Health and loneliness in Wales

Loneliness is a widespread issue, with surveys suggesting that one in six of the Welsh population is lonely (Office for National Statistics, Welsh Government, 2020; Welsh Government, Office for National Statistics 2020a; 2020b). Loneliness has a significant impact on health and wellbeing and is linked to increased risk of depression and early mortality (Campaign to End Loneliness, 2021). There are different types of loneliness: emotional loneliness (absence of close relationships), and social loneliness (absence of broader social networks). 'Overall' loneliness incorporates both (De Jong Gierveld and Van Tilburg, 2010).

Tackling loneliness and social isolation has been identified as a priority by the Welsh Government (Welsh Government, 2020a) and is one of the ways Wales measures progress towards the Well-being of Future Generations (Wales) Act 2015 goals. Key to addressing loneliness is understanding who in Wales is lonely and how loneliness affects different groups.

This is part of a series of insights on loneliness in Wales based on bespoke analysis of the National Survey for Wales (NSW). The series is designed to provide policy makers and public services with a greater understanding of who is lonely so that funding and interventions to tackle loneliness can be designed and delivered most effectively.

Previous research has found that levels of loneliness are associated with various socio-demographic characteristics (Welsh

Government, 2018, 2020b; Office for National Statistics 2021, Centre for Thriving Places, 2021) but there is limited evidence on how factors associated with loneliness intersect to produce more or less lonely groups. The first insight in the series reports levels of loneliness among different groups (Goldstone et al., 2021). It finds that loneliness varies according to individual characteristics such as age, gender, and ethnicity, and personal circumstances such as marital status, household composition, deprivation, and general health. But individuals do not experience these characteristics in isolation, and the way these characteristics intersect to shape levels of loneliness has not been explored in detail.

This data insight combines three years' worth[1] of NSW data to identify reported levels of overall, emotional, and social loneliness among different groups, to explore how general health interacts with other characteristics such as household type and area-based deprivation, and to show which groups are especially vulnerable to loneliness. It highlights the acute risk of loneliness faced by people experiencing multiple forms of disadvantage and the importance of targeted policy and public service funding and interventions to support them.

We focus on those who report fair and very bad general health in this insight. These two groups are chosen because they can illustrate general patterns found across two discrete groups, including those with the poorest health and those with a more moderate level of health. This

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[1] We have pooled the most recent NSW datasets on loneliness (2016/17, 2017/18, and 2019/20), involving a total of 30,912 unique responses. Questions about loneliness were not asked as part of the 2018/19 NSW.

allows us to understand how levels of loneliness and intersectional relationships differ across health groups. However, the patterns observed in this report are broadly consistent across all health groups.

We present these findings using Decision Tree analysis, a method that identifies statistically significant differences between different groups within the data and displays them as tree diagrams. This method was chosen to explore loneliness because it enables an intersectional approach to be taken to understand how those who share different characteristics are affected and what proportion of the population these groups represent. Further details about the methodology can be found in the accompanying appendix (Hodges et al., 2021).

Summary

- There is a relationship between general health and loneliness: 42% of those in very bad health are lonely compared to 23% of those in fair health.

- Age affects how loneliness and health interact: 50% of those aged under 65 in very bad health are lonely compared to 24% of those aged 75+ in very bad health.

- Among those in very bad health, those living in single person households, single parents and two adult households with children are particularly at risk of loneliness (55%).

- Younger people in fair health are lonelier than their older counterparts – the highest levels of loneliness among those in fair health are among 16-24s (47%) and 25-44s (38%).

- Among those in fair health, age interacts with household type: those in two adult households with and without children aged 16-24 are lonelier (44%) than those in the same household type aged 65+ (11%).

- Those in fair health are lonelier if they are living in higher levels of deprivation – 28% of people in fair health and in the 20% most deprived households in Wales are lonely compared to 20% of those in the least deprived households.

