

## Measuring the Prevalence of Loneliness in England

Combining responses from a single-item direct loneliness question and the UCLA 3-item loneliness scale

**Summary:** The Office for National Statistics has recommended that a direct (single-item) and indirect (UCLA 3-item) measure be used as indicators of loneliness in England. This recommendation has been accepted by the UK Government, and the direct (single-item) measure will be used to estimate the national prevalence of loneliness with the indirect (UCLA 3-item) measure providing further nuance. The rationale for a direct (single-item) and indirect (UCLA 3-item) measure of loneliness is to both capture people's feelings of loneliness in terms of what it means to them, and also capture the feelings of people who are unwilling to admit to being lonely or do not recognise or understand the term. Therefore combining responses to the direct (single-item) and indirect (UCLA 3-item) measures of loneliness will provide a more complete picture of feelings of loneliness than either measure on its own.

Disclaimer: Any omissions and errors in the contents of this paper are the author's only.

## Introduction

Over the last decade the issue of loneliness has risen globally in both the public consciousness and as a public policy issue to be tackled. The UK has put itself among the countries attempting to tackle this issue through policies, provisions and services that aim to enable and support people in maintaining and (re)establishing positively meaningful connections and relationships.

The UK government led the way by publishing a 'loneliness' strategy<sup>1</sup> for England in October 2018. In this strategy, the importance of measuring loneliness both in the general population and when evaluating policies and programmes to tackle this issue has been highlighted. The strategy accepted the recommendations from the Office for National Statistics on the measures to be used as indicators of loneliness.

This paper presents the official measures of loneliness in England and how they are interpreted, before challenging this interpretation by putting forward a way of combining the measures to provide a more complete picture of people's feelings of loneliness.

## Measuring Loneliness in England – The Official Approach

In January 2018 the Prime Minister of the United Kingdom tasked the Office for National Statistics to develop “*national indicators of loneliness suitable for use on major studies to inform future policy in England...to enable better measurement of progress towards preventing and alleviating loneliness...[and] encouraging more consistent use of standard measures of loneliness, enabling more robust comparisons between studies*”<sup>ii</sup>

The Office for National Statistics “*recommend four questions to capture different aspects of loneliness....the University of California, Los Angeles (UCLA) three-item loneliness scale and...a direct question about how often the respondent feels lonely*”<sup>iii</sup>.”

### Box 1: Official Loneliness Measures - England

UCLA three-item loneliness scale:

- How often do you feel that you lack companionship?
- How often do you feel left out?
- How often do you feel isolated from others?

Response categories: ‘Hardly ever or never’, ‘Some of the time’ or ‘Often’

Responses to each question can be scored to provide a single loneliness score.

There is a slightly modified version of this scale for children aged 10 to 15.

Single direct loneliness question:

- How often do you feel lonely?

Response categories: ‘Often or always’, ‘Some of the time’, ‘Occasionally’, ‘Hardly ever’ or ‘Never’

The Office for National Statistics recommends that the “*‘gold standard’ is to use both direct and indirect measures of loneliness where possible*”<sup>iv</sup> and where this is not possible to use the direct (single-item) measure which “*will provide an estimate of the prevalence of loneliness based on respondents’ own perspectives*”<sup>v</sup>. The Office for National Statistics also clarify that they “*are not recommending that the direct measure of loneliness be combined with the UCLA scale into a composite score, but rather... used together as a loneliness question module*”<sup>vi</sup>

The UK Government accepted the recommendations of the Office for National Statistics, noting that the direct (single-item) measure of loneliness “*will allow us to determine the national prevalence of loneliness and in some surveys it will be appropriate to use only this. For others, the full four question set will be more suitable, adding further nuance while retaining the link with the national benchmark.*”<sup>vii</sup>

The Government Statistical Service builds on these recommendations and adds in its advice to users and producers of statistics that “*if the results of the two approaches to measurements suggest differences between groups of people who may be more or less likely to report loneliness (or feelings associated with it), it would be very helpful to indicate this in your reporting of the findings and to share it more widely*”<sup>viii</sup>.

