

## Loneliness – evidence of the effectiveness of interventions

### Background

Loneliness, a state of mind, should be distinguished both from social isolation, an external experience of reduced social contact, and from social exclusion, the ways in which society is organised which exacerbate social isolation in a particular group of individuals. Living alone, although possibly a contributory factor to social isolation and loneliness, should not in any way be conflated with loneliness.

Loneliness, a mental state arising from a perceived lack of social contact, and social isolation, an actual lack of social contact, are important factors leading to lower levels of health and well-being. Social isolation is associated with raised blood pressure, poor physical health, increased mortality and poorer mental health including depression, suicide and dementia. The health risk associated with social isolation is comparable to that associated with smoking.<sup>1</sup>

Researchers distinguish social and emotional loneliness. Social loneliness links closely to social isolation – the distance between the existing and desired number and quality of social contacts. Emotional loneliness refers specifically to not having a close emotional attachment, for example a partner or best friend. Although these two types of loneliness share a number of characteristics, they also have distinct, measurable, features. It is also important to note that loneliness is not the same as depression<sup>2</sup>.

It is useful to identify causal and other factors closely identified with loneliness as interventions that address these factors will, at the same time, address loneliness.

Interventions to address loneliness may be addressed directly at an individual, at groups of people or at the neighbourhood or environment in which those people live.

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<sup>1</sup> Iliffe S et al (2007) Health risk appraisal in older people 2: the implications for clinicians and commissioners of social isolation risk in older people, *British Journal of General Practice* 57 (537) : 277-282

<sup>2</sup> Fenney D (2013) "Let's start assessing not assuming": a report about the approaches to tackling social isolation within Welsh local authorities

The UK Campaign to end loneliness toolkit for health and wellbeing boards (<http://www.campaigntoendloneliness.org.uk/toolkit>) adopts the following useful way of categorising interventions to combat loneliness.

**Information and signposting services**

- websites or directories including information about social support services;
- telephone help-lines providing information about social support services;
- health and social support needs assessment services (postal or web based questionnaires or visits).

**Support for individuals**

- befriending – visits or phone contact, it may include assistance with small tasks such as shopping;
- mentoring – usually focused on helping an individual achieve a particular goal, generally short term;
- buddying or partnering – helping people re-engage with their social networks, often following a major life change such as bereavement;
- Wayfinders or Community Navigator initiatives – helping individuals, often those who are frail or vulnerable, to find appropriate services and support (eg Dorset Wayfinders).

**Group interventions – social**

- day centre services such as lunch clubs for older people;
- social groups which aim to help older people broaden their social circle, these may focus on particular interests for example, reading. (eg: Brendoncare)

**Group interventions – cultural**

- initiatives that support older people to increase their participation in cultural activities (e.g. use of libraries and museums);
- community arts and crafts activities (eg: Craft Café);
- local history and reminiscence projects.

**Health promotion interventions**

- fitness classes for people over 50;
- healthy eating classes for people over 50.

**Wider community engagement**

- projects that encourage older people to volunteer in their local community (for example, local volunteer centres and Time Banks).

In other cases, the delivery mechanism may be the focus of attention, for example *telephone* befriending schemes, or the use of *information technology* and the *internet* or *videoconferencing* to improve social involvement and reduce loneliness.

Loneliness, as a state of mind, has a number of other causal, or at least strongly associated, factors, for example, living alone, social isolation, bereavement, being divorced or never married, age 85 or over, being in poor health, having a disability or sensory or cognitive impairment or living in an area with high levels of material deprivation or crime. Broader societal measures, for example improved and safer neighbourhoods, measures to reduce crime, or the maintenance of bus and ‘freedom’ passes to reduce social isolation, will, at the same time, reduce loneliness.