- Among those in fair health, ethnic minority groups are lonelier than White British groups: 38% of those in fair health and in ethnic minority groups are lonely relative to 22% of people identifying as White British and in fair health.

Read the other data insights in this series

Goldstone, R., Hodges, H., Durrant, H., and Taylor-Collins, E. (2021). **Who is lonely in Wales?** Cardiff: Wales Centre for Public Policy.

Hodges, H., Goldstone, R., Durrant, H., and Taylor-Collins, E. (2021). **Age and loneliness in Wales**. Cardiff: Wales Centre for Public Policy.

Goldstone, R., Hodges, H., Durrant, H., and Taylor-Collins, E. (2021). **Loneliness in Wales during the Coronavirus pandemic**. Cardiff: Wales Centre for Public Policy.

Hodges, H., Goldstone, R., Durrant, H., and Taylor-Collins, E. (2021). **Loneliness data insights: Methodological appendix**. Cardiff: Wales Centre for Public Policy.

Findings

Level of health and loneliness

Our analysis finds a relationship between health and loneliness. Higher levels of loneliness are found among those in worse health (Table 1 and Figure 1).
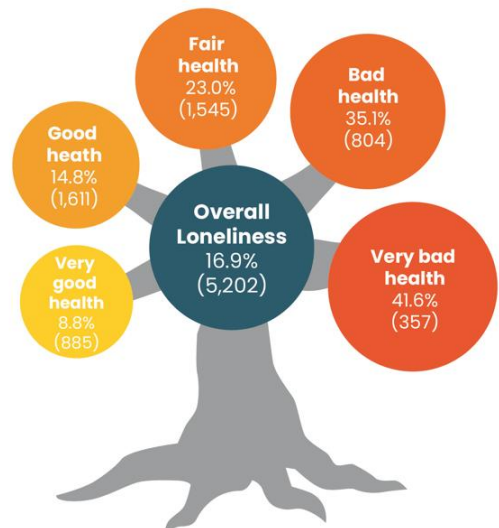
Table 1: Levels of loneliness, by level of general health

Level of general health	Sample N (%)		Overall loneliness		Emotional loneliness	Social loneliness
			Sometimes lonely (1-3)	Lonely (4-6)		
Very good	10,113	(32.8%)	52.6%	8.8%	10.8%	24.4%
Good	10,896	(35.3%)	54.7%	14.8%	17.6%	31.4%
Fair	6,713	(21.7%)	53.4%	23.0%	29.9%	36.8%
Bad	2,288	(7.4%)	46.5%	35.1%	45.0%	43.2%
Very bad	858	(2.8%)	44.9%	41.6%	58.1%	46.1%
All health groups	**30,868**	**(100%)**	**52.8%**	**16.9%**	**21.1%**	**31.5%**

Source: The pooled dataset consisting of responses from 2016/17, 2017/18 and 2019/20 National Survey for Wales where respondents answered questions related to loneliness and each of the pertinent socio-demographic characteristics considered within this insight (N=30,868) (Office for National Statistics, Welsh Government, 2020; Welsh Government, Office for National Statistics 2020a; 2020b).

Levels of emotional and social loneliness are high for individuals in bad or very bad health compared to those in fair, good, or very good health. More than half (58.1%) of those in very bad health are emotionally lonely, compared to 10.8% of those in very good health. A similar but not as pronounced gradient can be seen in relation to social loneliness.

Figure 1: Level of overall loneliness by health status

Figure 1 summarises the proportions reporting overall loneliness given in Table 1 as a 'tree' with the headline figure at the centre. This is then broken down on the basis of health in the second level – the branches. This approach identifies where there are statistically significant differences between categories or levels. In this instance, levels of loneliness amongst each of the five health categories are statistically significantly different to each other, with the proportion that is lonely increasing progressively as their health worsens. However, as can be seen in later 'trees' this is not always the case, with some categories being combined since there is no statistically significant difference between them.

