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Single women living alone in later life: a short review

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10 Single women living alone in later life: a short review

Hafiz Khan, Trish Hafford-Letchfield and Nicky Lambert

Introduction

This chapter picks up the study of gender issues within ageing populations. According to OECD statistics, the UK is the loneliest country in Europe and the least likely to report having close friendships or knowing our neighbours (OECD, 2005). The number of people living on their own has doubled since the 1970s, with single-person households now making up a third of all homes. We report on the findings of our examination of some of the factors associated with health and well-being of women living alone in later life using data collected in the 'Understanding Society' 2012. This is a nationwide longitudinal survey that captures important information on the life course trajectories of individuals in the UK. By looking at variables associated with health and wellbeing, we have identified some relevant determinants when looking at single older women living alone. The prevalence of living alone during later life varies widely across developed countries, but everywhere its growth has been remarkable in recent decades, even in societies with traditionally strong family ties (Reher and Requena, 2017). Within the increasing trend of single women living alone over time and space, there is a need to adapt and develop more accurate measures and research designs in order to begin to understand the factors impacting on the nature of ageing for those who are living alone. Forming new intimate relationships might be one way of compensating for any loneliness associated with this phenomenon (Carr, 2004).

Gender issues in ageing researchAs we will see in the following chapter, the importance of comparing profiles for different groups of older women is useful to consider the development of research priorities which support inclusive positive ageing. Household status and living arrangements are important for individuals to satisfy several goals (Burch and Matthews, 1987), for example, privacy, companionship and care, and socio-psychological costs such as staying connected as well as for practical reasons as in making domestic arrangements and economies of scale. Chapter 11 considers further how these are often impacted upon by opportunities in earlier life associated with relationships and fertility. Reher and Requena (2017) also refer to macro-, meso- and micro-level contexts (see also Dykstra, 2009), and living alone has been shown to be directly linked to higher levels of disease and disability (Kharicha et al., 2007). For those of us working in care services, we need to be aware of the potential for how living alone lowers the levels of social and familial support in later life (; Hafford-Letchfield et al., 2016), and not only the risk of having insufficient support but the potential loss of quality in relationships including sexuality and intimacy.

This chapter picks up the study of gender issues within ageing populations now of global interest given that women represent just under half of the population (Powell and Khan, 2013). Understanding different life trajectories and diversity characteristics of the ageing female population is important given the implications for wider society and culture. Women's changing circumstances, attitudes and behaviours are affecting their experience of ageing at both an individual and societal level. These circumstances present new opportunities and challenges for governments, policy-

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makers and service providers. As life expectancy increases, the 'traditional' life-stage trajectory is changing (Laslett, 1994; Kirkwood, 2014). The 2015 World Population Prospects (UN, 2015) confirms that significant gains in life expectancy have been achieved worldwide. During 2010–2015, global average life expectancy was estimated to be 70.48 years, which is predicted to be 79.18 years by 2060–2065. On the contrary, in more developed regions, life expectancy was 78.30 years during 2010–2015 and this will increase to 85.38 by 2060–2065. In the UK, life expectancy at birth for males and females are 78.45 and 82.39 years respectively during 2010–2015 with evidence of increasing longevity in later life (ONS, 2014a; UN, 2015). Centenarians are increasing at a faster rate than any other age group too; an over 137-fold increase between 1911 and 2013 (from 100 to 13,780) (ONS, 2014b).

Changes to the life course, life stages and lifestyle choices are starting to have a marked impact on the shape, size and types of households in the UK (Laslett, 1994; McNair, 2009) as well as the biographies of current generations of older people (Bildtgard and Oberg, 2017). Single women living alone may reflect a lifestyle choice as well as the consequences of other influencing factors, such as loss of a partner through separation, divorce or death (Victor et al, 2000; Hafford-Letchfield et al., 2016). More than three and a half million people in the UK aged 65+ live alone, which corresponds to 32 percent of all people aged 65+ in the UK, of which nearly 70 percent are women (ONS, 2016). Out of the 2 million people over 75 who live alone, 1.5 million of these are also women (ONS, 2016). Further, 61 percent of widows (male and female) in England and Wales are aged 75 and over. Living alone may be a result of the inability to find the right relationship at the right time as well the use of fertility control or the experience of fertility problems in earlier life (Al-Kandari and Crews, 2014). Besides these more commonly perceived reasons for living alone in later life, greater diversity in relationship status has also been influenced by choice and sexual identities, for example, evidence suggests that older lesbian, gay, bisexual and transgender people are more likely to live alone in old age, with fewer links with younger generations, thereby increasing their risk of isolation (Heaphy and Yip, 2003). Within this group, older lesbians are likely to live longer than (gay) men, to be less well off in later life and to make greater use of health and social care services (Trais, 2016). Further, studies of non-familial relationships – 'families of choice' (Weeks et al., 2001) or 'friendship families' (Dorfman et al., 1995) – and those roles of caregivers and care receivers may be fluid, interchangeable and context-dependent. In the absence of positive and powerful counter narratives, the notion of living alone by choice or circumstances is a powerful and uncontested one with less interrogation into these different identities. Against this background, academic research on 'living alone' in later life is one area that is relatively underdeveloped in relation to its different causes, manifestations and explanations.

