

Article

Exploring loneliness in children, Great Britain: 2018

Analysis of children's (aged 10 to 15 years) reporting of loneliness and perception of their circumstances from The Children's Society Household Survey.

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1 . Main points

The relationship between children's loneliness and their circumstances has been explored by seeing if each factor has a relationship when others are taken into account.

On average, the odds of children reporting loneliness are increased if:

- they have low happiness with their relationships with friends
- they have low happiness with the amount of choice they have
- their parent or guardian doesn't have very high life satisfaction
- they live in a city
- their household is in relative poverty

When taking other factors into account, the following are not significant in children's reporting of loneliness:

- age
- gender
- ethnicity
- number of children in the household
- living in a single parent household
- living away from parents (such as with another relative)

2 . Statistician's comment

"Loneliness is an issue of growing importance to many organisations and policy-makers. Our findings show that the type of area where a child lives and relative poverty are both important, but this research also highlights that the child's perspective of their situation is a significant contributing factor to loneliness."

Dawn Snape, Assistant Divisional Director, Sustainability and Inequalities, Office for National Statistics

3 . Background

In 2018, the Prime Minister announced the government's response to the [Jo Cox Commission on Loneliness manifesto](#). As part of this, she requested that the Office for National Statistics (ONS) develops national measures of loneliness for all ages.

We worked with a cross-government group, charities, academics and other stakeholders, and in December 2018 published guidance and analysis on the [National Measurement of Loneliness](#). As part of this work, it became clear that there is currently much more extensive and robust data available on loneliness in older people, but comparatively little data on how loneliness may affect children and young people.

We worked with [The Children's Society](#) to develop the guidance to comprehensively capture younger age groups to ensure the [National Measures](#) were suitable for children aged 10 years and over. We published an article in December 2018 using our [proposed measures to look at loneliness in children](#) (aged 10 to 15 years) and young people (aged 16 to 24 years), which included interviews with both age groups. The article reported the main findings from both our qualitative and quantitative research in relation to how common loneliness is in children and young people, what loneliness means to them, why they are feeling lonely and how they manage loneliness. The findings came from a sample of around 1,500 children aged 10- to 15-years, who completed The Children's Society Household Survey in 2018. The findings from the in-depth interviews came from a sample of 30 children aged 10- to 15-years.

4 . What does children's loneliness look like?

Loneliness can be normal and transient, but physical, mental and social problems can arise when it becomes chronic. It has been found to have a profoundly negative effect on health at all ages and can be considered to be the "social equivalent of physical pain" (Hawkley and Cacioppo, 2010). Loneliness is associated with poor health outcomes for younger ages as much as for adults (Harris, Robinson, and Qualter, 2013; Qualter and others, 2013).

In our previous analysis, we found that [11.3% of children in Great Britain aged 10 to 15 years answered "often" when asked how often they felt lonely](#). This answer was more common among younger children aged 10 to 12 years compared with those aged 13 to 15 years. As well as age, satisfaction with health and relationships, and the number of children in the household were also associated with the reporting of loneliness.

Our previous analysis also highlighted a [relationship between deprivation and loneliness in children](#). However, it was unclear whether the association could be driven by other factors linked to both poverty and loneliness, such as family structure. In this article we use logistic regression to investigate if relative poverty is associated with loneliness even when accounting for these other elements.

5 . Things you need to know about this release

The data in this publication are from The Children's Society Household Survey and are not official government data. The survey covers Great Britain and asks questions to those aged 10 to 17 years; this analysis only includes children aged 10 to 15 years as per our definition of a child.

These data were collected in May to June 2018. Gender is self-identified with the response categories [male /female/trans/prefer not to say]; only male and female respondents are included, as is in line with The Children's Society's methods. For more information please see [The Children Society's Good Childhood Report 2018 \(PDF, 1.30MB\)](#).

Logistic regression has been used to analyse circumstances associated with loneliness while taking other factors into account. It allows us to provide a more accurate assessment of a child's reporting of loneliness and potential associated factors. In this article, we have analysed several variables taking a step-by-step approach to exclude and include them depending on their resulting statistical significance. More information on logistic regression can be found in the [technical report](#) accompanying our previous analysis on [loneliness in those aged 16 years and over](#). The regression models are in the [dataset](#).