Furthermore, the What Works Centre for Wellbeing in their guidance to measuring loneliness for charities and social enterprises advise that for the UCLA 3-item loneliness measure “*there is no agreed threshold above which someone would be considerably lonely – and it’s more helpful to look at the average scores across your sample to see what has changes over time, and how different people score relative to the average*” and that the single-item loneliness measure “*should be treated separately in terms of scoring, and the results shouldn’t be added to the aggregate score for the first three – it’s a stand alone score.*”<sup>ix</sup>

## Measuring Loneliness in England – A New Approach

The decision by the Office for National Statistics to recommend a direct and indirect measure, reflects that feelings of loneliness are personal and subjective, yet some people are unwilling to admit feelings of loneliness or do not recognise or understand the term. This is why the use of a direct and indirect measure of loneliness is more likely to provide a fuller picture of feelings of loneliness than either measure on its own.

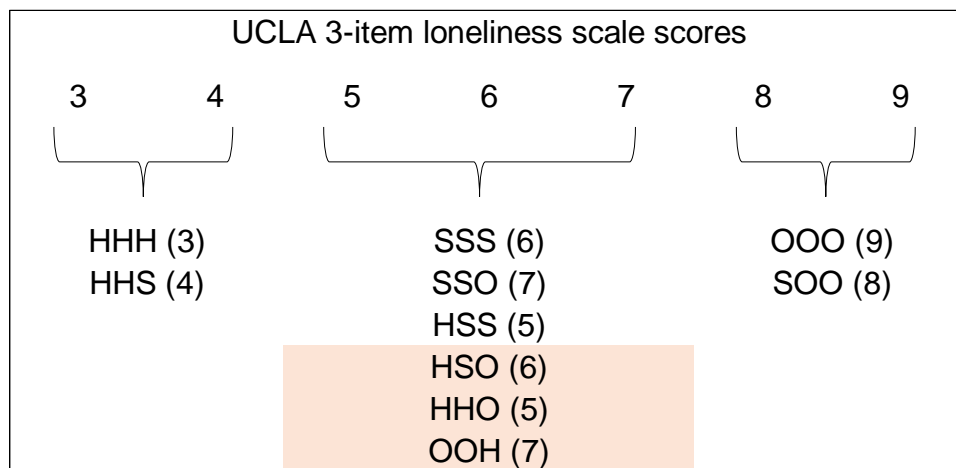
The recommendations from the Office for National Statistics that the direct and indirect measures of loneliness should not be combined is understandable, especially when it is acknowledged that there is no agreed way of categorising the range of scores from the UCLA 3-item loneliness scale. This is however contrary to the understanding that combining these measures is likely to provide a fuller picture of feelings of loneliness.

There is a way of categorising responses to the UCLA 3-item loneliness scale that can be thought of as logical and sensible, and meeting a ‘common-sense’ test. Answering all three questions of the UCLA 3-item loneliness scale results in a score between 3 (least lonely) and 9 (most lonely). Box 2 presents the combination of responses required to get a score between 3 and 9, and suggests that:

- A score of 3 or 4 can be categorised as representing people who feel ‘hardly ever or never lonely’, because it requires three responses of ‘hardly ever or never’ or two responses of ‘hardly ever or never’ and one response of ‘some of the time’.
- A score of 8 or 9 can be categorised as representing people who feel ‘often lonely’ because it requires three responses of ‘often’ or two responses of ‘often’ and one response of ‘some of the time’.

- A score of 5 or 6 or 7 can be categorised as representing people who feel ‘lonely some of the time’ because it requires at least two responses of ‘some of the time’. There are three exceptions to this (highlighted), yet with the interrelationship between the three questions these combination of responses are uncommon.

Box 2: Categorising responses to UCAL 3-item loneliness scale



H = Hardly ever or never (1)

S = Some of the time (2)

O = Often (3)

In parentheses are the scores for the given response

Such categorisation of scores on the UCLA 3-item loneliness scale presents an opportunity to combine these responses with those to the direct loneliness measure in a logical and sensible way, meeting a ‘common-sense’ test.