Source: Pooled dataset, all respondents; % = proportion that are lonely () = number of respondents in the category who are lonely.

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Approximately one in five (21.7%) is in fair health. Of these, 23.0% are lonely (1,545 out of 6,713). The proportion of those in very bad health is just 2.8%. However, more than four in ten of these (41.6%, 357 out of 858) are lonely.

In interpreting these figures, it is important to recognise that most NSW respondents are in very good or good health. However, as can be seen from Appendix 2, general levels of health vary on the basis of various socio-demographic characteristics. These are explored in the remainder of this insight.

Very bad health & loneliness

Under-65s in very bad health are lonelier than their older counterparts (49.9% compared to 33.9% of those aged 65-74 and 23.5% of those aged 75+ – see Figure 2).
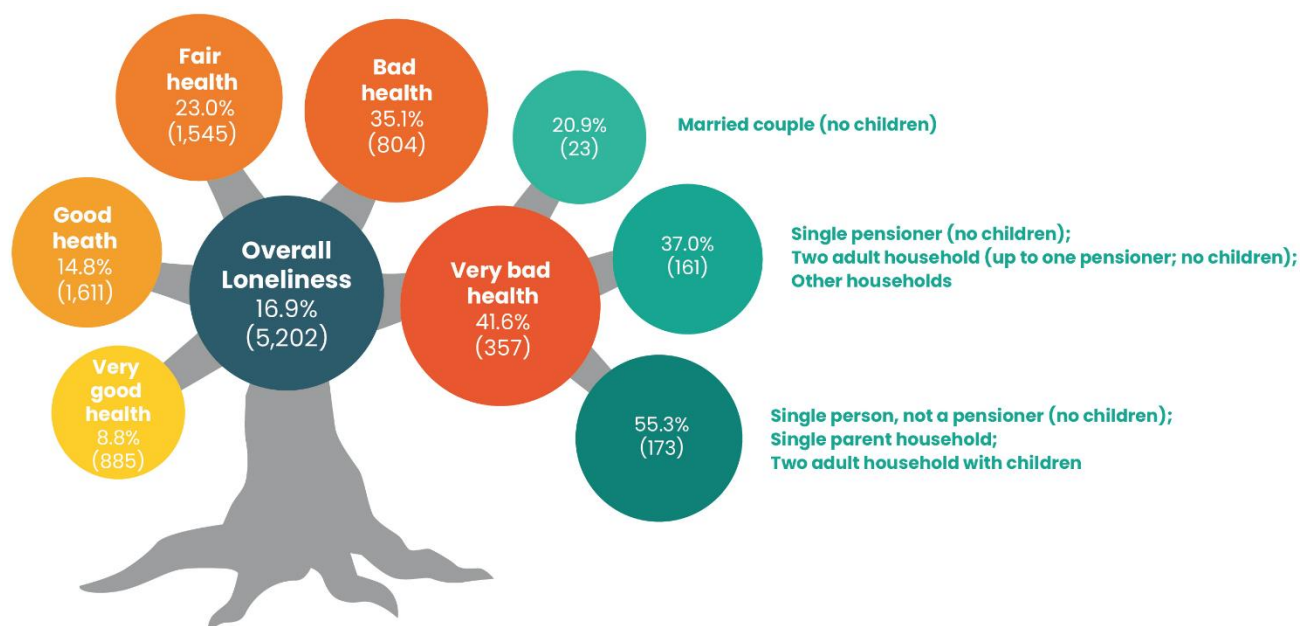
Source: Pooled dataset. 858 respondents are in very bad heath of which 357 are lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely.