In this publication loneliness is defined as children who answered either "often" or "some of the time" when asked, "How often do you feel lonely?" [Often/ Some of the time/ Hardly ever or never]. 45.4% of the children asked said they felt lonely "often" or "some of the time" compared with 54.6% who said that they felt lonely "hardly ever or never".

Our previous analysis showed that children who received free school meals reported higher levels of loneliness than those who did not; this article explores this relationship. Receipt of free school meals is commonly used as an indicator for childhood poverty. However, as a child may be eligible for free meals but not receive them it was appropriate to choose another measure to ensure accurate assessment of poverty in this analysis.

Relative poverty in this article is defined as those living below 60% of the average (median) equivalised income, a widely-used definition of relative poverty. This measure considers how many adults and children live in the household. The median income has been calculated from adult responses to the question “What is the usual [weekly/monthly/annual] income for your household, after any deductions such as Income Tax or National Insurance, and including any benefits or tax credits received?” within The Children’s Society Household Survey. The median of the sample has been used rather than the [national median](#) to ensure that our analysis is representative of our respondents. More information on this can be found in the [Quality and methodology](#) section.

Income itself is not included in this analysis as it is a component of our poverty definition, and therefore could provide misleading results.

For a list of all variables included in the regression models please see the [dataset](#).

6 . Children in relative poverty had almost twice the odds of reporting feeling lonely

The odds of a child reporting feeling lonely are nearly two times higher than them reporting “hardly ever or never” feeling lonely if they live in a household below the relative poverty threshold (model 1 in the [dataset](#)).

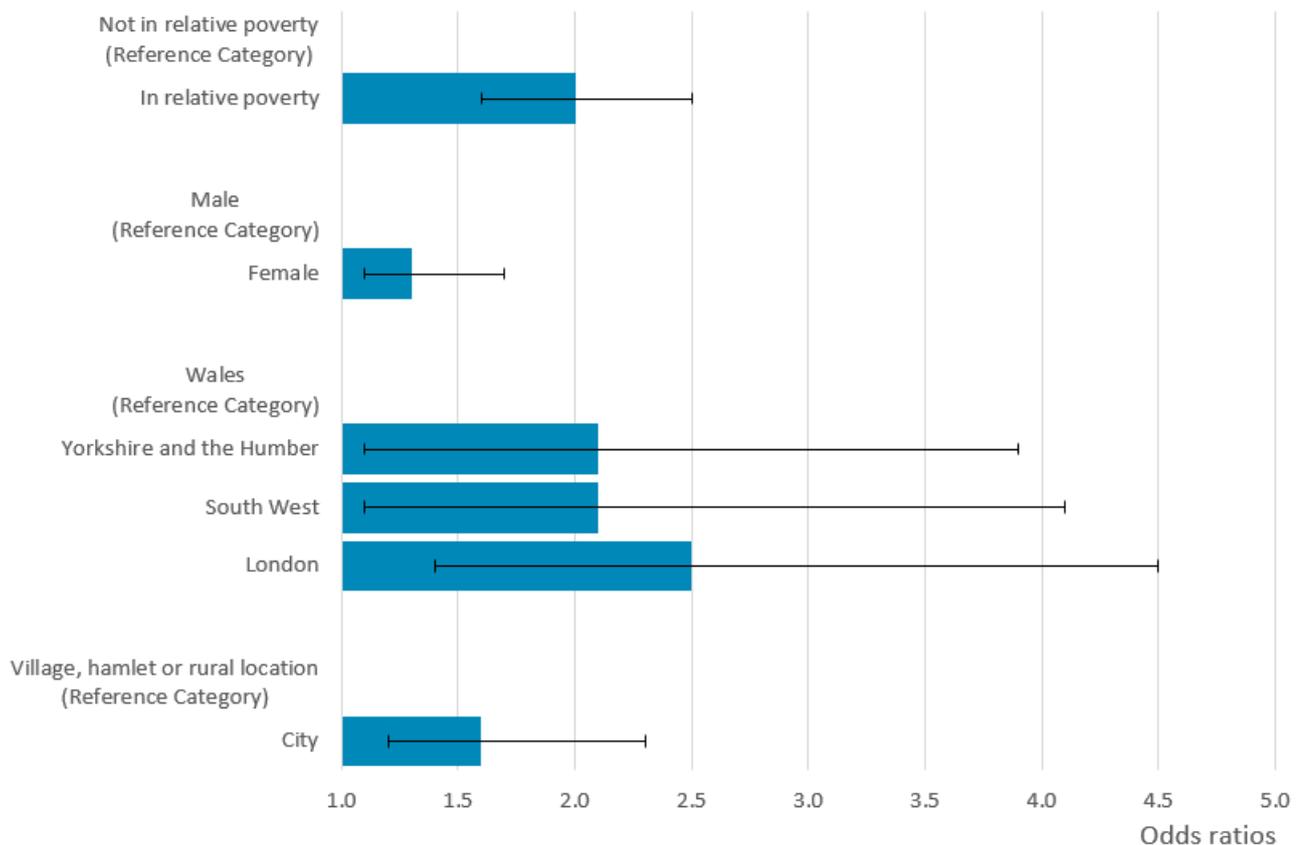
When interviewed, children highlighted that loneliness may arise:

“When [children] don’t have the stuff that other kids may have. Like for example a new pair of trainers might come out, people might want to get it, they can’t get it, they’ll feel alone; like why can’t I get this, why can’t I get that?” (Female, 15 years).

Countries and English regions, being female rather than male, and living in cities compared with rural locations (village, hamlet or isolated rural location) also significantly contribute to loneliness (Figure 1; model 2 in the [dataset](#)).

Figure 1: Relative poverty, gender, countries and English regions, and area type independently influence children’s loneliness

Significant odds ratios of reporting feeling lonely more often compared with the reference category, Great Britain, children aged 10 to 15 years



Source: The Children’s Society Household Survey

Notes:

- Odds ratios are reported from the logistic regression to show the odds of a child reporting feeling lonely “often” or “some of the time” in relation to reporting “hardly ever or never” feeling lonely when compared to the reference category within the group.
- The reference category has been selected as being the category with the lowest proportion of children reporting feeling lonely.
- 95% confidence intervals are displayed on the chart.
- All variables on this chart are statistically significantly different to the reference category, which equates to a p value below 0.05. Variables tested at this stage are in model 3 in the [dataset](#).
- Statistically significant differences can only be reported in comparison with the reference category. For example, reported loneliness in London is statistically significantly higher than in Wales, but is not statistically significantly higher than those in the South West.
- Definitions of the variables used in this analysis can be found in the [dataset](#).

In our previous analysis, looking at the [relationships between loneliness and other variables of interest](#) one at a time, age group and the number of children in the household were significantly related to reported loneliness. In the current analysis, after holding relative poverty, gender, countries and English regions, and area type constant, age and number of children is no longer significantly related to loneliness.

Additionally, children in single parent households and children living away from their parents (for example, with another relative) are not significantly more likely to report loneliness than those who are not in single parent households or living with parents (respectively) when all the other factors are accounted for (model 2 in the [dataset](#)).

Having identified that relative poverty is a factor linked to children's reporting of loneliness, we now explore whether this could be related to the main adult's occupation. When at least one parent or guardian is in employment, as well as the type of this employment (such as managerial or routine occupations), are controlled for, the odds of children in relative poverty reporting feeling lonely are still around two times greater than those not in relative poverty (model 4 in the [dataset](#)).

