Is being home alone bad for your health?
Findings from Office for National Statistics Longitudinal Study (ONS LS)

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Previous studies, utilising smaller samples, reported that living alone (LA) may increase risk of poor self-rated health (SRH), morbidity and mortality, and that socioeconomic and demographic characteristics may play a role in the association.
Our aim is to explore the strength of the association between LA, SRH and mortality in large population sample from England and Wales, both cross-sectionally and longitudinally.
ONS LS is a unique study containing individual-level Census information for 1% of population, linked to other administrative and event data, since 1971.
Sample of almost 400,000 individuals used data from 2001 and 2011 Censuses (mean age 43.3 in 2001; 48% of males), and has been analysed by multinomial regression analysis.
In crude analyses, those LA were 1.83 and 2.34-times more likely to report poor SRH in 2001 and 2011, respectively. Magnitude of the associations decreased but remained significant after adjustment for available sociodemographic characteristics and health limitations, with those LA being by 13% and 19% in 2001 and 2011, respectively more likely to report poor SRH than those living with someone.
In conclusion, living alone negatively affects self-rated health even when controlled for other available factors. Project findings will be used by policymakers to develop programmes suitable for persons living alone.

THEORETICAL FOCUS:

This project looks at phenomenon of living alone and how it might influence the perception of one's own health status.
Living alone can lead to social isolation and loneliness, which are strongly linked to poorer self-rated health. Social connections are crucial for mental well-being, and the absence of regular social interactions can contribute to feelings of loneliness and depression. These psychological states are often reflected in lower self-rated health scores (Courtin et al, 2015). Living alone was found to predict mortality across various populations and settings. Individuals who rate their health as poor or fair have a higher risk of mortality compared to those who rate their health as good, very good, or excellent. This relationship holds true even when controlling for other variables such as age, sex, socioeconomic status, and existing medical conditions (Holt-Lunstad et al., 2015). Research by Lorem et al. (2020) found that "SRH predicted mortality, but with a time-dependent effect. SRH is affected by disease, mental health and other risk factors, but still predicts mortality independently." It only supports the knowledge that the mechanisms underlying the relationship between SRH, and mortality are complex and multifaceted. SRH captures a broad range of factors, including physical health, mental health, and functional ability, as well as social and environmental influences that may not be fully captured by clinical measures.

Most of the research agrees that the socioeconomic position of individuals may play a mediating role in the association between living alone and health outcomes. Individuals with higher socioeconomic position may have better access to healthcare, more social resources, and healthier lifestyles, which can mitigate some of the negative effects of living alone. Conversely, those with lower SES might experience greater health disparities when living alone, as they often have fewer resources to compensate for the lack of social support (Pamperl et al, 2010). However, money can't buy everything, and individuals living in isolation remain heavily dependent on social support (Hawkley & Kocherginsky, 2018). Recently, with successive Conservative governments and massive cuts in the social sphere, social support is harder and harder to find even for the wealthier.

Other research also suggests that in some cultures, living alone may be stigmatized, leading to worse health outcomes, while in others, it may be more accepted or even associated with greater autonomy and independence, which could positively influence SRH (Victor & Young, 2012).

Some studies have explored neighbourhood trust and its influence on living arrangements and health outcomes, finding that, mainly for women, trust in local area and maintained relationships with neighbours helped to keep good health status (Ziersch et al, 2005; Walker & Hiller, 2007). In Britain, research was also done on the association between regional income inequalities and worse SRH. However, it provided limited evidence of an association, was although associations there was evidence of stronger associations among those with the lowest individual income levels. (Weich, Lewis & Jenkins, 2002)
Living alone can mean widow(er)hood. This status is a predictor of declining self-rated health due to a combination of psychological distress, social isolation, gender differences, physical health decline, the economic impact, and other factors. (Umberson, Wortman & Kessler, 1992; bennet et al, 1998). The impact of widow(er)hood on self-rated health tends to be more pronounced in men than in women although both genders experience significant health declines. Men might struggle more with the loss of a spouse due to traditionally fewer social connections and less experience in managing household tasks, leading to a greater decline in SRH. Women, on the other hand, may experience financial strain after losing a spouse, which can also negatively affect their health perception. (Lee et al, 2001; Williams, 2004)

