
Base Size	*7317*	*5138*	*3369*	*2207*	*1113*	*16*

Table 70 Participation in projects of those who are lonely, have low wellbeing or low social contact, by method of delivery

Characteristic	Method of delivery (multi-code)			
	Face-to-face (%)	Telephone (%)	Online (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)				
Lonely (scored 2 and above)	73	78	70	58
Base Size	*12917*	*3341*	*1567*	*85*
UCLA scale				
Lonely (scored 6 and above)	51	59	54	35
Base Size	*9069*	*2316*	*1156*	*48*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)				
Low wellbeing (scored under 20)	46	53	42	29
Base Size	*8386*	*2290*	*959*	*39*
Contact with family and friends				
Low social contact (in person, less than once a week)	30	34	29	19
Base Size	*5991*	*1594*	*710*	*33*
Contact with anyone locally				
Low social contact (speak once a week or less)	38	41	33	24
Base Size	*7445*	*1868*	*791*	*42*

Table 71 Participation in projects of those who are lonely, have low wellbeing or low social contact, by type of support

Characteristic	Type of support (multi-code)		
	One to one (%)	Group support (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)			
Lonely (scored 2 and above)	78	71	68
Base Size	*6631*	*9451*	*471*
UCLA loneliness scale (3 to 9)			
Lonely (scored 6 and above)	58	49	55
Base Size	4457	6599	*427*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)			
Low wellbeing (scored under 20)	54	44	33
Base Size	*4526*	*5946*	*238*
Contact with family and friends			
Low social contact (in person, less than once a week)	33	29	21
Base Size	*3119*	*4378*	*176*
Contact with anyone locally			
Low social contact (speak once a week or less)	42	36	28
Base Size	*3791*	*5383*	*236*

Table 72 Participation in projects of those who are lonely, have low wellbeing or low social contact, by delivery location

Characteristic	Delivery location (multi-code)						
	Business venue (%)	Community venue (%)	Outdoors (%)	Public transport (%)	Provider's venue (%)	Participant's Home (%)	Other (%)
DJG social and emotional loneliness scale (0 to 6)							
Lonely (scored 2 and above)	71	74	70	78	73	80	70
Base Size	*5807*	*10987*	*4738*	*1072*	*8081*	*5128*	*434*
UCLA loneliness scale (3 to 9)							
Lonely (scored 6 and above)	49	52	47	61	51	62	60
Base Size	*3993*	*7651*	*3314*	*815*	*5680*	*3519*	*377*
Short Warwick Edinburgh Mental Wellbeing Scale (7 to 35)							
Low wellbeing (scored under 20)	45	48	43	51	48	56	39
Base Size	*3735*	*7214*	*3000*	*729*	*5412*	*3563*	*236*
Contact with family and friends							
Low social contact (in person, less than once a week)	29	30	30	33	31	34	24
Base Size	*2647*	*5095*	*2302*	*481*	*3805*	*2405*	*156*
Contact with anyone locally							
Low social contact (speak once a week or less)	35	38	36	42	38	44	29
Base Size	*3093*	*6212*	*2648*	*536*	*4542*	*2897*	*191*

Type of intervention, primary aim and target group

The following tables show the primary aim of projects according to the type of intervention.

Table 73 Type of intervention by primary aim: project level. Proportion of projects offering a certain intervention type with different primary aims

Type of intervention (multi-code)	Primary Aim						
	Empowering older people (%)	Improving mental health (%)	Improving physical health(%)	Promoting positive images of ageing (%)	Learning or improving skills and knowledge(%)	Other (%)	*Base Size*
IT Interventions	15	38	4	29	13	2	*48*
Asset Based Community Development	61	21	4	1	8	5	*77*
Creative Activity Projects	27	45	4	12	11	1	*95*
Social Interventions	40	37	7	8	6	2	*163*
Culture Change	35	23	0	12	15	15	*26*
Knowledge sharing or building knowledge	23	21	4	29	15	8	*48*
Social Prescribing	56	16	6	9	13	0	*32*
Mental Health Interventions	17	73	2	3	5	0	*60*
Physical Health Interventions	20	47	18	2	13	0	*85*
Transport related projects	44	28	11	0	11	6	*18*
Other	13	0	0	63	0	25	*8*

Table 74 Primary aim by type of intervention: project level. Proportion of projects with a certain primary aim that offer different types of intervention