Living alones in British households

Within British households, this study shows that over the last three to four decades, there has been a considerable increase in the number of people living alone (Pampel, 1992; Legare and Martel, 2003; Macvarish, 2006). Demographers have identified that this trajectory starts to emerge during

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midlife and have observed increasing trends among men living alone in the UK (Demey et al., 2011, 2013). Some studies have shown that older women living alone are more likely to possess relatively less material resources than their male counterparts (Eurostat, 2002; Gaymu and Springer, 2010), and in many cases are dependent on their children and relatives (Khan and Leeson, 2006). Longer life is also associated with multiple morbidities and long-term care. Whilst many enjoy longer longevity compared to the previous generation, they also need to prepare for supporting themselves in circumstances which may also coexist with increasing social isolation (Banks et al., 2009) and lack of both economic and practical support, particularly where there is a burden of care (Maynard et al., 2008; Laing and Buisson, 2014). Women living alone may not be able to draw on the range of family and community support often seen in many societies (Lee and Xiao, 1998; Kohli, 1999; Khan, 2014; Hafford-Letchfield et al., 2016). As mentioned earlier, some studies are beginning to pick up these issues much earlier (Demey et al., 2013) which is important given that UK legislation and policy on care entitlement and provision tends to be underpinned by assumptions about informal care. These assume that all older people will have carers to support them drawn from their family and networks (Hafford-Letchfield, 2013). These expectations may be compromised for single women living alone in later life, as well as for those who have lost a partner. Both groups may have restricted support networks to rely or fall back upon (Kalogirou and Murphy 2006; Girling and Morgan, 2014; DEMOS, 2014).

The attention on women living alone in ageing studies has emerged from disciplines such as sociology, psychology, gender and sexuality studies (Wolf, 1995; Byrne, 2008; Lahad and Hazan, 2014; Girling and Morgan, 2014; Timonen and Doyle, 2014). The aim of this chapter is to review one particular source of demographic data alongside this literature to review any research possibilities which would facilitate better examination of possible trajectories of single older women living alone in British households.

Rationale for the variables selected

We know that the defining characteristics of the ageing process make individuals more vulnerable to disease, disability and frailty, and that in developed nations, the majority of health resources are focused on conditions where age is the biggest risk factor (Kirkwood, 2014). Education has also been associated with socio-economic status, which in turn impacts on health inequalities in later life (McNair, 2009; Rahman et al., 2016). The World Health Organisation defines health as ‘a complete physical, mental and social-wellbeing and not merely the absence of disease or infirmity’ (2006, p. 5), thus placing emphasis on well-being which goes beyond the existence of physical health. Subjective well-being involves an overall assessment of how people are doing without being directive about what particular aspects of their lives contribute towards their feelings of well-being (Gaymu and Sringer, 2010). However, well-being can be measured in a wide variety of ways. In this paper, we have utilised the variable of ‘general happiness’ as an indicator of the overall well-being of an individual. Health status is also directly linked with well-being which includes general life satisfaction (Khan and Raeside, 2014, Kirkwood, 2014). Hank and Wagner (2013) have addressed the

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question of whether and how parenthood and marital status are associated with various dimensions of older peoples' well-being, including elements of the individual's economic situation, psychological well-being and social connectedness. Gaymu and Springer's (2010) European study of the influences of objective living conditions on the life satisfaction of older Europeans living alone from a gender and cross-national perspective, found that a lower proportion of women living alone declared themselves to be satisfied with life compared to men. When controlling for inequalities in living conditions, this difference disappeared. Gamu and Springer found that determinants of older women's life satisfaction, however, were more strongly linked to the sociocultural. Other studies have also found that despite less favourable conditions, older women report only slightly lower life satisfaction, happiness and self-esteem (Pinquart and Sorensen 2001; Inglehart, 2002). These different findings have led to debates about the need for gender specific models to measure well-being (Pinquart and Sorensen 2001; Hafford-Letchfield, 2016). These would take into account institutional differences that influence gender inequalities in the living conditions of older people living alone as well as both objective and subjective measures. An example of such study involved a secondary phenomenological analysis of studies exploring the concept of 'hope' in the everyday life of older women living alone (Porter et al., 2011). Porter et al. (2011) produced a descriptive taxonomy of their life-world pertaining to 'hoping'. This taxonomy found that the woman's preferred futures involved both the mundane and the profound, but were still focused firmly on 'living'.

