Gauging the 'Loneliness Epidemic'
Predicting Social Isolation in an Urban Population
for the Purpose of Targeting Services

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Introduction

There is growing evidence of the negative impact of loneliness on the lives of a significant section of the population, as well as the demand this places on the NHS and other public services.

In this context, Dudley MBC is seeking to target specialist services towards groups in the population who are at particular risk of experiencing loneliness or social isolation. These services are not necessarily restricted to residents aged over 65, and are often open to a wider groups. At a more general level, the local Health and Wellbeing Board has also made reducing loneliness and isolation one of its three key goals for the period 2017-22.

Note: Although it is recognised that loneliness and social isolation are not necessarily synonymous, for the purposes of this poster the terms are treated as referring to the same set of concerns.

Dudley
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More details of this review are at:
https://www.allaboutdudley.info/ home/key-topics/loneliness-and- isolation/

Loneliness by Luis Prado from Noun Project

Aims

The aim was to review predictive models of loneliness produced in England. This review was then expected to inform the creation of an index of the risk of loneliness in Dudley. The review was prompted in part by knowledge that: (a) composite indices of loneliness had been created by Essex[1] and Warwickshire[2]; and (b) despite the importance of a national index published by the charity Age UK in 2015[3,4], the latter is limited to assessing the risk to older residents.

With the latter point in mind, this study sought to understand the feasibility of producing a model or models which would assess the risk of loneliness across the life-course of the residents in Dudley Borough. This was included in our objectives to address what might be considered as an imbalance in public perceptions of who is impacted by social isolation: it is often associated with the process of ageing in a way which could unnecessarily direct attention away from its effects on younger groups.

Methodology

Our approach comprised three elements:

1) a web/snowball search for models similar to those mentioned above, followed by scrutiny of their associated methodologies. Where these methodological details were not publically available, the authors were contacted directly.

2) the analysis of any locally observed data on loneliness and social isolation against which any modelled data could be tested.

3) a literature search for studies identifying factors associated with loneliness or social isolation among middle aged and younger groups. Due to limitations on space, the results of this are not fully reported here.

Figure 1: Variables Commonly Used in Models of Loneliness

Local Authority Composite Indices
(alphabetical left to right)

Variable Name	Bristol	Essex	Glos.	Lancs.	Leeds	Luton	Medway	Somerset	SIIS Overall	SIIS 0-15	SIIS 16-64	SIIS 65+	Surrey	Suffolk	Warks.
(Income) Deprivation															
Single Household															
Elderly															
LTLI / Disability															
Divorced / Widowed															
Carer															
No Car															
Depression															
Non-English Speaker															
Sensory Impairment															
Less Educated															
Poor Health															
Socially unconnected															
Less Social Interaction															
Poor Mobility															
Digitally unconnected															
Retired															
Lone Parent															
BME															
Unemployed															
On benefits															
No qualifications															
Dementia															
Crime / ASB rate															
Anxiety															
Does not take care of self															

Notes to Figure 1
Equivalent data on Barnet, Dorset and Maidstone was not available.

Variable names have been shortened and rationalised for the Figure, given that similarly-named variables were used in different models

The chart excludes variables which were only used by one local authority. These were: 'part-time/ housewife' (Warks); 'little can be changed' (Warks); 'heart problems' (Warks); 'visits GP frequently' (Warks); young people not in education,

employment or training (SIIS 0-15); 'Post Natal Depression' (SIIS 16-64); excess weight (SIIS 0-15); in residential care (Luton); pessimistic (Medway); sexual orientation (Luton); women (Luton)

The following abbreviations are used:
ASB   Anti-social behaviour
BME   Black and Minority Ethnic
LTLI   Long-term limiting illness
SIIS   Social Isolation Index for Southampton

Results 1:
Models of Loneliness

Fifteen local authorities were identified as having produced predictive models of loneliness or social isolation[5]. Most were identified via reports posted online by the authorities themselves. In addition, one academic study published at the end of 2017 made reference to eleven indices created by local authorities[6].