Figure 2: Levels of loneliness among those in very bad health by age
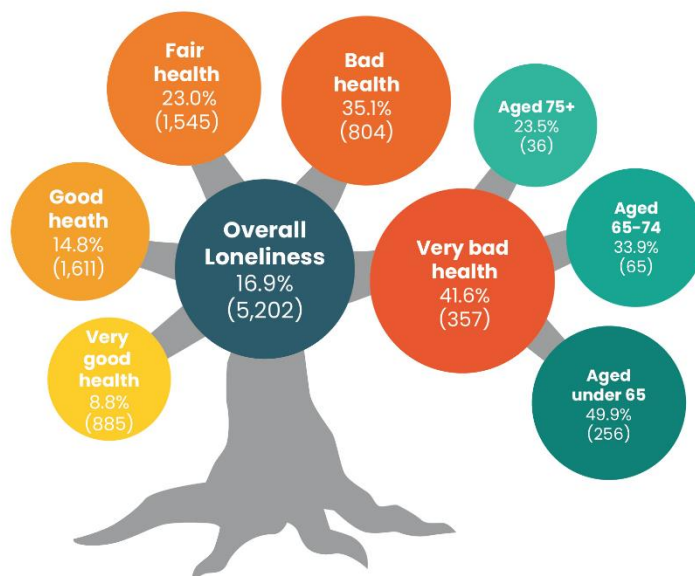
Living arrangements make a difference to how lonely someone is, with those living alone often more likely to be lonely than the average (Office for National Statistics, 2020). Our analysis finds that having very bad health interacts with household composition to further increase or reduce the likelihood of loneliness (Figure 3).

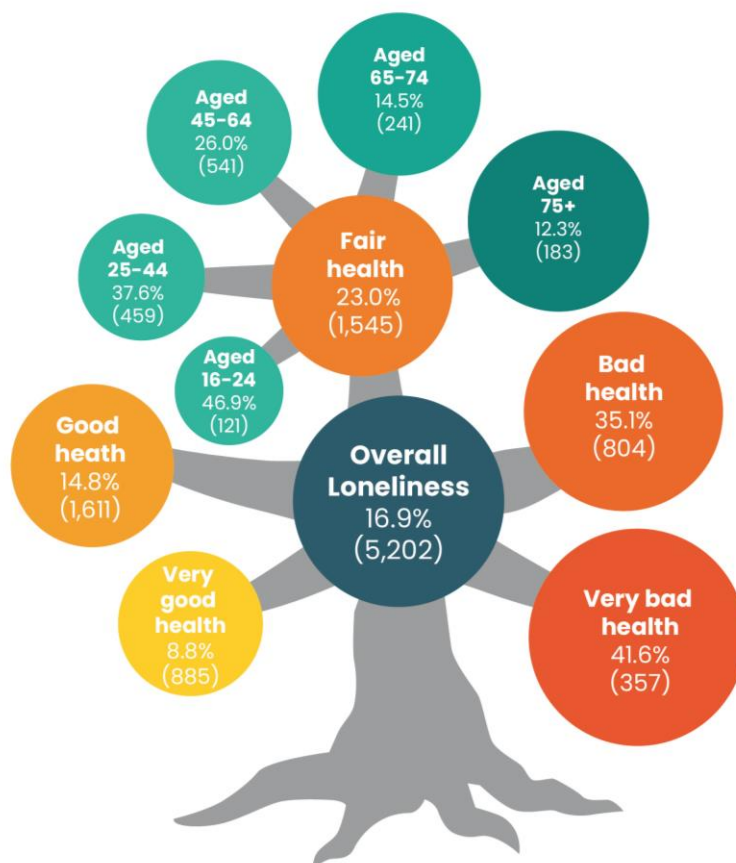*Figure 3: Levels of loneliness among those in very bad health by household type*

Source: Pooled dataset. 858 respondents are in very bad heath of which 357 are lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely.

Among those in very bad health, those who are **married couples with no children have far lower levels of loneliness than those in other types of households** (20.9%). The highest levels of loneliness are found among single persons (not pensioners) living alone with or without children. Notably no statistically significant difference was found between this group and those living in two adult households with children. Across these groups 55.3% are lonely, more than three times higher than the average. Low numbers meant that it was not possible to explore further the interaction between age and household type for those in very bad health.