Methodology

The study uses UK *Understanding Society* data. The data enables us to examine individual behaviour both cross-sectional and through the life course. The data is scientifically rich enough to capture key determinants of health outcomes within UK society. The study is an annual survey of each adult member of a nationally representative sample. The same individuals are re-interviewed in each wave. If individuals leave their household, all adult members of their new household are interviewed. Each wave is collected over 24 months, such that the first wave of data was collected between January 2009 and 2011, the second wave between January 2010 and 2012, and so forth. Each person aged 16 or older answers the individual adult interview and self-completion questionnaire. Young people aged 10–15 years are asked to respond to a paper self-completion questionnaire (UK data service, 2015). As definition and their measurements are available in the main documents of understanding society manual (McFall, 2013) we have not gone into further detail here.

The target population for analysis in this paper are women who were defined as being aged 55 years plus and living alone in the household. In the survey, a question was asked about number of own children in the household (specific survey code c_nchild_dv) that includes natural children, adopted children and step children under age of 16 years. The survey Understanding Society uses a single_dv code to enumerate those living alone in the household. This target group of sample was then subject to detailed data analysis. Both exogenous as well as endogenous variables were used for model building purposes in this paper. Exogenous variables are free dependency in the model whereas

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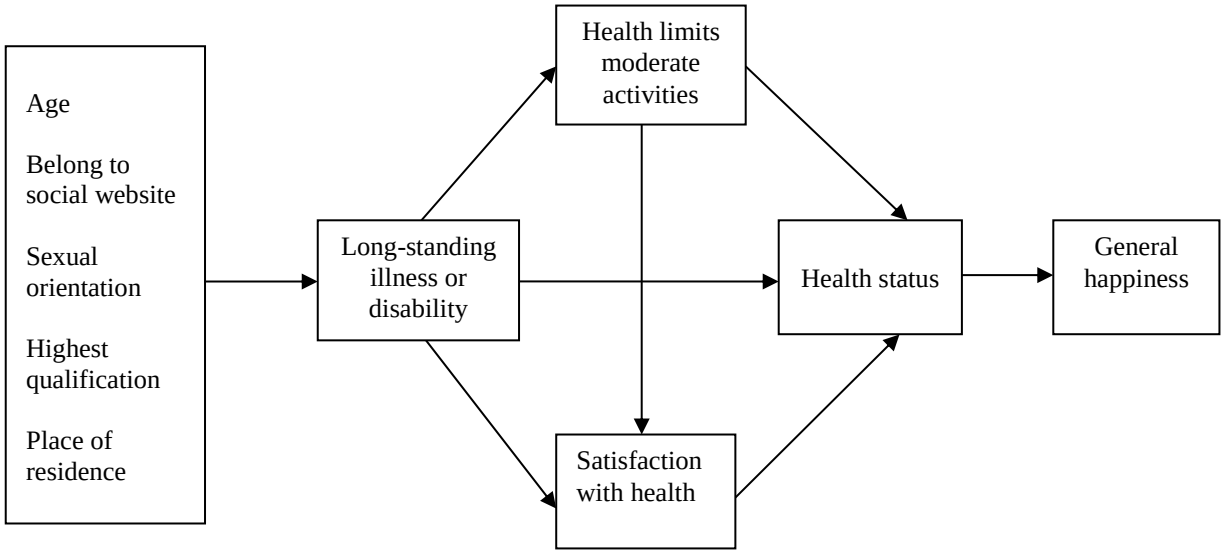
endogenous are those which are used at least once as a dependent variable in the model building stages. Thus five exogenous variables are used in Figure 10.1 (age, belong(ing) to a social website, sexual orientation, highest qualification and place of residence) and four endogenous variables (long-standing illness or disability, health limits modern activities, satisfaction with health, health status and general happiness).

Figure 1: Path diagram showing linkages between selected variables considered in the study



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The detailed category of each variable is given in Table 10.1 and these were subsequently used for statistical analysis. The Understanding Society survey questionnaire is made available online for any further consultation or verification.

<COMP: Place Table 10.1 Here>

Analytical framework

Descriptive statistics, cross-tabulation and multivariate logistic regressions are used to examine key variables associated with health and well-being of older women who are living alone. Selected variables are considered in the paper as to examine how they are interrelated. Variables are considered as categorical as seen in the list in Table 10.1. A schematic diagram describes the links and causality between variables for analysis (see Figure 10.1).