Primary Aim	Type of intervention (multi-code)											
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)	*Base Size*
Empowering older people	6	39	22	54	8	9	15	8	14	7	1	*120*
Improving mental health	21	18	49	69	7	11	6	51	46	6	0	*87*
Improving physical health	9	13	17	48	0	9	9	4	65	9	0	*23*
Promoting positive images of ageing	78	6	61	72	17	78	17	11	11	0	28	*18*
Learning or improving skills and knowledge	15	15	26	26	10	18	10	8	28	5	0	*39*
Other	10	40	10	40	40	40	0	0	0	10	20	*10*

Table 75 Type of intervention by target group; project level. Proportion of projects offering a certain intervention type that have different target groups

Type of intervention (multi-code)	Target Group									
	All older people (%)	Older people at risk of social isolation or loneliness (%)	Older people experiencing social isolation or loneliness (%)	Demographic focus (%)	Living situation focus (%)	Health focus (%)	Transition focus (%)	Non-demographic groups (%)	Other (%)	*Base Size*
IT Interventions	35	17	8	23	0	0	0	17	0	*48*
Asset Based Community Development	30	14	11	22	4	5	1	11	1	*77*
Creative Activity Projects	34	17	9	21	3	4	1	8	2	*95*
Social Interventions	25	12	18	21	1	8	1	11	3	*163*
Culture Change	32	0	8	24	0	8	0	20	8	*26*
Knowledge sharing or building knowledge	28	19	11	17	0	11	2	9	4	*48*
Social Prescribing	15	0	35	12	0	26	6	6	0	*32*
Mental Health Interventions	28	7	18	20	3	11	0	11	2	*60*
Physical Health Interventions	33	14	12	25	1	7	0	8	0	*85*
Transport related projects	39	6	17	17	0	11	0	11	0	*18*
Other	25	0	0	13	0	25	0	38	0	*8*

Table 76 Target group by type of intervention; project level. Proportion of projects with a certain target group that offer different types of intervention

% Of Target Group with Type of Intervention												
Target Group	Type of intervention (multi-code)											
	IT Interventions (%)	Asset Based Community Development (%)	Creative Activity Projects (%)	Social Interventions (%)	Culture Change (%)	Knowledge sharing or building knowledge (%)	Social Prescribing (%)	Mental Health Interventions (%)	Physical Health Interventions (%)	Transport related projects (%)	Other (%)	*Base Size*
All older people	22	32	42	53	11	17	7	22	37	9	3	76
Older people at risk of social isolation or loneliness	21	29	42	53	0	24	0	11	32	3	0	38
Older people experiencing social isolation or loneliness	9	20	20	65	4	11	26	24	22	7	0	46
Demographic focus	20	30	36	61	11	14	7	21	37	5	2	56
Living situation focus	0	43	43	29	0	0	0	29	14	0	0	7
Health focus	0	13	13	41	6	16	28	22	19	6	6	32
Transition focus	0	25	25	25	0	25	50	0	0	0	0	4
Non-demographic groups	24	27	24	55	15	12	6	21	21	6	9	33
Other	0	13	25	63	25	25	0	13	0	0	0	8

Table 77 Primary aim by target group; project level. Proportion of projects with a certain primary aim that have different target groups

% Of Primary Aim with Target Group										
Primary Aim	Target Group									
	All older people (%)	Older people at risk of social isolation or loneliness (%)	Older people experiencing social isolation or loneliness (%)	Demographic focus (%)	Living situation focus (%)	Health focus (%)	Transition focus (%)	Non-demographic groups (%)	Other (%)	*Base Size*
Empowering older people	26	12	19	17	3	8	2	10	2	*120*
Improving mental health	16	14	19	23	3	9	1	14	1	*87*
Improving physical health	17	13	9	22	0	30	0	9	0	*23*
Promoting positive images of ageing	35	13	5	18	0	13	3	8	8	*18*
Learning or improving skills and knowledge	61	17	11	6	0	0	0	6	0	*39*
Other	10	10	0	20	0	20	0	30	10	*10*

Table 78 Target group by primary aim; project level. Proportion of projects with a certain target group that have different primary aims