The English Longitudinal Study of Ageing and Understanding Society are currently the only two surveys, data from which are publicly available for analysis, that include both the Office for National Statistics recommended direct (single-item) and indirect (UCLA 3-item) measures of loneliness. In both these surveys participants are offered three possible responses to the direct (single-item) loneliness measure - 'Hardly ever or never'; 'Some of the time' and 'Often'

Box 3 presents how these responses can be combined, indicating:

- A response of 'Hardly ever or never' to both the direct (single-item) and indirect (UCLA 3-item) measure can be categorised as representing people who feel 'hardly lonely'
- A response of 'Often' to at least one of the direct (single-item) and indirect (UCLA 3-item) measure can be categorised as representing people who feel 'often lonely'
- A response of 'Some of the time' to both the direct (single-item) and indirect (UCLA 3-item) measures or a response of 'Some of the time' to one of the measures and a response of 'Hardly ever or never' to the other can be categorised as representing people who feel 'lonely some of the time'

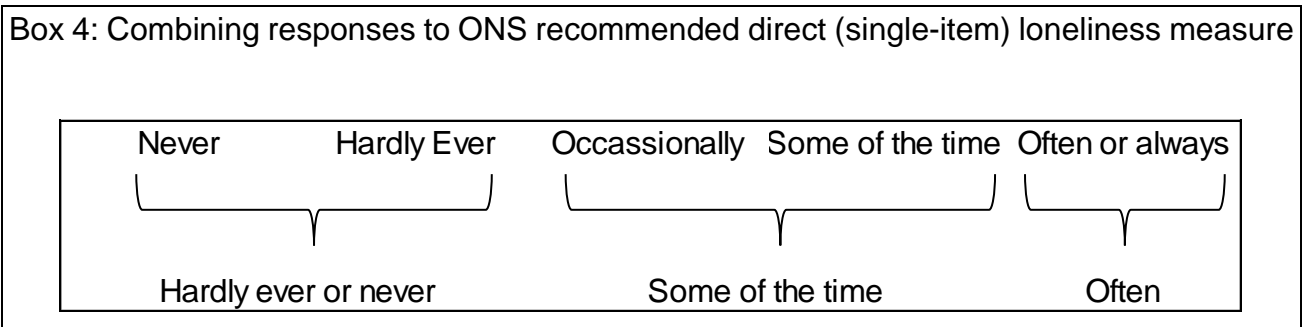
**Box 3: Combining responses to direct and indirect measures of loneliness**

Hardly ever or never		Some of the time		Often	
Hardly ever or never	Hardly ever or never	Some of the time	Some of the time	Often	Often
		Some of the time	Hardly ever or never	Often	Some of the time
		Hardly ever or never	Some of the time	Often	Hardly
				Hardly	Often
				Some of the time	Often

Response to direct (single-item) measure  
 Response to indirect (UCLA 3-item) measure

The Annex presents analysis on how the same people respond to the direct (single-item) and indirect (UCLA 3-item) loneliness measures. The analysis shows that there will be people who are classified as being more lonely on one measure than they are on the other. This means when each measure is considered separately, a greater proportion of people will be considered ‘hardly lonely’ and a lower proportion will be considered ‘lonely some of the time’ or ‘often lonely’ compared to the combined measure of loneliness. The suggested approach of combining responses from the direct (single-item) and indirect (UCLA 3-item) measures will therefore provide a more complete picture of people’s feelings of loneliness.

The ONS recommended direct (single-item) measure has been sourced from the Community Life Survey and has five response categories – ‘Never’; ‘Hardly ever’; ‘Occasionally’; ‘Some of the time’; and ‘Often or always’. Box 4 presents how these responses can be combined into three response categories such that they can be combined with responses to the UCLA 3-item loneliness scale (as demonstrated in Box 3).





## Summary

The UK Government tasked the Office for National Statistics to develop national indicators for England. The Office for National Statistics recommended a direct (single-item) measure and an indirect (UCLA 3-item) measure to be used as part of a loneliness question module, but for responses not to be combined into a composite score.