Reducing loneliness may be a desirable end in itself, improving the wellbeing of the individual, but loneliness is also associated with poor health. Loneliness and stressful social ties contribute to a higher risk of disability, poor recovery from illness, and early death. The magnitude of health risk associated with social isolation is seen as comparable with that of cigarette smoking and other major risk factors.<sup>3</sup> The effectiveness of interventions may therefore be measured in terms of reduction in feelings of loneliness in the individual or in the reduced use of health services and in other cost savings, depending on the objectives chosen.

### **Volunteering**

An important and repeated theme running through many of the mooted interventions to combat loneliness is the use of volunteers. The use of volunteers is likely to reduce the cost and therefore improve the cost-effectiveness of any intervention.<sup>4</sup>

### **Summary and key findings**

Despite strong evidence of the association of loneliness with poorer health outcomes and less good lifestyle choices, for example reduced levels of physical activity, evidence of effective interventions to combat loneliness is still sparse.

This review supports the consensus view that effective interventions are a) group interventions with an educational themes or specific support functions, b) interventions that target specific groups for example women, carers or people with health needs, c) interventions where participants are involved in setting up and running the group (co-production), d) interventions developed within or run by an existing service, e) interventions with a sound theoretical basis and f) interventions with a technological element, for example using videoconferencing or the internet.

Individual interventions, including the use of companion animals and mentoring were generally ineffective

Regional, environmental and multi-component interventions, while intuitively potentially effective, were not generally well evaluated.

Except for the use of videoconferencing, there were few properly evaluated effective interventions in residential care

Technology based interventions, videoconferencing, computer training and regular use of the internet had generally positive effects although the value of social networking is less clear..

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<sup>3</sup> Iliffe S, Kharicha K, Harari D, Swift C, Gillmann G and Stuck A E (2007) Health risk appraisal in older people 2: the implications for clinicians and commissioners of social isolation risk in older people, *British Journal of General Practice* 57 (537) : 277-282

<sup>4</sup> Local Government Association (2012) *Combating loneliness: a guide for local authorities*

**Review of evidence**

The review of evidence is subdivided into the following sections

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Within each section, the evidence is presented in reverse chronological order, with the most recent study first.

## a) The effects of loneliness

Study	Methods	Findings
<p>Stephens A, Shankar A, Demakakos P and Wardle J (2013) Social isolation, loneliness, and all-cause mortality in older men and women, <i>Proceedings of the National Academy of Sciences of the United States of America</i> 110 (15) : 5797-5801</p>	<p>Both social isolation and loneliness are associated with increased mortality, but it is uncertain whether their effects are independent or whether loneliness represents the emotional pathway through which social isolation impairs health. This study assessed the extent to which the association between social isolation and mortality is mediated by loneliness. Social isolation was assessed in terms of contact with family and friends and participation in civic organizations in 6,500 men and women aged 52 and older who took part in the English Longitudinal Study of Ageing in 2004-2005. A standard questionnaire measure of loneliness was administered also. All-cause mortality was monitored up to March 2012 (mean follow-up 7.25 y) and results were analyzed using Cox proportional hazards regression.</p>	<p>Mortality was higher among more socially isolated and lonelier participants. However, after adjusting for demographic factors and baseline health, social isolation remained significantly associated with mortality (hazard ratio 1.26, 95% confidence interval, 1.08-1.48 for the top quintile of isolation), but loneliness did not (hazard ratio 0.92, 95% confidence interval, 0.78-1.09). The association of social isolation with mortality was unchanged when loneliness was included in the model. Both social isolation and loneliness were associated with increased mortality. However, the effect of loneliness was not independent of demographic characteristics or health problems and did not contribute to the risk associated with social isolation. Although both isolation and loneliness impair quality of life and well-being, efforts to reduce isolation are likely to be more relevant to mortality</p>