Statistical analyses

Exploratory data analysis (EDA) was carried out to understand the selected characteristics of respondents, mainly the frequency analysis of variables for the selected subcategories. Bivariate analysis was performed to compare the difference between sub-groups of each independent variable and the significance of difference was measured by the Chi-squared tests. Finally, a multivariate logistic regression model was employed to explore the factors affecting health status and general happiness (well-being) among older women living alone while controlling for various predictors. A detailed discussion on logistic regression and its application can be found elsewhere (see for example, Khan and Raeside, 1997; Hosmer and Lemeshow, 2000; Khan, 2014).

Results

The data analysis was performed based on a study population of older women living alone in a British household. Their socio-economic and demographic characteristics were analysed. As women live longer than men, it is anticipated that the proportion of older women living alone will increase as they get older. Three waves of data (Waves 1, 2 and 3) were used to capture a picture of this trend as well as its distribution within the individual population. Table 10.1 shows the percent distribution of men and women in single British households by considering five years age groups. The data reveals that the number of women in single British households is higher than number of men in single British households across these three waves. In wave 1 there were as many as 1,890 men and 3,912 women, in wave 2 (1,665 men and 3,317 women) and in wave 3 (1,939 men and 3,830 women).

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A total of 49,739 individuals (males = 22,788 and females = 26,951) were surveyed in wave 3 in which the proportion of women living in single households is estimated to be 7.7 percent. There has been a significant variation in number of women by age cohort and the proportion is found to be higher for upper age groups. For example, in wave 3, only 14.6 percent of women living in single households belong to age group 55–59 years, whereas it is 54.3 percent for age group 70 years or above. This indicates that there are a higher proportion of older women living alone without a partner and any dependents in the household.

The vast majority of women living alone live in England compared with other regions and the sample is well representative of the country's population size. Despite a higher sample in England, in all four geographical regions the most common scenario is that a higher proportion of women living alone are in the age range of 70 years or more. As life expectancy continues to increase, the absolute number or proportion of women living alone is projected to increase further on the basis of familial and social changes as discussed earlier in the introduction. This also indicates that a proportional increase in independent living in British households may be linked to the availability of appropriate social support (Lee and Xiao, 1998; Rahman et al., 2004; Al-Kandari and Crews, 2014; Khan et al., 2015). The provision of intergenerational support is particularly pertinent which has been shown to promote filial obligation and transactional approaches to resource transfer in later life (Silverstein et al., 2012; Khan, 2014) and the need for different models of sustainable health and social care provision (DEMOS, 2014). The issue of intergenerational support has become particularly significant given wider recognition for the 'families of choice' that LGB individuals rely on as opposed to more traditional connections with biological kin (Heaphy and Yip, 2003). Research has shown that older lesbian, gay and bisexual adults are not necessarily in contact with families of birth, are less likely to have children in this cohort and family members may not be involved in future care planning or be available (or requested) to provide unpaid care (Hughes, 2009).

As part of exploratory data analysis, a frequency distribution of total sample as well as single women living alone is presented in Table 10.1. This provided us an opportunity to compare women in the study as compared with the entire dataset. The study shows that single household women represent about 8 percent of the total study sample. As the proportion of single women was greater for those who are 70 years or more, we then further regrouped the age group into 10 years age cohorts (55–64, 65–74, 75–84 and 85+ years) to distribute sample equally and to control the variability within each age cohort. This was justified on the basis that disability tends to be linked in later age groups, say 80 years or more (Kirkwood, 2014). A vast majority (about 89.5 percent) of single women in the survey reported that they do not utilise social websites and 93.6 percent identified themselves as heterosexual. About 40 percent had no formal education followed by 29.8 percent who have been educated up to GCSE and A level. The survey also shows that one quarter of single women living alone live in rural areas (25.6 percent). About 15 percent of these women reported that their health condition is poor, more than double of the total sample (6.5 percent). Similarly, single women living alone in the survey reported higher long-standing illness or disability (62.8 percent), to the extent that health limits doing moderate activities (52.2 percent). Conversely, about 58.6 percent of the women reported that their health situation is at least good or even better. Moderate happiness is

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found to be lower for women living alone (6.4 percent) than the total population (11.1 percent). The percentage univariate analysis does not say anything about how the individual characteristic is linked with health and well-being in later life.