In general these models were created by identifying a number of variables associated with loneliness and/or social isolation, and using them to create a composite index which could be mapped for small geographic areas. A number of models used consumer classification data, such as *Mosaic* or *Acorn*, and some weighted variables according to their perceived relative importance. Our review sought to understand: (i) the variables used; (ii) the means by which variables were identified for inclusion; and (iii) if the models were tested against any observed data.

Figure 1 shows the distribution of variables included in the various models identified. The models used between 6 and 17 variables. Southampton produced four indices to take account of different age groups. By way of an example, Map (i) in Figure 2 shows how the methodology adopted by Warwick appears when applied to Dudley.

Five variables are common to almost all the indices: deprivation; single households; elderly people; disability; and divorced or widowed residents. What is less clear is whether this consensus (or co-incidence) evolved based on clear, objective and independent analyses of risk factors. Certainly an influence on the choice of factors has been the availability of data for small geographies. In this regard, the changing list of variables available via consumer classification systems has also sometimes been a limitation.

In some cases, such as Southampton, the justification for the selection of variables is detailed and clear, in several others less so. Some refer to literature and others repeat the selection previously used by other authorities (Essex's model, for example, influenced some later initiatives).

On the question of whether the outputs from the models were tested, evidence of (attempted) verification was found in the case of six authorities: Bristol, Essex, Gloucestershire, Lancashire, Leeds and Southampton. In these cases comparisons had been made with the results of local surveys, while Gloucestershire and Leeds[6] had also used more qualitative research as a means of evaluation.

The local authority models were produced from 2013 onwards, but in 2015 Age UK's 'heat maps' became available. These are based on an analysis of data from the English Longitudinal Study of Ageing (ELSA) but used a composite index of four variables (marital status, self-reported health status, age, and household size), which are all among the most commonly used by local authorities. Map (ii) in Figure 3 shows the distribution of risk in Dudley using the Age UK approach.

Figure 2:
Loneliness Maps Compared
For Dudley Borough
All four maps highlight two groups of 2011Census Lower Super Output Areas (LSOAs): the 30 with the highest ranking (darkest colour); and the next 30 highest ranked

Map (i): Warwickshire Model — Risk of Loneliness ('Warwickshire' method). Lowest risk. In 60 LSOAs at most risk. In 30 LSOAs at most risk.

Map (ii): Age UK Loneliness 'Heat Map' — Risk of Loneliness for residents aged 65 and over. Lowest risk. Among 60 LSOAs at most risk. Among 30 LSOAs at most risk.

Map (iii): Mosaic Groups L, M, N, & O — Percent of Households in Mosaic Groups L, M, N, O. Lowest Percentages. Among 60 LSOAs with highest %. Among 30 LSOAs with highest %.

Map (iv): Index of Multiple Deprivation — Index of Multiple Deprivation Most deprived LSOAs. Least deprived. Most deprived 60 LSOAs. Most deprived 30 LSOAs.

Results 2:
Locally-Observed Data

In order to be able to verify any new model created in Dudley, locally-observed data on loneliness were sought. The following outlines a selection of sources identified.

(a) The Adult Social Care Survey (ASCS)

The ASCS includes a question on the level of social contact experienced by social care users. In Dudley, respondents deficient in social contact were found to be more common in postcodes characterised by Mosaic groups L, M, N, and O[7]. The distribution of these groups, in Map (iii) in Figure 2, shows similarities with measures of the risk of loneliness produced by Warwickshire (Map i) and Age UK (Map ii), as well as rankings of deprivation (Map iv). Although ASCS results are not necessarily representative of wider populations, scrutiny of the percentage of each age group who were deficient in social contact does not appear to support the conclusion that older age groups are necessarily at the highest risk of loneliness.

(b) Public Health Self-Management Programme (SMP)

The SMP in Dudley is an intervention to encourage people to take effective control over their life with a long-term health condition. Participants agree to take part in a six-week course designed to foster the skills and confidence needed to achieve this.

Roughly half SMP participants are of working age (compared to around 40% of ASCS respondents). Again, from the albeit limited data collected so far, higher rates of loneliness among older participants are not yet in evidence.
From 2018/19 spatial data will allow a link to Mosaic and other such datasets.