Loneliness is a feeling that is personal and subjective, and this is the rationale for having a direct (single-item) measure of loneliness, which provides the opportunity for people to define loneliness for themselves. For some people, admitting feelings of loneliness is difficult and for others the term is not recognised or understood. This is the rationale for having an indirect (UCLA 3-item) measure of loneliness. These sets of rationale suggest that a measure of loneliness which combines both direct and indirect measures will provide a more complete picture of feelings of loneliness than either measure on its own.

This is supported by analysis of two datasets that measure feelings of loneliness using both a direct (single-item) and an indirect (UCLA 3-item) measure of loneliness. The analysis shows that there are people who are classified as being more lonely on one measure than they are on the other. Therefore combining responses from the direct and indirect loneliness measures will provide a more complete picture of people's feelings of loneliness.

The UK Government's decision to use the direct (single-item) measure to determine the national prevalence of loneliness and the indirect (UCLA 3-item) measure to add further nuance therefore risks providing an incomplete picture of loneliness across England. A more complete picture will emerge using a combined (direct and indirect) measure of loneliness, alongside responses to each of the individual questions to provide greater nuance.

## Annex: The Overlap between Direct and Indirect Loneliness Measures

The Office for National Statistics has recommend a direct (single-item) and indirect (UCLA 3-item) measure of loneliness. The English Longitudinal Study of Ageing and Understanding Society are currently the only two surveys, the data from which are publicly available for analysis, that include both these two measures of loneliness. This provides an opportunity to understand how the same people response to these two measures of loneliness.

Table 1 below presents analysis of data from the English Longitudinal Study of Ageing Wave 8 (2016-17). The table shows how people aged 50 and over in England responded to the two measures of loneliness. The figures shaded in blue are to be read horizontally and the figures shaded green are to be read vertically.

Table 1: Overlap in responses to direct and indirect loneliness measures among people aged 50 and over in England (English Longitudinal Study of Ageing Wave 8)

		UCLA 3-item loneliness scale		
		Hardly ever or never lonely	Lonely some of the time	Often lonely
Direct Loneliness Measure	Hardly ever or never lonely	87.9%	11.7%	0.4%
		89.6%	28.8%	5.3%
	Lonely some of the time	27.6%	68.1%	4.3%
		10.0%	59.5%	21.8%
	Often lonely	3.9%	46.2%	49.9%
		0.4%	11.6%	73.0%

Source: Author's analysis of English Longitudinal Study of Ageing Wave 8

Table 1 indicates that:

- Of those people who responded 'often' to the direct (single-item) measure of loneliness, half (49.9%) were categorised as 'often lonely' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'often lonely' on the indirect (UCLA 3-item) measure, almost three-quarters (73.0%) responded 'often' to the direct (single-item) measure of loneliness.
- Of those people who responded 'some of the time' to the direct (single-item) measure of loneliness, over two-thirds (68.1%) were categorised as 'lonely some of the time' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'lonely some of the time' on the indirect (UCLA 3-item) measure, three-fifths (59.5%) responded 'some of the time' to the direct (single-item) measure of loneliness.
- Of those people who responded 'hardly ever or never' to the direct (single-item) measure of loneliness, almost nine-tenths (87.9%) were categorised as 'hardly lonely' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'hardly lonely' on the indirect (UCLA 3-item) measure, nine-tenths (89.6%) responded 'hardly ever or never' to the direct (single-item) measure of loneliness.

A similar pattern emerges from an analysis of data from Understanding Society Wave 9 (2017-18) as presented in Table 2. The table shows how people aged 16 and over in England responded to the two measures of loneliness<sup>x</sup>.