It may be hypothesised that there is no relationship between an individual health status and other selected characteristics of the individual. We considered five exogenous variables, such as age of individual, whether or not they used a social website, their sexual orientation, educational qualification and place of residence in order to examine their association with long-standing illness or disability and whether health limits moderate activities, satisfaction with health, health status and general happiness. The analysis reveals that age is related with long-standing illness or disability ($p <$ 0.000) which implies that there is a higher chance of suffering from long-standing illness or disability as we age. Similarly, age is found to be related with moderate activities, satisfaction with health, health status and general happiness even.

Being able to access and having the opportunity to maintain online social relationships is perhaps important for older people living alone and when done extensively has been demonstrated as one of the key elements of aging well (McNair, 2009; Ballantyne et al., 2010). Sourbati (2004) has explored how internet-based delivery of social healthcare related information and services presents any benefits to older people who use care support. A study by Ofcom identified that in the UK, only 33 percent of adults aged 75 years and over had ever used the Internet. Use of the Internet in later life has been shown to influence people in a variety of ways. This can influence their health and provide a means for developing a reliable and supportive social network that can shape well-being that shapes peoples' lives (Hafford-Letchfield, 2011; Thanakwang and Soonthorndhada, 2011). The sample studied here bears out these findings in that there was a statistical association between belonging to a social network with health status and general happiness.

Whilst sexual orientation was found to be unrelated with any of the health and happiness variables, there is increasing and significant research emerging on the association between sexual orientation, identity, culture and lifestyle in later life with impact on health and well-being. This can be both positive and negative, the latter which is associated with being invisible and experiencing homophobic or transphobic discrimination (Willis et al., 2016). Gabrielson and Holston (2014) suggest that lesbian older women, for example, have triple vulnerability (gender, sexual orientation and age) necessitating inquiry into their social support needs and in their study found that older lesbians without children accessed support from 'families of choice' with whom they shared common values and common passion contributing to their sense of well-being and happiness. More research needs to be done with lesbian, bisexual and transgender women in relation to single lifestyles and happiness within the appropriate cultural context. Given that the survey does not ask about gender identity or detailed questions about sexual orientation, we were not able to undertake any analysis of this important group of women.

<COMP: Place Table 10.2 Here>

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The multivariate logistic regression is used to identify important variables as well as to measure the extent to which they influence on the dependent variable while controlling for all other remaining variables. The adjusted coefficient reflects the actual effect of variable in the paper and we use only odds ratio (OR) and their 95 percent confidence intervals (CI). In this chapter, we have five dependent variables in which three being treated as endogenous variable (long-standing illness or disability, health limits moderate activities, satisfaction with health) and two other variables being as ultimate dependent variables (Health status, general happiness or well-being).

<COMP: Place Table 10.3 Here>

Models are constructed as per the analytical framework in Figure 10.1 and this requires inclusion of variables for the dependent variable. So, considering selected covariates we have constructed Model 1 for long-standing illness or disability. Age was found to have significant influence on long-standing illness or disability and Model I shows that the higher the age the more likely that the person is to have suffered from illness or disability. The result shows that cohort 85 years or more has 2.252 times (95% CI: 1.631–3.110) higher likelihood of reporting a long-standing illness or disability than those in the younger age cohort (55–64 years). This may be explained as an expected finding as mobility chance is higher in old ages. Education is found to play important role too. The higher the education, the lower the chance of suffering from long-standing illness or disability.

Model 2 is constructed to tease out the extent to which the selected variables are associated with health limits moderate activities. It has been revealed that age has positive influence on moderate activities, which means that an older person has a higher chance of limiting moderate activities and it is 4.11 times more likely for 85+ age cohort compare to 55–64 years age cohort. Education is significantly related with limiting moderate activities as well. The result shows that higher education lowers the chance of limiting moderate activities. Long-standing illness or disability is found to be strongly related with limiting moderate activities. As can be seen from Table 10.3 that long-standing illness has 6.798 times higher chance of limiting moderate activities than those are not suffering from long-standing illness. This is statistically significant as indicated by p-value and lower and upper limit of confidence intervals ($p < 0.000$, 95% CI: 5.724–8.073).

Model 3 is considered “satisfaction with health” as dependent variable in two outcomes is present (dissatisfied and satisfied). In other words, this model aims to identify key factors related to dissatisfaction with health. It has been found that age is statistically related with dissatisfaction with health. As we age there is higher chance of dissatisfaction and this is reflected in Table 10.3. The oldest old age group has the biggest chance of having dissatisfaction compare to age cohort 55–64 years. This is an expected result (Scharf et al., 2004).