Fair health & loneliness

Similar to those in very bad health, **those in fair health are more likely to be lonely than those in good health**. In addition to age (Figure 4), we found that fair health interacts with household type (Figure 5), area deprivation (Figure 6), and ethnicity (Figure 7) to further increase or reduce likelihood of loneliness.

Figure 4: Levels of loneliness among those in fair health by age
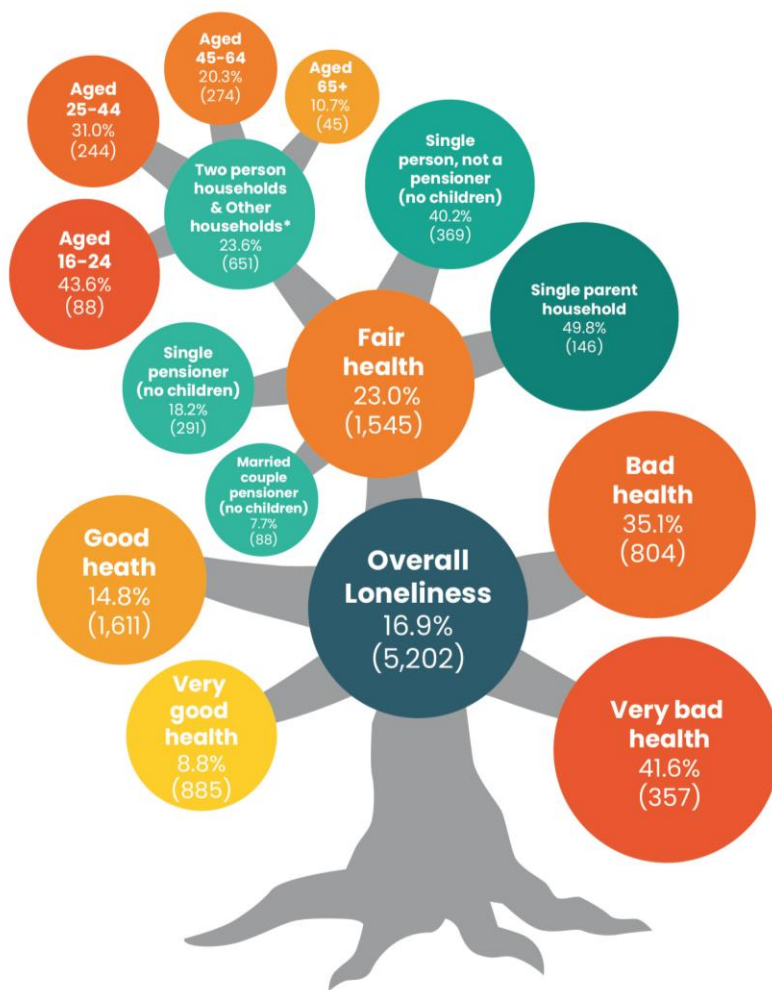

Source: Pooled dataset. 6,713 respondents are in fair heath of which 1,545 are lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely.

Among those in fair health, being younger is associated with higher levels of loneliness (Figure 4). For example, those aged 16-24 and 25-44 are the loneliest age groups among those in fair health, with

46.9% and 37.6% of people (respectively) being lonely, compared to 12.3% of those aged 75+. Indeed, those aged 16-24 in fair health are more likely to be lonely than those aged 65+ in very bad health (see Figure 2).