However, research on the solo living arrangement remains limited, and the studies that there are have conflicting findings e.g., referring to the fact that living alone is worse for older age groups whereas that living alone leads to better subjective health at higher ages. (Henning-Smith et al., 2018; Klinenberg, 2012) or finding limited evidence on how area inequalities influence reporting of SRH versus stating that a wealthy area means healthy people (Weich, Lewis & Jenkins,2002; Pritchett & Summers, 1993).

DATA:

Data used in this project comes from the Office for National Statistics Longitudinal Study (ONS LS). It is a comprehensive and ongoing study conducted by the ONS in the England and Wales providing valuable data for understanding social, economic, and health trends over time. The study tracks a 1% sample of the population of England and Wales, drawn from the decennial censuses (since 1971) and is linked to various other administrative records including births, deaths, and cancer registrations. The study includes over a million records, making it a powerful resource for analysing long-term trends and outcomes.

The ONS LS is a dynamic sample. New sample members enter the study through being born on one of the four birth dates or migrating into England and Wales and being born on one of the four birth dates, and LS members leave the study through death or emigration. The unique birthdate-based sample allows for consistent follow-up of individuals over time and ensures that the data remains representative of the broader population, even as the sample members age or migrate. Data from the ONS LS is anonymised to protect the privacy of participants, making it a secure and reliable source for research. The dataset is available to accredited researchers through secure access arrangements. Researchers need to apply for access, detailing their research proposals and ensuring that their use of the data complies with ethical standards. (Shelton et al, 2019)

RESEARCH METHODS:

The analyses presented here are part of a larger project, Health of People in Places (HOPE): looking at asset for economic and social improvement for all. The project aims to help answering part of question “Which health measures influence how well local places are doing, economically and socially?”.

This part of the project is planned to have two phases. Phase one, presented here, focuses on exploring two census waves cross-sectionally, with a focus on comparison of study members 10 years apart. Basic descriptive and bivariate analyses were run at this cross-sectional level along with multivariable regressions.

EXPECTED FINDINGS:

In the first phase, which was completed recently, and is part of this application, we described the analytical dataset and explored how census-available socioeconomic and demographic characteristics influence the association between living alone and subjective health.

Being literature driven, we found strong association which is not modified by any of used characteristics. Those who live alone are by 13% to 19% more likely to report poor self-rated health when basic socioeconomic, demographic and health characteristics were taken into account.

In the second phase, which we plan to complete by the time of conference, we intend to apply geographical and broader demographic characteristics by using additional census information. We expect to find that the relationship between living alone and SRH varies depending on geographical location, cultural context (measured by ethnicity), and the availability of individual

level socio-economic resources, and local level deprivation. Understanding how geographical variations influence the association will be crucial for developing targeted interventions to support individuals living alone across different settings.

Second phase will use additional characteristics considering regional variations. As was stated in the original HOPE project application, a higher proportion of healthier people live in certain parts of the UK, which correlates with where more advantaged residents live (Pritchett & Summers, 1993). We expect to find regional differences according to the Index of Multiple Deprivation (IMD). This is a widely used measure in the UK that assesses levels of deprivation across different geographical areas. It combines various indicators into a single score to determine the relative deprivation of neighbourhoods. The IMD is composed of seven distinct domains, each reflecting a different aspect of deprivation: income, employment, education skills and training, health and disability, crime, barriers to housing and services, and living environment deprivations. (DCLG, 2015; Noble et al., 2006) Another additional characteristic will be widow(er)hood status, and its duration.
In order to fully understand how the relationship between living alone and health varies by demographic characteristics, it is necessary to show policymakers and programme makers what the current and future needs of adults of all ages are and will be. The goal is to improve well-being and thus reduce the burden on the healthcare system.

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