In this sample, education was found to reduce the level of dissatisfaction in women living alone. Education is demonstrated as an important determinant for health and happiness among this group of women. The benefits of education and learning, particularly programmes and interventions which engage older people are beginning to be increasingly researched (McNair, 2009; Hafford-Letchfield, 2011; Hafford-Letchfield and Lavender, 2015; Hafford-Letchfield, 2016). These have made some

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clear links between education and well-being, for example, through its significance for cognitive performance, health literacy and an increased level of participation through the process and structures associated with education and learning.

However, in the rural sample, nearly 43 percent of women in our category were reported as having poorer health as compared to 37 percent in the urban sample and the results show a statistically significant relationship with health outcome ($p < 0.001$). Therefore, geographical location may be important in terms of availability of resources and social networks. Long-standing illness or disability increases dissatisfaction level of health as many as 2.294 times ($p < 0.000$, 95% CI: 1.929–2.728). This implies that disability issue is very important for women living alone and further research can be done to explore this area. Those whose health limits moderate activities are found to have positively associated with health dissatisfaction (OR = 3.178***, 95% CI: 2.673–3.780). In this paper, we have developed an empirical model (Model 4) where health outcome is dichotomy (1 for poor health and 0 for others). Our analysis shows that the higher the age the poorer is the health status. Belonging to social network lowers the risk of reporting poor health and it is found to be statistically significant. Higher education is linked with lower reporting of poor health and this is found to be statistically significant in Table 10.3. Variables – suffering from long-standing illness or disability, if health limits modern activity and if dissatisfied with health – all are strongly associated with reporting of poor health. Modelling heath status is common in health and social science literature (Khan and Raeside, 2014; Khan and Flynn, 2015).

Finally, Model 5 was constructed to measure general happiness and to capture well-being of individual. The outcome measure used asked the respondents to indicate 1 for not happy and 0 for otherwise. Therefore, fitting a logistic regression seems to be appropriate like others. It has been found that age is strongly association with general happiness or well-being. The results show that the higher the age the lower the propensity of reporting not being happy in the sample. This may be mainly due to the existence of health issues. Those women residing alone in urban areas are less likely not happy (in other words more likely to be happy) than their counterparts living in rural areas. Long-standing illness increases the likelihood of reporting that they were not happy with a 1.652 times higher probability of reporting not being happy. Similarly, dissatisfaction with health and poor health status of individuals are positively associated with not being happy. This indicates that poorer health outcome has increasing effect on not being happy.

Discussion and conclusion

Having a contemporary research agenda which includes the specific need of a diverse group of women within the ageing population is becoming more significant if we are to grapple with the unique challenges of demography. The increasing emphasis on intergenerational relationships; meeting individual needs and developing policies on public health needs to take account of the specific characteristics of cohorts of women whose living circumstances are changing within a more fluid society. Little research has been done on the situation of women living alone and how changing

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relationship status impacts on their future needs and well-being, particularly in relation to how key public services, such as those providing care and support, may need to respond and develop. As we will see in the next chapter, ageing women who have experienced long-term singlehood and who have not had children are a group of particular risk (Hafford-Letchfield et al., 2016).

This paper aims to generate further discussion by attempting to identify some of the issues that may face ageing women living alone for whatever reason based on nationally representative data available from the *Understanding Society*. There may be limitations in the data available given the complexity of what we conceptualise, understand and try to define as a woman living alone in later life given the different choices, experiences and relationships happening at different stages in the life course (third age, fourth age, etc.). For example, the inclusion and exclusion criteria for defining women living alone are extremely complex and inclusion criteria are mainly around self-selection given the range of measures involved. Researchers will need to develop a range of very complex variables in order to understand the trends of women who are living alone more clearly. This was one of the limitations of our paper in that it was not always possible to isolate the characteristics of single women living alone. They may, for example, include women who have been in unsuccessful or disrupted long term relationships in earlier life, as well as those who may have had unsuccessful pregnancies or infant /child death leading to their single status or in living alone. However, further debate about the relevance of these factors makes it possible to regard them as a separate group within ageing and gender studies and to explore the impact of these different experiences on successful ageing. Limitations, for example, for capturing data that relate to people with diverse sexual and gender identities are already well documented and subject to pressure for urgent reform (Betts, 2009).

The analysis demonstrated that biological age plays an important role across life cycle and is a major determinant of health and well-being status of individuals. Education may be another important variable for women living alone in terms of how they may be able to adjust and cope with the challenges of later life. There were some findings associated with measuring perceptions of health and happiness in this group of women which will need to be interrogated further. The availability of social networks in view of absent familial relationships and thinking about the impact of sexual orientation on the types of 'families' and support networks that older lesbian, gay, bisexual and transgendered people may value, all merit further investigation.