(c) Integrated Plus (IP)

Commissioned by Dudley Clinical Commissioning Group (CCG), IP is a social prescribing scheme designed to support adults who frequently visit their GP and who are at high risk of hospital admission. Established in 2014, it aims to address the whole needs of its clients and, in particular, any negative effects of social isolation. Dudley MBC is in discussion with the CCG to allow IP data to be used to assess the distribution and burden of loneliness on particular services.

Results 3:
Literature Search

Analysis recently published on the results of the Community Life Survey has offered useful conclusions as to the factors associated with loneliness among groups aged under 65[8].

Our subsequent literature search identified 42 additional publications by academics, local authorities and other government bodies on the subject of factors associated with loneliness or social isolation within the population under 65. More details of the findings can be found by following the link at the left of this poster.

Conclusions

Many local authority models of loneliness have not had the benefit of significant observed evidence against which to test their results. National survey data, including ELSA and the Community Life Survey, have made significant contributions to the understanding of the distribution of loneliness, but there is a need to supplement this with local observations if models are to take into account the specific circumstances of areas like Dudley.

Most local authority indices include old age as a predictor of loneliness—while evidence suggests that substantial problems of social isolation also exist among middle-aged and younger groups.

The similarities in the distribution of both modelled and observed measures of the risk of loneliness on the one hand, and deprivation as measured by the IMD 2015 on the other, might suggest that long-term, structural factors determine our risk of experiencing social isolation.

The knowledge gained of other local authorities' previous initiatives, local processes for reporting loneliness among service-users and patients, as well as the current literature on contributing factors will inform further development of our understanding of the risk of feeling socially isolated.

Notes & References

1. Campaigntoendloneliness.org [Internet]. London: Campaign to End Loneliness. Essex County Council Isolation Index; [cited 2018 Aug 3]. Available from: https://campaigntoendloneliness.org/ guidance/case-study/essex-county-council-isolation-index/.
2. Rigney C. Loneliness and Social Isolation Needs Assessment, Warwickshire Joint Strategic Needs Assessment 2015. Warwick: Public Health Warwickshire; 2015 [cited 2018 Aug 3]. pp78. Available from: https://apps.warwickshire.gov.uk/api/documents/WCCC-644-270.
3. The results of the latter have been made available as a series of online maps for every local authority in the UK
4. Age UK [Internet]. London: Age UK. Loneliness Maps; [cited 2018 Aug 3]. Available From: https:// www.ageuk.org.uk/our-impact/policy-research/loneliness-research-and-resources/loneliness-maps.
5. The sixteen local authorities were, in alphabetical order: (1) The London Borough of Barnet; (2) Bristol City Council; (3) Dorset County Council; (4) Essex County Council; (5) Gloucestershire County Council; (6) Lancashire County Council; (7) Leeds City Council; (8) Luton Borough Council; (9) Maidstone Borough Council; (10) Medway Council; (11) Somerset County Council; (12) Southampton City Council; (13) Suffolk County Council; (14) Surrey County Council; (15) Warwickshire County Council. In addition, Wolverhampton City Council have emulated Warwickshire's methodology as a way of understanding the approach used.
6. Wigfield A, Alden S. Assessing the Effectiveness of Social Indices to Measure the Prevalence of Social Isolation in Neighbourhoods: A Qualitative Sense Check of an Index in a Northern English City. Social Indicators Research. 2017. Available from: https://link.springer.com/article/10.1007/ s11205-017-1812-0.
7. Within Mosaic (2014), these groups are termed (L) 'Transient Renters', (M) 'Family Basics', (N) 'Vintage Values', and (O) 'Municipal Challenge'.
8. Loneliness - What characteristics and circumstances are associated with feeling lonely? - Office for National Statistics [Internet]. Ons.gov.uk. 2018 [cited 23 August 2018]. Available from: https:// www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/ lonelinesswhatcharacteristicsandcircumstancesare associatedwithfeelinglonely/2018-04-10.

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