<p>Longman J, Passey M, Singer J and Morgan G (2013) The role of social isolation in frequent and/or avoidable hospitalisation: rural community-based service providers' perspectives, <i>Australian Health Review</i> 37 (2) : 223-231</p>	<p>A small study of service providers:</p> <p>Semi-structured interviews with 15 purposively sampled community-based service providers in rural New South Wales, Australia - thematically analysed.</p>	<p>Social isolation was repeatedly identified as an important contributory factor in frequent and/or avoidable admission. Patients were described as socially isolated in three broad and interrelating ways: living alone, not socialising and being isolated from family. Social isolation was perceived to contribute to admission by limiting opportunities offered by social interaction, including opportunities for improving mental health, pain tolerance and nutritional status; facilitating access to services; reinforcing healthful behaviours; and providing a monitoring role.</p> <p>Conclusion: Social isolation is perceived to contribute to admission in ways that may be amenable to intervention.</p> <p>Further research is needed to understand patients' perspectives on the role of social isolation in admission, in order to inform policy and programs aimed at reducing hospitalisation among older people with chronic disease.</p>
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<p>Coyle C E and Dugan E (2012) Social isolation, loneliness and health among older adults, <i>Journal of Aging and Health</i> 24 (8) : 1346-1363</p>	<p>Using data from the Leave Behind Questionnaire of the Health and Retirement Study [a longitudinal panel study that surveys a representative sample of more than 26,000 Americans over the age of 50 every two years] (2006 and 2008), (n = 11,825) several indicators of social isolation were scaled and the Hughes 3-Item Loneliness Scale was used. Two measures of health (self-rated health and mental health conditions) were examined using logistic regression.</p>	<p>Loneliness and social isolation were not highly correlated with one another (<math>r = 0.201</math>, <math>p = 0.000</math>). Loneliness was associated with higher odds of having a mental health problem (OR: 1.17; CI: [1.13, 1.21], <math>p = 0.000</math>); and isolation was associated with higher odds of reporting one's health as being fair/poor (OR:1.39; CI: [1.21, 1.59], <math>p = 0.000</math>). The results suggest that global measures of isolation, that fail to distinguish between social isolation and feelings of loneliness, may not detect the impact on physical and mental health in older adults</p>
<p>Ramic E, Pranjić N, Batic-Mujanović O, Karić E, Alibasić E and Alić A (2011) The effect of loneliness on Malnutrition in elderly population, <i>Medical Archives</i> 65 (2) : 92-95</p>	<p>The study was conducted in the municipality of Tuzla (Bosnia-Herzegovina) in 2009.-2010, in outpatient family medicine Simin Han. The survey covered a total of 200 elderly subjects (age &gt;65 years). Subject group consisted of 45% of people living alone, and 55% control group consisted of elderly patients who live in traditional family surroundings. Questionnaires used in this study are General geriatric assessment questionnaire and Mini nutritional status. *Note: this study conflates loneliness with living alone.</p>	<p>In the subject group (living alone) significantly more patients were on the verge of poverty. Members of the subject groups had significantly lower BMI categories (<math>p=0.03</math>) compared with the control group. People who lived alone were at increased risk of malnutrition (<math>p=0.030</math>), have reduced the number of daily meals, significantly lower daily intake of protein, fruits and vegetables in the diet in relation to persons living in a family environment. Significantly more patients with loss of appetite live alone and they are significantly more likely to self-report food problems.</p>