% Of Target Group with Primary Aim							
Target Group	Primary Aim						
	Empowering older people (%)	Improving mental health (%)	Improving physical health (%)	Promoting positive images of ageing (%)	Learning or improving skills and knowledge (%)	Other (%)	*Base Size*
All older people	42	18	5	18	14	1	*76*
Older people at risk of social isolation or loneliness	37	32	8	13	8	3	*38*
Older people experiencing social isolation or loneliness	50	37	4	4	4	0	*46*
Demographic focus	38	36	9	13	2	4	*56*
Living situation focus	57	43	0	0	0	0	*7*
Health focus	31	25	22	16	0	6	*32*
Transition focus	50	25	0	25	0	0	*4*
Non-demographic groups	36	36	6	9	3	9	*33*
Other	38	13	0	38	0	13	*8*

Project types regression data tables

The following tables show the results from the linear regression models used to identify the project characteristics associated with changes in outcomes, by project types (the following section considers project activities). This model examines the level at which a project aims to have an impact (Table 29). These tables relate to Methods note Section 4.6.2.

The regressions were run in the SPSS complex samples models and the standard errors account for the clustering of the data within projects and the inclusion in the data more than once of some participants who had more than one follow-up.

A positive beta coefficient reflects greater than average change; a negative coefficient suggests lower than average change, although the change may still be positive.

Table 79 Regression analysis for level at which project aims to have an impact[50]

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
N	6,444			6,538			6,064			6,820		
R-squared	0.261			0.302			0.340			0.294		
Intercept	-0.802	0.136	0.000	0.820	0.154	0.000	1.788	0.203	0.000	1.388	0.140	0.000
Level for impact (over and above individuals)												
Interpersonal	0.050	0.072	0.488	-0.065	0.052	0.220	-0.038	0.060	0.532	-0.015	0.047	0.743
Community	-0.141	0.064	0.028*	-0.016	0.045	0.721	-0.042	0.052	0.423	-0.050	0.040	0.214
Organisational	0.073	0.047	0.125	0.153	0.038	0.000*	0.079	0.040	0.047*	0.033	0.032	0.309
Public policy and wider systems change	0.070	0.077	0.365	0.015	0.066	0.827	-0.047	0.064	0.464	0.051	0.037	0.166
Type of engagement												
Not a one-off activity	0.150	0.075	0.047*	0.091	0.071	0.201	-0.015	0.087	0.864	-0.019	0.043	0.653
One-off activity	.000			.000			.000			.000		
Period between baseline and follow-up												
Up to three months	-0.055	0.073	0.452	0.047	0.062	0.448	0.148	0.068	0.031*	0.005	0.046	0.916
3 to 6 months	0.035	0.069	0.613	0.092	0.062	0.142	0.142	0.068	0.040*	0.068	0.045	0.130
6 to 9 months	-0.017	0.059	0.770	0.089	0.060	0.139	0.104	0.068	0.127	0.026	0.038	0.487
10 to 12 months	-0.055	0.068	0.417	0.059	0.062	0.343	0.130	0.076	0.088	0.038	0.049	0.444
12 to 15 months	-0.098	0.076	0.198	0.050	0.063	0.427	0.090	0.081	0.268	0.031	0.053	0.564
15 to 18 months	-0.003	0.059	0.964	0.061	0.071	0.392	0.166	0.068	0.015*	-0.015	0.051	0.768
18 or more months	.000			.000			.000			.000		

[50] Because almost all projects identified the project type 'individuals' as a relevant level for their project, it is not included in the model.

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Project model												
Group/mixed intervention	-0.077	0.060	0.202	0.025	0.047	0.600	-0.025	0.066	0.704	-0.015	0.039	0.700
One to one intervention	.000			.000			.000			.000		
Duration of involvement for individual												
Unknown	-0.010	0.057	0.861	0.036	0.048	0.455	0.015	0.062	0.803	-0.019	0.043	0.655
Up to one month	0.107	0.052	0.039*	0.076	0.047	0.110	-0.008	0.059	0.895	-0.066	0.059	0.263
1 to 3 months	0.082	0.053	0.124	0.079	0.046	0.087	0.004	0.051	0.942	-0.001	0.043	0.974
3 to 6 months	0.053	0.093	0.568	0.095	0.057	0.095	0.012	0.051	0.809	-0.023	0.042	0.591
6 to 12 months	0.015	0.059	0.798	0.066	0.044	0.136	0.075	0.048	0.119	0.038	0.046	0.404
Over a year	.000			.000			.000			.000		
Typical project intensity per person												
Unknown	0.087	0.085	0.306	0.109	0.083	0.191	0.114	0.078	0.148	0.124	0.061	0.042*
Up to 3 months duration; no info on session numbers	0.058	0.087	0.504	0.150	0.060	0.014*	0.129	0.087	0.141	0.111	0.057	0.055
Longer than 3 months duration; no info on session numbers	-0.020	0.070	0.777	-0.038	0.060	0.523	0.001	0.058	0.990	0.031	0.041	0.455
1 to 5 sessions	0.021	0.114	0.855	-0.023	0.079	0.768	-0.044	0.113	0.701	-0.008	0.071	0.914
6 to 10 sessions; up to 3 months duration	0.019	0.060	0.754	-0.020	0.061	0.738	-0.131	0.060	0.031*	0.029	0.046	0.525
6 to 10 sessions; more than 3 months duration	0.091	0.115	0.427	0.178	0.109	0.104	0.119	0.092	0.198	0.112	0.065	0.086
11 or more sessions	.000			.000			.000			.000		
Baseline WEWMBS score												
7 to 19	1.497	0.100	0.000*	-0.331	0.057	0.000*	-0.027	0.052	0.607	-0.095	0.042	0.025*