7 . How children's happiness with the things they have influences the reporting of loneliness

Our previous research suggested that children may feel left out if they lack things that other children have:

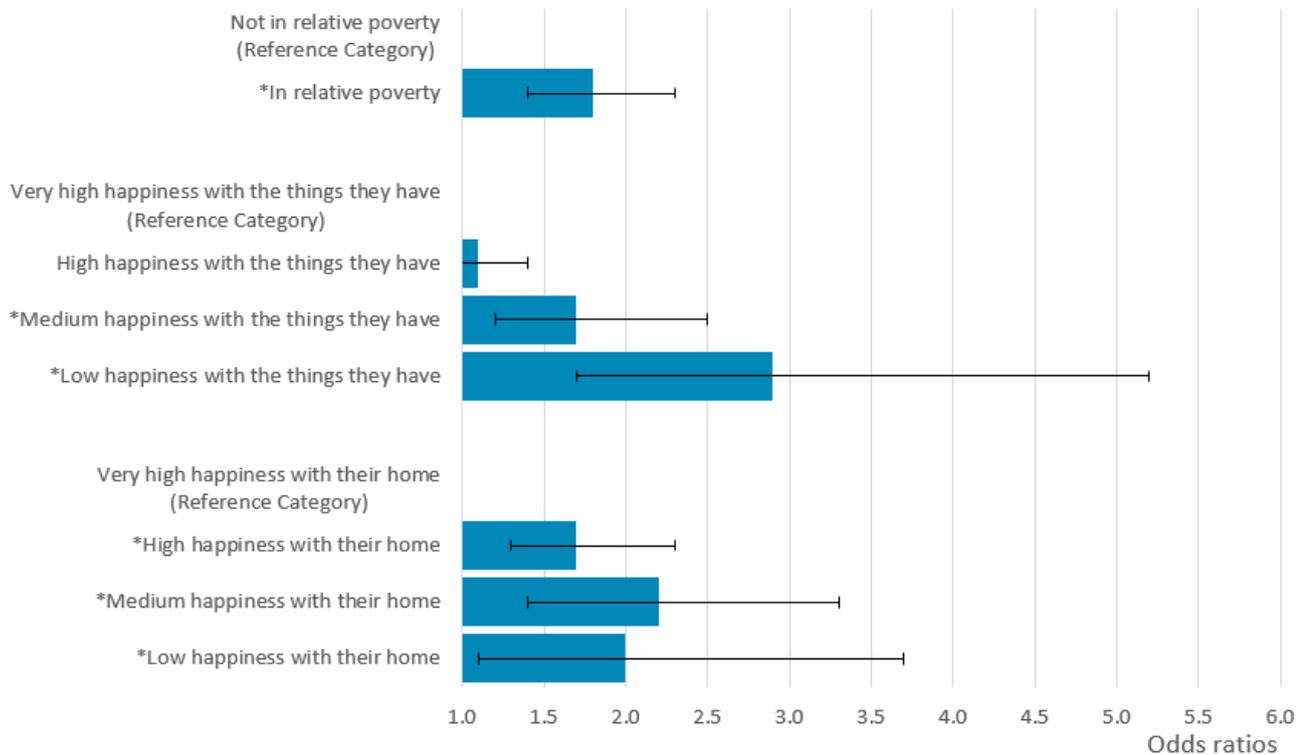
"[They may feel lonely] if they feel they're in a different living situation, for example. If they feel like a friend's got more money than them or things like that. Or if someone's got the latest iPhone and you don't." (Female, 13 years)

To better understand the relationship between loneliness and relative poverty, we examine whether this relationship is affected by the child's perspective of their situation. We assess this by looking at the degree to which children said they were happy with what they have or with their home.

Adding children's happiness with the things they have and happiness with their home into the analysis only mitigated the effect of relative poverty on loneliness slightly, reducing the odds ratio from 1.9 to 1.8 (Figure 2; model 5 in the [dataset](#)). Notably, happiness with the things they have and happiness with home had a greater impact on reporting loneliness than being in relative poverty. This suggests relative poverty is more complicated than simply not having enough of something.

Figure 2: Having low happiness with the things they have and low happiness with their home has a greater impact on loneliness in children than relative poverty

Odds ratios of reporting feeling lonely more often compared with the reference category, Great Britain, children aged 10 to 15 years



Source: The Children’s Society Household Survey

Notes:

1. Odds ratios are reported from the logistic regression to show the odds of a child reporting feeling lonely “often” or “some of the time” in relation to reporting “hardly ever or never” feeling lonely when compared to the reference category within the group.
2. The reference category has been selected as being the category with the lowest proportion of children reporting feeling lonely.
3. 95% confidence intervals are displayed on the chart.
4. Statistically significantly different responses to the reference category, which equates to a p value below 0.05, are marked with an asterisk (*). Not all variables tested in this model are in the graph, please see model 5 in the [dataset](#).
5. Statistically significant differences can only be reported in comparison with the reference category.
6. Definitions of the variables used in this analysis can be found in the [dataset](#).