The variables measured in the survey may help understand just some of the possible trends for women living alone in later life and the potential different 'positions' occupied by this group. By looking at variables associated with health and well-being, such as education, long-standing illness, satisfaction with health and health status, we have started to identify some determinants when looking at status within ageing studies. This was by no means conclusive but illustrates the challenges of studying women who meet these criteria. Within the increasing trend of women living alone over time and space, there is a need to adapt and develop more accurate measures and research designs in order to investigate the specific nature of ageing for those who are living alone and the diversity of women within this category. Further research can be done to capture a wider

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picture which can include qualitative studies to try and evaluate the real strengths and challenges that women are facing or may face in the future alongside a data driven approach.

Key recommendations for applying research to professional practice

- When coming into contact with older people living alone, show awareness and sensitivities to the complexities for the reason why they may be living alone and make space for their biographies to emerge.
- Help older people living alone to access the internet or social media, which may help to increase their social networks and networking capabilities
- Ensure diversity in your approach to offering support to women living alone in relation to their backgrounds, life stories and future needs.

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Figure 10.1 Path diagram showing linkages between selected variables considered in the study about here

Table 10.1 Characteristics of general population as well as study population about here

Characteristics	Total sample		Women 55+ living alone	
	Cases	%	Cases	%
Gender				

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Male	22,788	45.8	3,830	7.7
Female	26,951	54.2		
Age				
55–64	7,488	15.1	1,155	30.2
65–74	5,975	12.0	1,157	30.2
75–84	3,246	6.5	421	28.6
85+	848	1.7	389	11.0
Belong to social website				
Yes	20,722	41.7	389	10.5
No	25,159	50.6	3,314	89.5
Sexual orientation				
Heterosexual	38,008	76.4	2,836	93.6
Gay or lesbian	476	1.0	9	0.3
Bisexual	406	0.8	9	0.3
Other	424	0.9	32	1.1
Prefer not to say	1,296	2.6	143	4.7
Highest qualification				
Degree	10,822	21.8	361	9.6
Other higher degree	5,405	10.9	470	12.5
A-level etc.	10,175	20.5	300	8.0
GCSE etc.	10,305	20.7	532	14.1
Other qualification	4,769	9.6	590	15.7
No qualification	7,190	14.5	1,509	40.1
Place of residence				
Urban area	37,740	75.9	2850	74.4
Rural area	11,980	24.1	979	25.6
General health				
Excellent	8,760	17.6	300	7.8
Very good	16,956	34.1	934	24.4
Good	13,290	26.7	1,009	26.4
Fair	7,443	15.0	1,020	26.6
Poor	3,247	6.5	566	14.8
Long-standing illness or disability				
Yes	17,130	34.4	2,403	62.8
No	32,561	65.5	1,424	37.2
Health limits moderate activities				
Yes, limited a lot	3,351	8.2	703	23.1
Yes, limited a little	7,252	17.8	885	29.1
No, not limited at all	30,108	74.4	1,455	47.8
General happiness				
More so than usual	4,511	11.1	193	6.4

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About the same as usual	30,669	75.4	2,450	80.7
Less so than usual	4,472	11.0	314	10.3
Much less than usual	1,014	2.5	78	2.6
Satisfaction with health				
Completely dissatisfied	2,429	4.9	213	7.0
Mostly dissatisfied	5,557	11.2	445	14.7
Somewhat dissatisfied	5,707	11.5	508	16.7
Neither satisfied or dissatisfied	3,194	6.4	290	9.6
Somewhat satisfied	5,339	10.7	457	15.1
Mostly satisfied	14,488	29.1	927	30.6
Completely satisfied	3,943	7.9	194	6.4

Table 10.2 Cross-tabulations between characteristics of older women in the household about here

Characteristics	Long-standing illness or disability (% yes)	Health limits moderate activities (% yes)	Satisfaction with health (% dissatisfied)	Health status (% poor health)	General happiness (% not happy)
Age					
55–64	56.8	42.4	51.2	37.1	18.8
65–74	61.7	45.9	44.1	37.4	11.5
75–84	65.9	62.8	48.4	47.4	8.2
85+	74.1	80.1	48.3	48.7	10.0
Chi-square value	*45.7*	*172.4*	*10.0*	*41.4*	*50.8*
Significance p-level	*.000*	*.000*	*.018*	*.000*	*.000*
Belong to social website					
Yes	59.8	43.2	51.7	31.6	17.5
No	62.5	53.4	47.5	41.2	12.3
Chi-square value	*1.0*	*13.2*	*2.2*	*13.2*	*7.6*
Significance p-level	*.296*	*.000*	*.137*	*.000*	*.006*
Sexual orientation					
Heterosexual	60.7	51.7	48.0	36.9	12.9
Gay, lesbian & others	62.2	58.0	47.2	40.4	12.4
Chi-square value	*0.1*	*2.8*	*0.1*	*0.9*	*0.0*
Significance p-level	*.676*	*.090*	*.814*	*.331*	*.837*