Table 2: Overlap in responses to direct and indirect loneliness measures among people aged 16 and over in England (Understanding Society Wave 9)

		UCLA 3-item loneliness scale		
		Hardly ever or never lonely	Lonely some of the time	Often lonely
Direct Loneliness Measure	Hardly ever or never lonely	87.4%	12.4%	0.2%
		88.4%	24.0%	2.3%
	Lonely some of the time	23.9%	72.0%	4.1%
		11.2%	64.7%	18.4%
	Often lonely	2.4%	40.8%	56.8%
		0.3%	11.4%	79.3%

Source: Author's analysis of Understanding Society Wave 9

Table 2 indicates that:

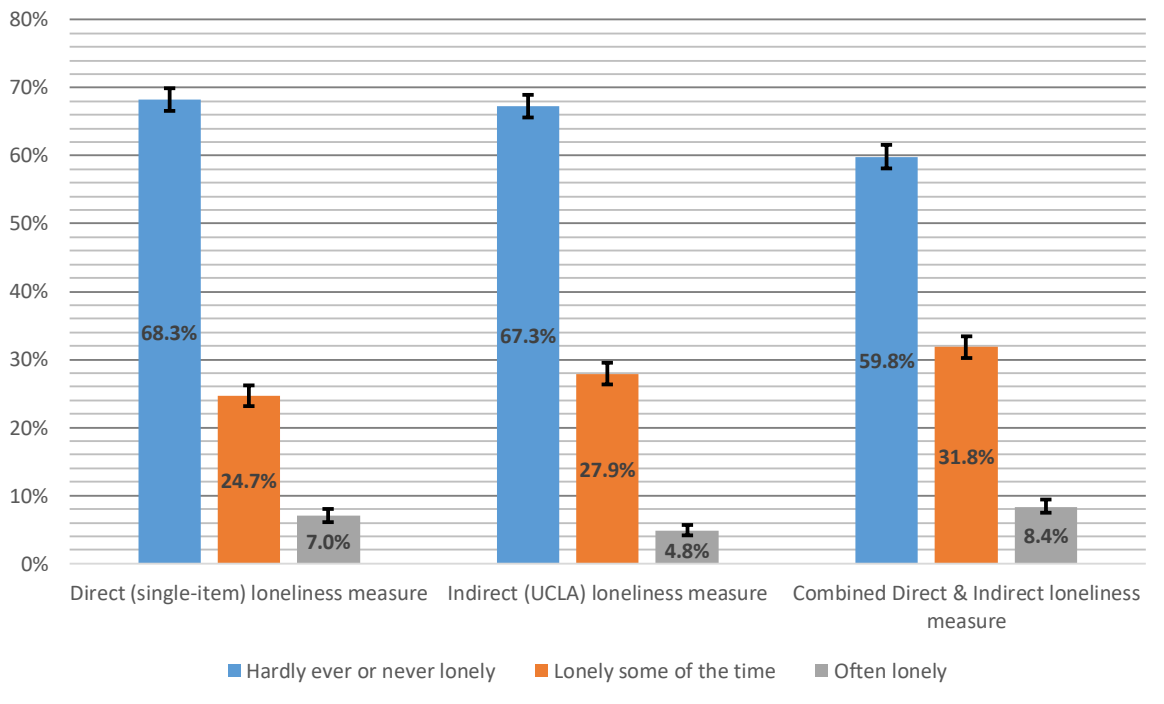
- Of those people who responded 'often' to the direct (single-item) measure of loneliness, over half (56.8%) were categorised as 'often lonely' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'often lonely' on the indirect (UCLA 3-item) measure, almost four-fifths (79.3%) responded 'often' to the direct (single-item) measure of loneliness.

- Of those people who responded 'some of the time' to the direct (single-item) measure of loneliness, almost three-quarters (72.0%) were categorised as 'lonely some of the time' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'lonely some of the time' on the indirect (UCLA 3-item) measure, almost two-thirds (63.7%) responded 'some of the time' with their responses to the direct (single-item) measure of loneliness.
- Of those people who responded 'hardly ever or never' to the direct (single-item) measure of loneliness, nine-tenths (87.4%) were categorised as 'hardly lonely' on the indirect (UCLA 3-item) measure of loneliness. Similarly, of those people who were categorised as 'hardly lonely' on the indirect (UCLA 3-item) measure, almost nine-tenths (88.4%) responded 'hardly ever or never' with their responses to the direct (single-item) measure of loneliness.