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
20 to 24	0.821	0.063	0.000	-0.220	0.038	0.000*	-0.072	0.037	0.056	-0.044	0.034	0.203
25 to 29	0.460	0.041	0.000	-0.055	0.033	0.094	-0.031	0.033	0.347	-0.019	0.025	0.457
30 to 35	.000			.000			.000			.000		
Baseline UCLA score												
3	0.053	0.063	0.400	-1.848	0.077	0.000*	0.150	0.060	0.013*	0.104	0.059	0.080
4	0.042	0.063	0.503	-1.553	0.067	0.000*	0.100	0.056	0.073	0.106	0.058	0.068
5	0.008	0.067	0.906	-1.267	0.073	0.000*	0.088	0.062	0.158	0.075	0.051	0.148
6	-0.006	0.057	0.920	-0.992	0.064	0.000*	0.086	0.050	0.089	0.034	0.050	0.493
7	-0.064	0.063	0.315	-0.616	0.070	0.000*	0.053	0.064	0.410	-0.042	0.067	0.532
8	-0.130	0.066	0.050*	-0.377	0.067	0.000*	-0.080	0.067	0.233	-0.040	0.058	0.494
9	.000			.000			.000			.000		
Baseline frequency of local social contact												
Every day or almost every day	0.081	0.041	0.051	0.111	0.039	0.005*	0.110	0.051	0.032*	-1.642	0.078	0.000*
Three times a week or more	0.018	0.042	0.659	0.032	0.043	0.464	0.092	0.049	0.061	-1.360	0.068	0.000*
Once or twice a week	0.084	0.039	0.032*	0.086	0.044	0.050*	-0.002	0.044	0.962	-1.025	0.066	0.000*
Less often	.000			.000			.000			.000		
Baseline frequency of face-to-face contact												
Three times a week or more	-0.015	0.048	0.756	0.128	0.066	0.052	-2.298	0.140	0.000*	-0.075	0.090	0.404
Once or twice a week	-0.008	0.041	0.852	0.081	0.064	0.210	-1.869	0.128	0.000*	-0.082	0.084	0.334
Once or twice a month or every few months	0.016	0.046	0.734	0.130	0.054	0.017	-1.192	0.095	0.000*	-0.122	0.086	0.156
Less often or never	.000			.000			.000			.000		

	Improvement in well-being score			Improvement in UCLA score			Improvement in face-to-face contact score			Improvement in speaking locally score		
	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value	Beta (effect size)	Std err	p-value
Age												
50-63	0.019	0.060	0.757	0.055	0.059	0.355	-0.083	0.044	0.060	0.017	0.053	0.754
64-69	0.078	0.057	0.171	0.082	0.049	0.097	-0.069	0.042	0.104	0.033	0.059	0.583
70-74	0.111	0.054	0.041*	0.180	0.050	0.000*	-0.043	0.054	0.422	0.098	0.058	0.095
75-79	0.039	0.047	0.406	0.101	0.045	0.026*	-0.039	0.046	0.392	0.061	0.063	0.336
80-84	0.049	0.059	0.403	0.131	0.053	0.015*	-0.071	0.060	0.238	0.033	0.059	0.577
85+	.000			.000			.000			.000		
Gender												
Male	-0.027	0.030	0.377	-0.014	0.031	0.654	-0.137	0.025	0.000*	-0.051	0.028	0.066
Female	.000			.000			.000			.000		
Ethnicity												
Ethnic minorities	0.105	0.087	0.231	0.013	0.069	0.846	0.072	0.057	0.208	-0.071	0.049	0.150
White	.000			.000			.000			.000		
Living arrangements												
Do not live alone	0.056	0.027	0.039*	0.161	0.030	0.000*	-0.040	0.026	0.123	-0.032	0.026	0.217
Live alone	.000			.000			.000			.000		
Carer status												
Not a carer	0.050	0.037	0.174	0.077	0.031	0.015*	-0.027	0.033	0.419	-0.006	0.029	0.824
Carer	.000			.000			.000			.000		
Longstanding illness / disability												
Without longstanding illness / disability	0.101	0.025	0.000*	0.098	0.024	0.000*	0.058	0.025	0.020*	0.050	0.024	0.041*
With longstanding illness / disability	.000			.000			.000			.000		