Figure 5 shows how both household composition and age interact with fair health to create variation in levels of loneliness. Among those in fair health, single parents are loneliest (49.8%) and are more than six times more likely than retired married couples without children to be lonely. **Among those in two-person households & other households, younger groups are lonelier than older groups**. For example, 43.6% of those aged 16-24 are lonely compared to 10.7% of those aged 65+.
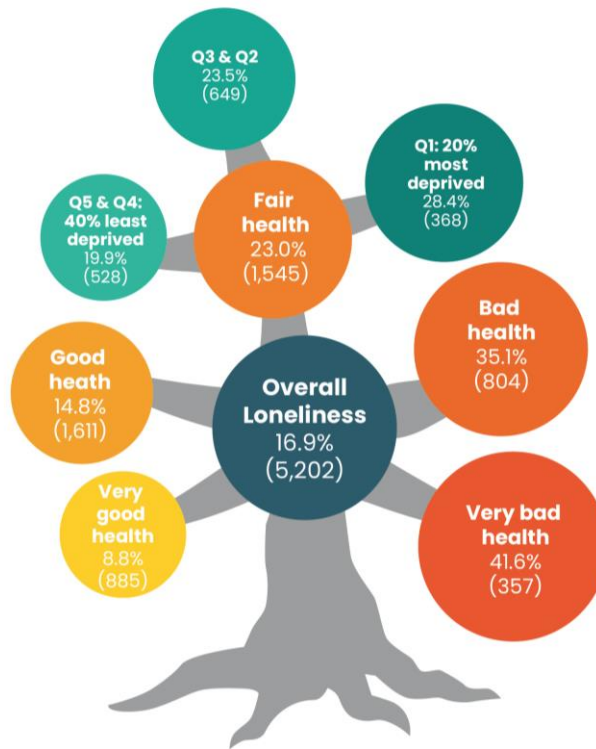
Figure 5: Levels of loneliness among those in fair health by household type and age

Source: Pooled dataset. 6,713 respondents are in fair heath of which 1,545 are lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely. *This group includes two adult household (up to one pensioner) without children; Two adult household with children; and Other households.

Figures 6 and 7 (overleaf) show the interaction between health and area deprivation and health and ethnicity. Area deprivation interacts with fair health to increase or reduce the likelihood of loneliness (Figure 6), with those in the most deprived areas of Wales (Q1) being lonelier (28.4%) than those in the least deprived areas (Q5 & Q4). Likewise, among those in fair health, respondents identifying as White (Welsh, English, British, etc.) report lower levels of loneliness (22.4%) than their counterparts in White-other and all other ethnic groups (37.5%), who are over two times more likely than the national average to be lonely (Figure 7).

Figure 6: Levels of loneliness among those in fair health by area deprivation (WIMD)

Source: Pooled dataset. 6,713 respondents are in fair heath of which 1,545 are lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely. Q1 comprises the 20% most deprived areas in Wales whilst Q5 reflects the 20% least deprived areas.

Figure 7: Levels of loneliness among those in fair health by ethnicity
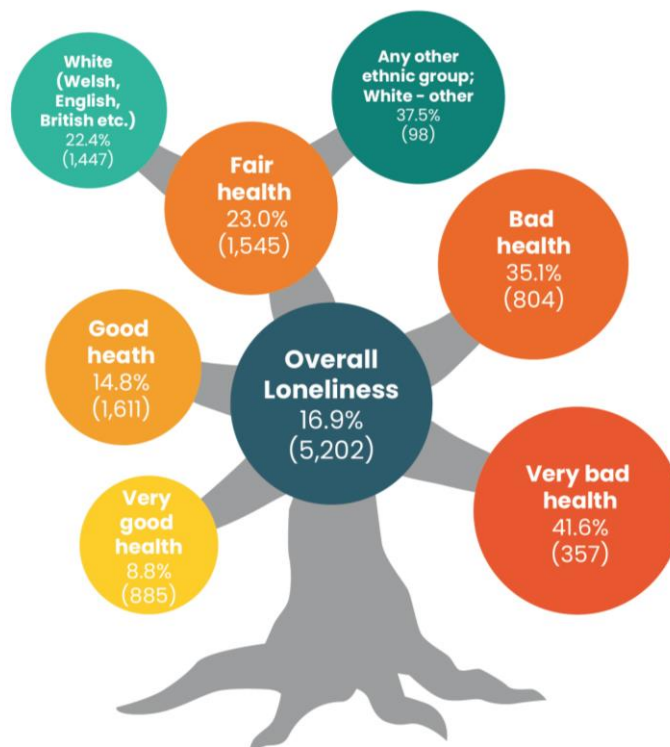
Source: Pooled dataset. 6,713 respondents are in fair heath of which 1,545 reported being lonely; % = proportion that are lonely. () = number of respondents in the category who are lonely.