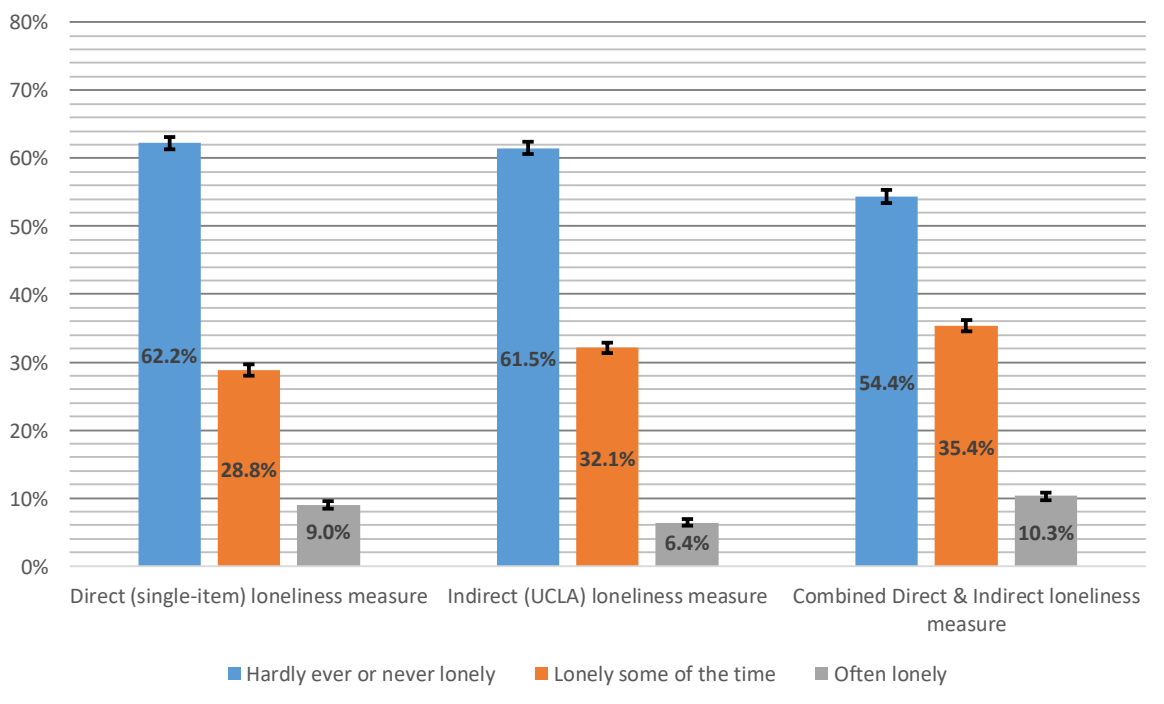
This analysis of how the same people respond to the two measures of loneliness suggests that there will be people who are classified as being more lonely on one measure than they are on the other. This means that when each measure is considered separately, a greater proportion of will be considered 'hardly lonely' and a lower proportion considered 'lonely some of the time' or 'often lonely' than the combined measure of loneliness. This is shown in figure 1, which also highlights that only using the indirect (UCLA 3-item) measure of loneliness would considerably underestimate the proportion of 'often lonely' people.

**Figure 1: Loneliness levels by measure**

(A) People aged 50 and over in England - English Longitudinal Study of Ageing Wave 8 (2016-17)



(B) People aged 16 and over in England - Understanding Society Wave 9 (2017-18)



Author's analysis of English Longitudinal Study of Ageing Wave 8 & Understanding Society Wave 9

Figure 1 also shows that the difference in the proportion of 'often lonely' people is not statistically significantly different between that estimated using the direct (single-item) loneliness measure and that estimated using the combined (direct and indirect) loneliness measure. This is reassuring given the Office for National Statistics' recommendation that the direct (single-item) measure of loneliness be used when both measures cannot be used.

The reassurance is however limited given that over a quarter of a million people<sup>xi</sup> aged 50 and over in England who are 'often lonely' on the indirect (UCLA 3-item) loneliness measure would not be categorised as such by their response to the direct (single-item) loneliness measure. These individuals will either not want to admit to being 'lonely' or will not recognise or understand the term 'lonely', and thereby be meaningfully different to those whose responses to the direct (single-item) measure classify them as 'often lonely'.