Project activity regression data tables

The following tables present the output from the linear regression models used to identify the project characteristics associated with improvement in outcomes, considering project activities from the CMF data (the previous section considered project types using data from the project typologies analysis). These tables relate to Methods note Section 1.1.1.

The regressions were run in the SPSS complex samples models and the standard errors account for the clustering of the data within projects and the inclusion in the data more than once of some participants if they had more than one follow-up.

A positive beta coefficient (effect size using Cohen's d) reflects greater than average change; a negative coefficient suggests lower than average change, although the change may still be positive.

Table 80 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for all participants

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	P-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.097	0.090	-0.06	-0.657	0.002*	-0.12	-0.056	0.273	-0.04	-0.051	0.250	-0.03
Skills development	0.058	0.286	0.03	0.030	0.866	0.01	0.113	0.014*	0.09	0.072	0.098	0.04
Physical activities and healthy living	0.209	0.001*	0.12	0.390	0.212	0.07	0.040	0.377	0.03	0.092	0.018*	0.06
Therapy or counselling	0.154	0.163	0.09	0.515	0.167	0.10	0.023	0.772	0.02	0.056	0.483	0.03
Community research	0.081	0.564	0.05	0.812	0.048*	0.15	0.019	0.846	0.01	-0.055	0.608	-0.03
Designing or delivering services	0.124	0.155	0.07	0.388	0.222	0.07	0.085	0.189	0.07	-0.008	0.895	-0.01
Intergenerational activities	-0.086	0.442	-0.05	-0.116	0.791	-0.02	0.019	0.766	0.02	-0.005	0.952	0.00
Social activities	0.070	0.285	0.04	-0.023	0.929	0.00	0.003	0.950	0.00	0.051	0.313	0.03
Transport	0.086	0.562	0.05	0.218	0.552	0.04	0.081	0.421	0.06	0.063	0.662	0.04
Community development	0.060	0.426	0.03	0.137	0.656	0.03	0.049	0.489	0.04	0.078	0.198	0.05
Practical services	-0.019	0.843	-0.01	-0.144	0.665	-0.03	-0.078	0.170	-0.06	-0.040	0.581	-0.02
Technology	-0.010	0.928	-0.01	-0.530	0.126	-0.10	-0.170	0.073	-0.13	0.024	0.795	0.01
Other activities	0.026	0.768	0.01	0.280	0.458	0.05	0.158	0.032*	0.12	0.020	0.792	0.01
Base size	*7234*											

Table 81 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for participants with and without a longstanding illness or disability

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.106	0.178	-0.06	-0.737	0.011*	-0.13	-0.039	0.587	-0.03	-0.080	0.178	-0.04
Skills development	0.085	0.286	0.05	0.060	0.783	0.01	0.152	0.027*	0.11	0.109	0.201	0.06
Physical activities and healthy living	0.246	0.003*	0.14	0.243	0.521	0.04	0.054	0.269	0.04	0.070	0.223	0.04
Therapy or counselling	0.252	0.088	0.14	0.621	0.159	0.11	0.049	0.571	0.04	0.106	0.304	0.06
Community research	0.153	0.471	0.09	0.866	0.081	0.16	0.125	0.115	0.09	-0.059	0.727	-0.03
Designing or delivering services	0.097	0.386	0.05	0.538	0.138	0.10	0.133	0.093	0.10	0.015	0.875	0.01
Intergenerational activities	-0.003	0.989	0.00	-0.011	0.986	0.00	0.005	0.965	0.00	-0.060	0.622	-0.03
Social activities	0.120	0.158	0.07	-0.043	0.891	-0.01	0.002	0.972	0.00	0.063	0.368	0.03
Transport	0.336	0.085	0.19	0.932	0.109	0.17	0.243	0.040*	0.18	0.094	0.607	0.05
Community development	0.063	0.541	0.04	0.023	0.946	0.00	0.065	0.386	0.05	0.137	0.184	0.08
Practical services	-0.012	0.919	-0.01	-0.276	0.516	-0.05	-0.072	0.209	-0.05	-0.029	0.765	-0.02
Technology	-0.008	0.964	0.00	-0.479	0.337	-0.09	-0.121	0.333	-0.09	0.061	0.677	0.03
Other activities	0.103	0.322	0.06	0.318	0.446	0.06	0.187	0.015*	0.14	0.035	0.705	0.02
Base size	4397											