8 . Children's autonomy and happiness with relationships with friends are the largest significant contributors to loneliness

We next focus on understanding whether children's sense of autonomy is associated with reporting of loneliness. So far, relative poverty, gender, countries and English regions, area type and happiness with both the things they have and happiness with their home are associated with children's reporting of loneliness. When we also consider children's happiness with the amount of choice they have in life, happiness with the things they have no longer influences a child's reporting of loneliness (model 6 in the [dataset](#)). The odds of children reporting feeling lonely if they have low happiness with their amount of choice are nearly four times greater than children reporting very high happiness with their amount of choice.

The odds of children reporting loneliness when they are less happy with their home decreases when we include happiness with the amount of choice they feel they have. This suggests that children's autonomy is more important in relation to loneliness than how they feel about more material things.

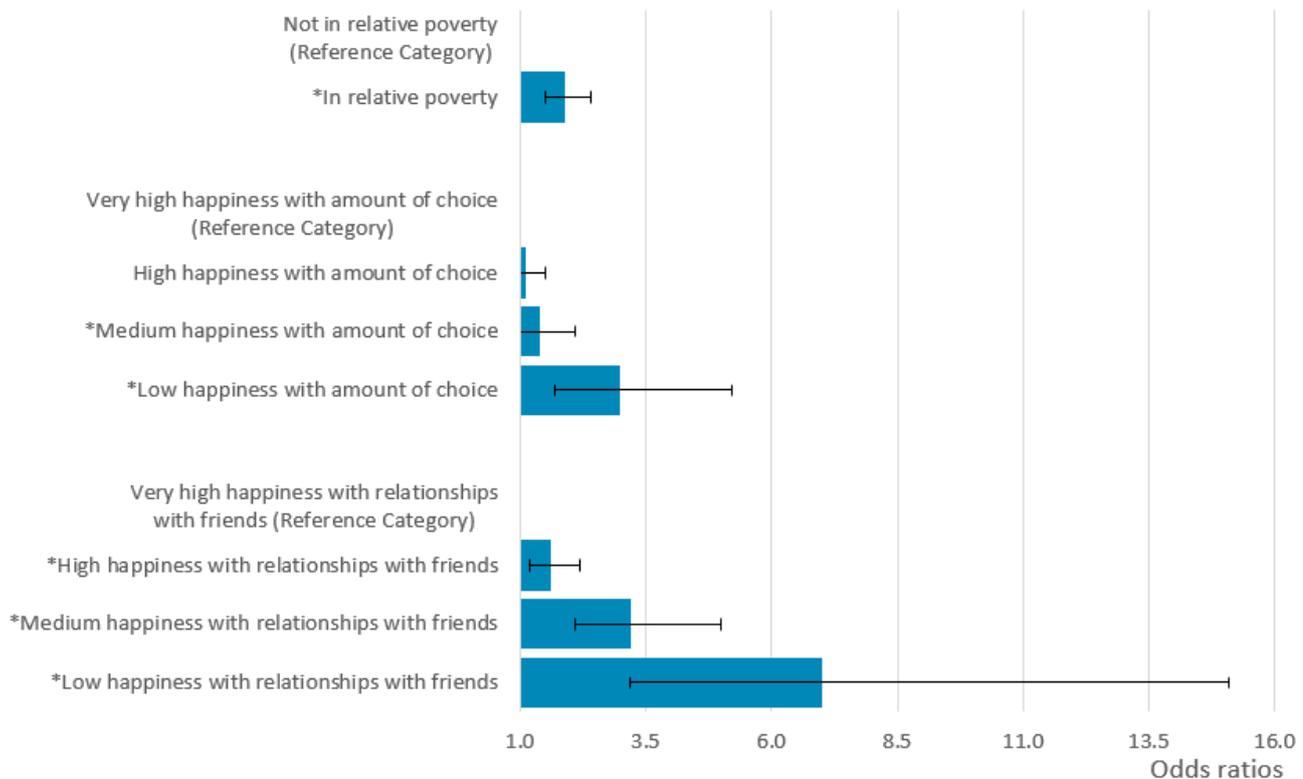
Happiness with relationships with friends is the last aspect of children's perspectives we focus on. Interestingly, when happiness with relationships with friends is included in the analysis, gender is no longer significantly associated with loneliness (model 8 in the [dataset](#)).