## Endnotes

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<sup>i</sup> Department for Digital, Culture, Media and Sport. (October 2018) *A connected society A strategy for tackling loneliness – laying the foundations for change*. Available at <https://www.gov.uk/government/publications/a-connected-society-a-strategy-for-tackling-loneliness> (Accessed 12th February 2020)

<sup>ii</sup> Office of National Statistics. (December 2018) 'Chapter 1: Introduction: Developing National Indicators of Loneliness'. In *National Measurement of Loneliness: 2018*. Available at <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/compendium/nationalmeasurementofloneliness/2018/introductiondevelopingnationalindicatorsofloneliness> (Accessed 12th February 2020)

<sup>iii</sup> Office of National Statistics. (December 2018) 'Chapter 5: Recommended national indicators of loneliness'. In *National Measurement of Loneliness: 2018*. Available at <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/compendium/nationalmeasurementofloneliness/2018/recommendednationalindicatorsofloneliness> (Accessed 12th February 2020)

<sup>iv</sup> Office of National Statistics. (December 2018) *Measuring loneliness: guidance for use of the national indicators on surveys*. Available at <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys#recommended-measures-for-adults> (Accessed 6th March 2020)



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<sup>v</sup> Office of National Statistics. (December 2018) *Measuring loneliness: guidance for use of the national indicators on surveys*. Available at

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys#recommended-measures-for-adults> (Accessed 6th March 2020)

<sup>vi</sup> Office of National Statistics. (December 2018) 'Chapter 5: Recommended national indicators of loneliness'. In *National Measurement of Loneliness: 2018*. Available at <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/compendium/nationalmeasurementofloneliness/2018/recommendednationalindicatorsofloneliness> (Accessed 12th February 2020)

<sup>vii</sup> Department for Digital, Culture, Media and Sport. (October 2018) *A connected society A strategy for tackling loneliness – laying the foundations for change*. Available at <https://www.gov.uk/government/publications/a-connected-society-a-strategy-for-tackling-loneliness> (Accessed 12th February 2020)

<sup>viii</sup> Government Statistical Service. (April 2019) *Loneliness indicators*. Available at <https://gss.civilservice.gov.uk/policy-store/loneliness-indicators/> (Accessed 13<sup>th</sup> March 2020)

<sup>ix</sup> What Works Centre for Wellbeing. (February 2019) *A brief guide to measuring loneliness for charities and social enterprises*. Available at <https://whatworkswellbeing.org/resources/brief-guide-to-measuring-loneliness/> (Accessed 13<sup>th</sup> March 2020)

<sup>x</sup> The pattern is almost identical when analysing people aged 16 and over in the UK. The analysis presented is for England-only because the recommendations by the Office for National Statistics for measurement of loneliness is for England.

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<sup>xi</sup> The Office of National Statistics' mid-year population estimate 2018 indicates that there are 20,712,407 people aged 50 and over in England. Analysis of English Longitudinal Study of Ageing Wave 8 (2016-17) indicates that 4.82% (with a 95% confidence interval of between 4.10% and 5.65%) of people aged 50 and over in England are 'often lonely' on the UCLA 3-item loneliness measure. This suggests that there are 998,338 (with a 95% confidence interval of between 849,209 and 1,170,251) people aged 50 and over in England who are 'often lonely' on the UCLA 3-item loneliness measure. Analysis of English Longitudinal Study of Ageing Wave 8 (2016-17) indicates that 73.0% of people aged 50 and over in England who are 'often lonely' on the UCLA 3-item loneliness measure are also 'often lonely' on the direct (single-item) loneliness measure. Therefore 27.0% of people who are 'often lonely' on the UCLA 3-item loneliness measure – 269,951 (with a 95% confidence interval of 229,626 and 316,436) – will not be categorised as 'often lonely' with their responses to the direct (single-item) loneliness measure. The figures are of a similar magnitude when analysing Understanding Society Wave 9 (2017-18)