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Highest qualification					
Degree	53.0	39.5	40.4	25.2	10.5
A-level etc.	56.7	52.5	47.5	37.0	16.7
GCSE etc.	55.6	44.0	47.6	34.6	14.9
Other qualification	69.1	60.4	51.9	49.9	12.8
Chi-square value	*85.4*	*101.8*	*26.6*	*165.0*	*9.1*
Significance p-level	*.000*	*.000*	*.000*	*.000*	*.028*
Place of residence					
Urban area	63.7	53.1	49.6	43.0	12.8
Rural area	60.3	49.7	43.3	37.0	13.1
Chi-square value	*3.6*	*2.6*	*9.3*	*10.7*	*0.1*
Significance p-level	*.056*	*.103*	*.002*	*.001*	*.842*

Note: Sexual orientation is grouped as heterosexual and others. All higher degree is considered in one category and similarly no qualification and other qualification being considered as a separate group. Satisfaction with health is recoded into two groups as dissatisfied (completely dissatisfied, mostly dissatisfied, somewhat dissatisfied and neither satisfied or dissatisfied) and satisfied (somewhat satisfied, mostly satisfied, and completely satisfied). Health limits moderate activities variable is grouped as yes (limited a lot and yes, limited a little), no (not limited at all). General health is grouped as being poor (fair and poor) and good (excellent, very good and good). General happiness is recoded as a dichotomy variable, not happy (less so than usual and much less than usual) and happy (more so than usual and about the same as usual).

Table 10.3 Logistic regression result displays the important factors influencing the dependent variables

Covariates	Long-standing illness or disability (% yes) Model 1	Health limits moderate activities (% yes) Model 2	Satisfaction with health (% dissatisfied) Model 3	Health status (% poor health) Model 4	General happiness (% not happy) Model 5
Age					
65–74	1.207* (1.002–1.453)	1.010 (0.823–1.240)	0.649*** (0.531–0.793)	0.810 (0.633–1.036)	0.563*** (0.428–0.740)

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75–84	1.347** (1.101–1.649)	2.150*** (1.716–2.693)	0.630*** (0.506–0.784)	0.903 (0.694–1.175)	0.336*** (0.242–0.466)
85+	2.252*** (1.631–3.110)	4.117*** (2.851–5.946)	0.449*** (0.330–0.612)	0.510*** (0.358–0.729)	0.396*** (0.246–0.637)
Belong to social website					
Yes	1.167 (0.920–1.481)	0.952 (0.733–1.236)	1.230 (0.953–1.589)	0.715* (0.520–0.985)	1.137 (0.816–1.583)
Sexual orientation					
Heterosexual	0.988 (0.728–1.342)	0.778 (0.553–1.094)	1.134 (0.825–1.558)	0.920 (0.630–1.345)	1.063 (0.668–1.93)
Highest qualification					
Degree	0.619*** (0.514–0.746)	0.574*** (0.466–0.706)	0.726** (0.595–0.887)	0.425*** (0.332–0.545)	0.913 (0.673–1.241)
A-level etc.	0.643*** (0.490–0.843)	1.163 (0.857–1.578)	0.838 (0.625–1.122)	0.640* (0.450–0.912)	1.270 (0.862–1.872)
GCSE etc.	0.635*** (0.513–0.786)	0.708** (0.559–0.898)	0.986 (0.784–1.241)	0.709* (0.538–0.936)	1.201 (0.873–1.652)
Place of residence					
Urban	1.165 (0.984–1.380)	1.134 (0.940–1.370)	1.169 (0.978–1.398)	1.151 (0.926–1.430)	0.750* (0.579–0.972)

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Long-standing illness					
Yes		6.798*** (5.724–8.073)	2.294*** (1.929–2.728)	4.738*** (3.766–5.961)	1.652*** (1.216–2.246)
Health limits activities					
Yes			3.178*** (2.673–3.780)	4.513*** (3.657–5.568)	1.180 (0.885–1.575)
Satisfaction with health					
Dissatisfied				3.982*** (3.285–4.827)	2.747*** (2.089–3.612)
Health status					
Poor					1.845*** (1.395–2.440)
Model Chi-square	84.55***	780.22***	480.87***	1265.23***	268.02***
df	9	10	11	12	13
−2 log likelihood	3955	3393	3689	2705	2045

Note: Statistically significant at *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. Odds ratio (OR) for reference category (ref.) is 1.000.