As would be expected, children's happiness with their relationships with friends is an important contributor to loneliness even after taking other possible influences into account. The odds of loneliness are seven times greater in children who report low happiness with their relationships with friends compared with children who have very high happiness with their relationships. This factor has the strongest effect on loneliness identified in our analysis, indicating the importance of good relationships with friends (Figure 3).

These are not surprising findings because loneliness itself is defined as a mismatch between the perceived quantity and quality of social relationships a person wants compared with what they have. What is perhaps more interesting is that satisfaction with friendships only explains part of children's loneliness and many other objective circumstances and subjective perceptions also play an important role.

Figure 3: Happiness with relationships with friends has the greatest impact on reported loneliness in children

Odds ratios of reporting feeling lonely more often compared with the reference category, Great Britain, children aged 10 to 15 years



Source: The Children’s Society Household Survey

Notes:

- Odds ratios are reported from the logistic regression to show the odds of a child reporting feeling lonely “often” or “some of the time” in relation to reporting “hardly ever or never” feeling lonely when compared to the reference category within the group.
- The reference category has been selected as being the category with the lowest proportion of children reporting feeling lonely.
- Statistically significantly different responses to the reference category, which equates to a p value below 0.05, are marked with an asterisk (*). Not all variables tested in this model are in the graph, please see model 8 in the [dataset](#).
- Statistically significant differences can only be reported in comparison with the reference category.
- 95% confidence intervals are displayed on the chart.

To explore why gender is no longer associated with loneliness, we look at the proportion reporting happiness with relationships with friends by gender and reporting of loneliness. In the sample, twice as many females than males report low happiness with relationships with friends. However, among those who report feeling lonely, females are four times more likely than males to report low happiness with relationships with friends. This could suggest that the commonly-noted association between gender and loneliness may be due to the differing expectations and quality of friendships of females and males (for example, Parker and Asher, 1993).

9 . How adults' life satisfaction levels contribute to children's loneliness

The final factor we focus on is whether adults' perspectives on their lives are associated with children's reporting of loneliness. In this survey, the main adult (whether a parent, guardian or other significant care giver) in the child's household was asked a series of questions about their life satisfaction (Student's Life Satisfaction Scale (SLSS); Huebner, 1991), which were used in this analysis. Please note that this is not the [ONS question on life satisfaction](#).

When controlling for other circumstances found to be significantly related to children's loneliness (relative poverty, countries and English regions, area type, happiness with their home, happiness with amount of choice and happiness with relationships with friends), the main adult's life satisfaction score is also significantly associated with children's reporting of loneliness (model 9 in the [dataset](#)).

This showed that children living with a parent or guardian whose life satisfaction is very high are less likely to report loneliness than children whose parents or guardians rated their life satisfaction at lower levels.

10 . Conclusions

The findings from this article highlight certain risk factors associated with children's loneliness, with a focus on relative poverty and children's own perspectives on their lives. Our findings show that the type of area where a child lives and relative poverty are both important, but this research also highlights that the child's perspective of their situation is also an important contributing factor to loneliness. This is an area that can often be overlooked when studying loneliness in children (Asher and Paquette, 2003) and, indeed, across all ages (Qualter and others, 2015).

Our previous qualitative research provided [suggestions from children and young people themselves, as to how loneliness could be improved](#) including the desire for greater openness about discussing relationships at school and elsewhere. This research also highlights how the life satisfaction of significant adults in their lives can contribute to feelings of loneliness in children.