Table 82 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for participants with no loneliness at baseline (UCLA score of 3)

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	0.090	0.279	0.07	-0.517	0.160	-0.11	0.023	0.715	0.02	0.054	0.529	0.04
Skills development	0.044	0.570	0.04	0.002	0.994	0.00	0.049	0.365	0.05	0.137	0.059	0.11
Physical activities and healthy living	0.228	0.001*	0.19	0.580	0.021*	0.13	-0.002	0.965	0.00	0.102	0.183	0.08
Therapy or counselling	0.043	0.677	0.04	0.476	0.278	0.10	-0.002	0.125	0.14	0.173	0.071	0.14
Community research	-0.046	0.727	-0.04	0.654	0.165	0.14	-0.015	0.406	-0.08	-0.255	0.116	-0.20
Designing or delivering services	-0.019	0.858	-0.02	0.216	0.646	0.05	-0.028	0.679	-0.03	-0.121	0.312	-0.09
Intergenerational activities	-0.053	0.738	-0.04	-0.624	0.220	-0.14	-0.041	0.910	0.01	0.038	0.731	0.03
Social activities	0.118	0.151	0.10	0.308	0.294	0.07	-0.054	0.195	0.08	0.042	0.563	0.03
Transport	-0.282	0.017*	-0.23	0.111	0.869	0.02	-0.067	0.446	0.08	0.043	0.882	0.03
Community development	0.066	0.469	0.05	0.315	0.459	0.07	-0.080	0.236	0.08	0.059	0.469	0.05
Practical services	0.020	0.826	0.02	0.200	0.569	0.04	-0.093	0.839	-0.02	0.175	0.103	0.14
Technology	0.287	0.070	0.24	0.484	0.333	0.11	0.030	0.627	0.03	-0.128	0.362	-0.10
Other activities	-0.083	0.582	-0.07	0.531	0.161	0.12	0.143	0.160	0.14	-0.038	0.714	-0.03
Base size	*1831*											

Table 83 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for participants with medium loneliness at baseline (UCLA score between 4 and 6)