<p>Buchman A S, Boyle P A, Wilson R S, James B D, Leurgans S E, Arnold S E and Bennett D A (2010) Loneliness and the rate of motor decline in old age: the Rush Memory and Aging Project, a community-based cohort study, <i>BMC Geriatrics</i> 10 : 77</p>	<p>To test the hypothesis that feeling alone is associated with the rate of motor decline in community-dwelling older persons.</p> <p>At baseline, loneliness was assessed with a 5-item scale in 985 persons without dementia participating in the Rush Memory and Aging Project, a longitudinal community-based cohort study. Annual detailed assessment of 9 measures of muscle strength and 9 motor performances were summarized in a composite measure of global motor function.</p>	<p>Linear mixed-effects models which controlled for age, sex and education, showed that the level of loneliness at baseline was associated with the rate of motor decline (Estimate, -0.016; S.E. 0.006, p = 0.005). For each 1-point higher level of loneliness at baseline, motor decline was 40% more rapid; this effect was similar to the rate of motor decline observed in an average participant 4 years older at baseline. This amount of motor decline per year was associated with about a 50% increased risk of death. When terms for both feeling alone (loneliness) and being alone were considered together in a single model, both were relatively independent predictors of motor decline. The association between loneliness and motor decline persisted even after controlling for depressive symptoms, cognition, physical and cognitive activities, chronic conditions, as well as baseline disability or a history of stroke or Parkinson's disease.</p> <p>Conclusion: Among community-dwelling older persons, both feeling alone and being alone are associated with more rapid motor decline.</p>
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<p>Hawkley L C, Thisted R A and Cacioppo J T (2009) Loneliness predicts reduced physical activity: Cross-sectional &amp; longitudinal analyses., <i>Health Psychology</i> 28 (3) : 354-363</p>	<p>To determine cross-sectional and prospective associations between loneliness and physical activity, and to evaluate the roles of social control and emotion regulation as mediators of these associations. A population-based sample of 229 White, Black, and Hispanic men and women from Cook County Illinois, age 50 to 68 years at study onset, were tested annually for each of 3 years. The main outcome measures were physical activity probability, and changes in physical activity probability over the 3-year period.</p>	<p>Loneliness was associated with a significantly reduced odds of physical activity (OR = 0.65 per SD of loneliness) net of socio-demographic variables (age, gender, ethnicity, education, income), psychosocial variables (depressive symptoms, perceived stress, hostility, social support), and self-rated health. This association was mediated by hedonic emotion regulation, but not by social control as indexed by measures of social network size, marital status, contact with close ties, group membership, or religious group affiliation.</p> <p>Longitudinal analyses revealed that loneliness predicted diminished odds of physical activity in the next two years (OR = 0.61), and greater likelihood of transitioning from physical activity to inactivity (OR = 1.58).</p> <p>Conclusion: Loneliness among middle and older age adults is an independent risk factor for physical inactivity and increases the likelihood that physical activity will be discontinued over time.</p>
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<p>O’Luanaigh C and Lawlor B A (2008) Loneliness and the health of older people, <i>International Journal of Geriatric Psychiatry</i> 23 (12) : 1213-1221</p>	<p>Review: The authors used Pubmed to search for research and review papers looking at loneliness as a construct, how it is measured, and its health effects.</p>	<p>Loneliness has strong association with depression and may in fact be an independent risk factor for depression. Furthermore, loneliness appears to have a significant impact on physical health, being linked detrimentally to higher blood pressure, worse sleep, immune stress responses and worse cognition over time in older people. There is a relative deficiency in adequate evidence-based treatments for loneliness. Loneliness is common in older people and is associated with adverse health consequences both from a mental and physical health point of view.</p>
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**b) Causal and related factors**