Reflections

This data insight has used NSW data to explore levels of loneliness among those in different levels of general health. We have found that having very bad or fair health interacts with various other socio-demographic factors associated with loneliness. There is a negative association between health and loneliness (overall, social and emotional), meaning that those in worse health are more likely to be lonely. However, it is not only being in worse health that contributes to being lonelier. Across all health groups, those who are younger, in more deprived circumstances, from an ethnic minority background, and/or are single or living alone, are more likely to be lonely. Our analysis shows that poorer health interacts with these characteristics to further increase the likelihood of loneliness.

In taking an intersectional approach to understanding the relationship between health and loneliness, we can see how certain groups are more at risk of loneliness than others. For example, we can see that across all ages, those in very bad health experience higher-than-average levels of loneliness, but that this is especially pronounced for the under-65s, who are almost three times as likely to be lonely than the average.

Understanding more about the qualitatively different experiences of loneliness among different groups, and how these might be affected by characteristics associated with increased levels of loneliness, has important implications for how interventions are designed and delivered to tackle loneliness. Approaches to tackling loneliness need to take account of how all these factors interact if they are to ensure that those who need support can access it in ways suited to their circumstances and the wider challenges they may face.

Authors: Dr Helen Hodges, Ross Goldstone, Dr Hannah Durrant, Emma Taylor Collins

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Appendices

Table A1: Measures used in the models included in this data insight.

	Level of general health					
	Very good	Good	Fair	Bad	Very bad	TOTAL
Age						
16-24	3.0%	2.2%	0.8%	0.1%	0.0%	6.2%
25-44	10.9%	8.9%	4.0%	1.1%	0.4%	25.2%
45-64	11.0%	12.0%	6.8%	2.9%	1.3%	33.9%
65-74	5.1%	7.3%	5.4%	1.8%	0.6%	20.2%
75+	2.7%	5.0%	4.8%	1.5%	0.5%	14.5%
Ethnicity						
White (Welsh, English, British etc.)	30.7%	33.3%	20.9%	7.1%	2.7%	94.7%
White – other	1.0%	0.9%	0.4%	0.1%	0.0%	2.5%
Any other ethnic group	1.1%	1.0%	0.5%	0.1%	0.1%	2.8%
WIMD						
Q1 (Least deprived 20%)	4.3%	5.1%	4.2%	2.0%	0.8%	16.5%
Q2	5.4%	6.2%	4.3%	1.8%	0.7%	18.3%
Q3	7.4%	7.7%	4.7%	1.5%	0.6%	21.8%
Q4	8.3%	8.7%	4.9%	1.3%	0.4%	23.6%
Q5 (Most deprived 20%)	7.4%	7.6%	3.7%	0.8%	0.3%	19.9%
Household Type						
Single pensioner (no children)	3.5%	5.5%	5.2%	1.7%	0.6%	16.5%
Married couple pensioner (no children)	3.4%	5.1%	3.7%	1.1%	0.4%	13.7%
Single person, not a pensioner (no children)	4.5%	4.6%	3.0%	1.6%	0.8%	14.4%
Two adult household with children	6.6%	5.2%	2.1%	0.5%	0.2%	14.5%
Two adult household (up to one pensioner) without children	7.7%	8.2%	4.3%	1.4%	0.5%	22.0%
Single parent household	1.6%	1.6%	0.9%	0.4%	0.1%	4.6%
Other households	5.5%	5.2%	2.5%	0.7%	0.3%	14.3%
TOTAL	32.0%	35.2%	22.1%	7.7%	3.0%	100.0%

Source: The pooled dataset consisting of responses from 2016/17, 2017/18 and 2019/20 where respondents answered both the questions on loneliness and their general health (Office for National Statistics, Welsh Government, 2020; Welsh Government, Office for National Statistics 2020a; 2020b). N = 30,868.