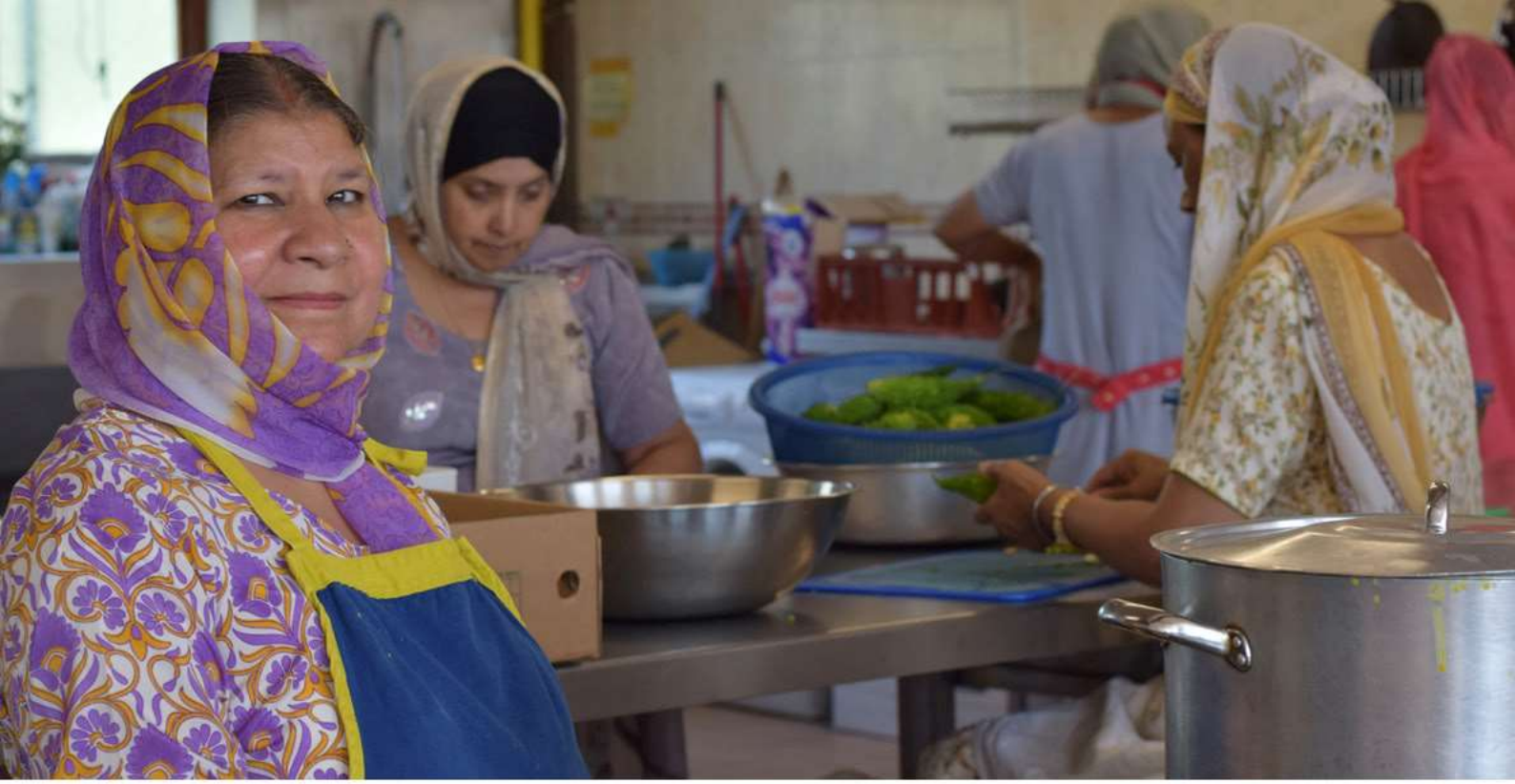
Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	-0.021	0.782	-0.01	-0.481	0.037*	-0.10	-0.032	0.602	-0.03	-0.078	0.237	-0.05
Skills development	-0.104	0.226	-0.07	-0.135	0.495	-0.03	0.083	0.150	0.07	-0.007	0.902	0.00
Physical activities and healthy living	0.062	0.443	0.04	0.119	0.767	0.02	0.019	0.742	0.02	0.095	0.077	0.06
Therapy or counselling	0.158	0.204	0.11	0.531	0.162	0.11	-0.012	0.896	-0.01	0.035	0.682	0.02
Community research	-0.098	0.591	-0.07	0.078	0.881	0.02	-0.101	0.513	-0.09	-0.149	0.188	-0.10
Designing or delivering services	0.118	0.252	0.08	0.254	0.431	0.05	0.081	0.325	0.07	0.029	0.647	0.02
Intergenerational activities	-0.151	0.344	-0.10	0.778	0.152	0.16	-0.161	0.170	-0.14	-0.015	0.900	-0.01
Social activities	0.030	0.693	0.02	-0.136	0.641	-0.03	-0.032	0.564	-0.03	0.116	0.044*	0.08
Transport	0.262	0.108	0.18	0.391	0.336	0.08	-0.022	0.862	-0.02	-0.001	0.996	0.00
Community development	0.171	0.075	0.11	0.838	0.029*	0.17	0.057	0.516	0.05	0.172	0.004*	0.11
Practical services	-0.071	0.585	-0.05	-0.387	0.367	-0.08	-0.065	0.345	-0.05	0.041	0.616	0.03
Technology	0.030	0.843	0.02	-0.518	0.138	-0.10	-0.159	0.146	-0.13	0.103	0.273	0.07
Other activities	0.044	0.676	0.03	0.219	0.561	0.04	0.128	0.128	0.11	0.092	0.362	0.06
Base size	3253											

Table 84 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for participants with medium wellbeing at baseline (SWEMWBS score between 20 and 27)