11 . Quality and methodology

Poverty and income

[Poverty was previously reported by us using free school meals](#). However, this measure suffers from several shortcomings. Firstly, not all children who are eligible for free school meals have them. Second, the receipt of a free school meal was self-reported by the children and therefore may be subject to measurement error. Therefore, it was decided that a more precise measure was needed for the analysis in this article.

To create a more robust measure, we define individuals in poverty using a relative measure, such as that reported by the Department for Work and Pensions (DWP) in their [Households below average income](#) (HBAI) publication. This defines an individual, including children, as being in relative poverty if they live in a household with income less than 60% of the median. While we could have used the national median income as reported by HBAI to make this more consistent, due to the sampling of the survey (see the next section), the way the income information was collected and because our data only include households with children, we use the median income within the sample.

The income variable in this sample is "What is the usual [weekly/monthly/annual] income for your household, after any deductions such as Income Tax or National Insurance, and including any benefits or tax credits received?". Annual income was equivalised (using the [Organisation for Economic Co-operation and Development \(OECD\) equivalisation scale \(PDF, 165KB\)](#)), which accounts for the fact that households with many members are likely to need a higher income to meet their needs. It considers the number of people living in the household and their ages.

Statistical significance, odds ratios and sampling

Statistical significance is used in this article to communicate that a relationship between two variables is greater than would be expected by chance. When referring to proportions, the statistical significance of differences noted within the release are based on non-overlapping 95% confidence intervals (that is, the two bounds within which we are 95% sure the true figure lies, when taking into account sampling and variation). If it is part of the logistic regression analysis, a p-value of less than 0.05 was taken as significant.

Odds are the ratio of the probability that an event occurs to the probability that it does not. In our case:

$$\text{The odds of reporting loneliness} = \frac{\text{the probability of reporting loneliness "often" or "some of the time"}}{\text{the probability of reporting loneliness "hardly ever or never"}}$$

The odds ratio shows the relative difference in odds between two groups and is defined as the ratio of the odds of one group to another. For instance, if the odds of reporting feeling lonely are twice greater for females than males, then the odds ratio would be equal to two. An odds ratio of one tells us that the odds are the same in the two groups. The odds ratio can be easily computed based on the coefficients of a logistic regression and we use the odds ratio to present results from the regression models.

An odds ratio is said to be statistically significant (for example, significantly greater or lower than one) if the p-value of the log odds ratio (the coefficient of the logistic model) is lower than 0.05. It means that the odds ratio in the population has 95% chance to be greater than one. In other words, if we replicated our analysis 100 times, we would expect the odds ratio to be greater than 1 in 95 of the replications.

Please note that the results have been discussed on the basis of unrounded data.

Please note that because The Children's Society's Household Survey is based on quota sampling rather than probability sampling, the hypothesis testing methods used in this article should only be interpreted as indicative.

The survey: age, gender, and missing cases

Children were asked about loneliness as part of [The Children's Society Household Survey](#), conducted in 2018, which covers Great Britain. The sample originally included young people aged 10 to 17 years, but we have only focused on those aged 10 to 15 years to correspond with our previous analysis. Children self-identified their gender, but the number of children who identified as transgender was too small for robust statistical analysis (for more information please see [The Children Society's Good Childhood Report 2018 \(PDF, 1.30MB\)](#)). The sample size included in the analysis was 1,540 children after removing those aged 16 to 17 years. This also excluded cases where children did not answer the loneliness question.

Statistical methods

We carried out a logistic regression to see if the factors we had identified previously as playing a part in children's loneliness were still significant when analysed together. This particular analysis took a step-by-step approach.

We first looked at objective measures to see which factors were significant (models 1 and 2 in the [dataset](#)), then worked through a number of subjective factors to explore the overall relationship between these and loneliness. [Creating dichotomised loneliness in the logistic regression](#) is in line with our previous analysis as it makes the distribution more even. Please see the [technical report](#) from the analysis for more information on logistic regression and how it is used. This logistic regression was carried out in the statistical package R v 3.4.0.

12 . References

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