Table A2: Contextual variables

	Level of general health					
	Very good	Good	Fair	Bad	Very bad	TOTAL
Gender (N = 30,862)	32.8%	35.3%	21.8%	7.4%	2.8%	100.0%
Male	14.5%	16.0%	9.5%	3.0%	1.3%	44.2%
Female	18.2%	19.3%	12.3%	4.4%	1.5%	55.8%
Marital Status (N = 30,864)	32.8%	35.3%	21.8%	7.4%	2.8%	100.0%
Single, never married or registered a same-sex civil partnership	10.6%	9.4%	5.1%	1.7%	0.7%	27.5%
Married or in a registered same-sex partnership	15.6%	16.9%	9.2%	2.7%	1.0%	45.4%
Separated but still legally married or in a same-sex civil partnership	0.7%	0.8%	0.6%	0.3%	0.1%	2.5%
Divorced	3.3%	4.2%	3.0%	1.4%	0.6%	12.5%
Widowed	2.5%	4.0%	3.8%	1.3%	0.4%	12.1%
Sexual Orientation (N = 30,747)	32.8%	35.3%	21.7%	7.4%	2.8%	100.0%
Heterosexual	31.4%	33.7%	20.5%	7.0%	2.6%	95.1%
Another response (incl. prefer not to say)	1.4%	1.6%	1.3%	0.4%	0.2%	4.9%
Long-term illness, disability, or infirmity (N = 30,778)	32.8%	35.3%	21.7%	7.4%	2.8%	100.0%
Yes	3.1%	10.2%	15.4%	7.0%	2.7%	38.4%
No	29.8%	25.1%	6.3%	0.4%	0.0%	61.6%
Can speak, read, and write Welsh (N = 30,864)	32.8%	35.3%	21.7%	7.4%	2.8%	100.0%
Yes	6.3%	5.3%	2.8%	0.6%	0.3%	15.2%
No	26.5%	30.0%	19.0%	6.8%	2.5%	84.8%
Religion (N = 30,263)	32.8%	35.2%	21.8%	7.4%	2.8%	100.0%
No religion	14.6%	14.0%	8.1%	2.8%	1.2%	40.7%
Christian	17.4%	20.3%	13.1%	4.3%	1.5%	56.6%
Other religion	0.8%	1.0%	0.5%	0.3%	0.1%	2.6%
Highest Educational Qualification (N = 30,772)	32.8%	35.3%	21.7%	7.4%	2.8%	100.0%
Higher degree / postgraduate qualifications	4.4%	3.5%	1.3%	0.3%	0.1%	9.6%
First degree	6.4%	5.9%	2.4%	0.6%	0.2%	15.4%
Diplomas, etc.	4.5%	4.7%	2.7%	0.8%	0.2%	12.9%
A/AS levels	3.6%	3.3%	1.6%	0.5%	0.2%	9.1%
Trade apprenticeships	1.3%	1.8%	1.1%	0.3%	0.1%	4.7%
O Level / GCSE grades A-C, etc.	5.5%	6.2%	3.7%	1.0%	0.4%	16.8%
O Level / GCSE grades D-G	1.1%	1.2%	0.8%	0.3%	0.1%	3.5%
Other and Foreign qualifications / No Qualifications	6.0%	8.7%	8.2%	3.6%	1.5%	28.0%

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For further information contact:

Hannah Durrant

Hannah.durrant@wcpp.org.uk