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	0.007	0.916	0.00	-0.671	0.003*	-0.16	0.021	0.697	0.02	-0.032	0.617	-0.02
Skills development	0.068	0.316	0.04	0.168	0.402	0.04	0.149	0.004*	0.12	0.150	0.005*	0.10
Physical activities and healthy living	0.032	0.652	0.02	0.017	0.952	0.00	-0.013	0.806	-0.01	0.002	0.974	0.00
Therapy or counselling	0.171	0.051	0.10	0.235	0.463	0.05	0.023	0.763	0.02	0.076	0.303	0.05
Community research	0.038	0.794	0.02	0.731	0.156	0.17	-0.044	0.669	-0.04	-0.264	0.017*	-0.17
Designing or delivering services	0.097	0.306	0.06	0.485	0.114	0.11	0.039	0.595	0.03	-0.016	0.831	-0.01
Intergenerational activities	0.067	0.590	0.04	-0.269	0.509	-0.06	-0.060	0.486	-0.05	0.074	0.593	0.05
Social activities	0.015	0.832	0.01	0.044	0.867	0.01	-0.006	0.910	-0.01	0.047	0.442	0.03
Transport	0.342	0.011*	0.20	0.047	0.883	0.01	0.008	0.943	0.01	0.220	0.168	0.14
Community development	0.085	0.297	0.05	0.163	0.599	0.04	0.076	0.361	0.06	0.172	0.009*	0.11
Practical services	0.112	0.377	0.07	0.363	0.420	0.08	-0.059	0.442	-0.05	0.016	0.877	0.01
Technology	-0.193	0.288	-0.11	-0.375	0.315	-0.09	-0.192	0.040*	-0.16	-0.100	0.387	-0.07
Other activities	0.030	0.722	0.02	0.339	0.322	0.08	0.090	0.284	0.07	-0.016	0.870	-0.01
Base size	*3532*											

Table 85 Regression analysis of project activity effect on loneliness, wellbeing and social contact with family/friends and locally, for participants with low wellbeing at baseline (SWEMWBS score between 28 and 35)

Activity	Improvement in loneliness (UCLA)			Improvement in wellbeing (SWEMWBS)			Improvement of in-person contact with family members or friends			Improvement of contact with people locally		
	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size	Estimate	p-value	Effect size
Engagement activities	0.141	0.091	0.10	-0.014	0.966	0.00	-0.021	0.725	-0.02	0.070	0.419	0.06
Skills development	0.044	0.541	0.03	0.046	0.885	0.01	0.091	0.049*	0.08	-0.021	0.772	-0.02
Physical activities and healthy living	0.289	0.003*	0.20	0.764	0.015*	0.17	0.056	0.403	0.05	0.252	0.000*	0.20
Therapy or counselling	0.113	0.316	0.08	0.295	0.556	0.07	0.192	0.035*	0.18	0.040	0.739	0.03
Community research	-0.083	0.524	-0.06	0.079	0.884	0.02	0.101	0.440	0.09	0.108	0.352	0.09
Designing or delivering services	0.007	0.949	0.01	-0.321	0.528	-0.07	-0.020	0.803	-0.02	-0.142	0.164	-0.11
Intergenerational activities	-0.365	0.072	-0.25	-0.512	0.416	-0.12	0.018	0.809	0.02	-0.024	0.849	-0.02
Social activities	0.119	0.091	0.08	0.324	0.308	0.07	0.075	0.205	0.07	0.192	0.003*	0.15
Transport	-0.116	0.405	-0.08	0.039	0.954	0.01	-0.037	0.748	-0.03	-0.234	0.214	-0.19
Community development	0.054	0.553	0.04	0.599	0.133	0.14	0.054	0.503	0.05	0.017	0.820	0.01
Practical services	0.030	0.791	0.02	0.008	0.983	0.00	0.116	0.125	0.11	0.141	0.068	0.11
Technology	0.141	0.282	0.10	0.506	0.308	0.12	0.018	0.799	0.02	0.237	0.013*	0.19
Other activities	0.220	0.033*	0.15	0.070	0.887	0.02	0.248	0.013*	0.23	0.050	0.644	0.04
Base size	*1809*											



Email: ageing.better@ecorys.com

Website: tnlcommunityfund.org.uk/funding/strategic-investments/ageing-better

Twitter: @TNLComFund

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Author: Ecorys and Bryson Purdon Social Research