Study	Methods	Findings
<p>Dahlberg L and McKee K J (2014) Correlates of social and emotional loneliness in older people: evidence from an English community study, <i>Aging &amp; Mental Health</i> 18 (4) : 504-514</p>	<p>This analysis sought to produce models of social and emotional loneliness in older people, using demographic, psychological and health, and social variables.</p> <p>Older people (aged 65+, n = 1255) from the Barnsley metropolitan area of the United Kingdom were recruited randomly from within a stratified sampling frame and received a questionnaire-based interview (response rate: 68.1%). The questionnaire contained items and scales on demographic, psychological and health, and social characteristics, and a validated measure of loneliness that assesses both social and emotional loneliness.</p>	<p>Of the respondents, 7.7% were found to be severely or very severely lonely, while another 38.3% were moderately lonely. Social and emotional loneliness shared 19.36% variance. Being male, being widowed, low well-being, low self-esteem, low-income comfort, low contact with family, low contact with friends, low activity, low perceived community integration, and receipt of community care were significant predictors of social loneliness (<math>R = 0.50</math>, <math>R(2) = 0.25</math>, <math>F(18, 979) = 18.17</math>, <math>p &lt; 0.001</math>). Being widowed, low well-being, low self-esteem, high activity restriction, low-income comfort, and non-receipt of informal care were significant predictors of emotional loneliness (<math>R = 0.55</math>, <math>R(2) = 0.30</math>, <math>F(18, 973) = 23.00</math>, <math>p &lt; 0.001</math>).</p> <p>Conclusion: This study provides further empirical support for the conceptual separation of emotional and social loneliness.</p>
<p>Tylova V, Ptáček R and Kuželová H (2013) Emotional and social loneliness in etiology and therapy of mental illness, <i>European Psychiatry</i> 28 (Supp 1) : 1</p>	<p>The aim of this pilot study was to describe the relationship of loneliness in four groups of psychiatric disorders (depression, dementia, schizophrenia and anxiety disorders). Loneliness was measured by UCLA Loneliness Scale - R (N=50 for each group).</p>	<p>Individuals with psychiatric disorders have higher level of loneliness (<math>p &lt; 0,01</math>), especially with dementia and depression (<math>p &lt; 0,1</math>), in comparison with the control group.</p> <p>Conclusion: Loneliness can be an important factor in the etiology and therapy of mental illness</p>

<p>Ibrahim R, Momtaz Y A and Hamid T A (2013) Social isolation in older Malaysians: prevalence and risk factors, <i>Psychogeriatrics</i> 13 (2) : 71-79</p>	<p>The purpose of this study was to identify prevalence and risk factors of social isolation in older Malaysians using a sample drawn from a national survey: 'Patterns of Social Relationships and Psychological Well-Being among Older Persons in Peninsular Malaysia'. Social isolation was measured with the Lubben Social Network Scale.</p>	<p>49.8% of older Malaysians are at risk for social isolation. The results of logistic regression analysis revealed that the number of sons, number of brothers, number of sisters, household size, self-rated health, place of residence, home ownership, sex and ethnicity were significantly associated with social isolation.</p>
<p>Victor C R and Bowling A (2012) A longitudinal analysis of loneliness among older people in Great Britain, <i>The Journal of Psychology: Interdisciplinary and Applied</i> 146 (3) : 313-331</p>	<p>A longitudinal study of loneliness among older people with a follow-up survey 8 years after the initial survey in 1999-2000. Of the 999 people aged 65+ years who were living in the community in the United Kingdom in the initial survey 583 participants were still alive, and 287 (58%) participated in the follow-up survey.</p>	<p>The overall prevalence of loneliness at both time points was very similar, with 9% reporting severe loneliness; 30% reporting that they were sometimes lonely, and 61% reporting that they were never lonely. 60% of participants had a stable loneliness rating between surveys, with 40-50% rating themselves as never lonely, and 20-25% rating themselves as persistently lonely; 25% demonstrated decreased loneliness, and approximately 15% demonstrated worse loneliness. Changes in loneliness were linked with changes in marital status, living arrangements, social networks, and physical health. Importantly improvements in physical health and improved social relationships were linked to reduced levels of loneliness. This result suggests that strategies to combat loneliness are not confined to the arena of social interventions such as befriending services, which aim to build and support social embeddedness, but may also result from the amelioration of chronic and long-term health conditions</p>

<p>Chou K-L (2010) Moderating effect of apolipoprotein genotype on loneliness leading to depressive symptoms in Chinese older adults., <i>The American Journal of Geriatric Psychiatry</i> 18 (4) : 313-322</p>	<p>This was a cross-sectional observational study. A population-based sample of 979 Chinese people from Taiwan aged 54 years and older was examined. A short-form of the Center for Epidemiologic Studies of Depression Scale was used and the genotype of APOE was obtained.</p>	<p>The interaction between loneliness and APOE 2 was found to be negatively associated with depressive symptoms in adjusted regression models. Loneliness was also positively correlated with symptoms of depression. Conclusion: These results suggest that the APOE 2 genotype decreases vulnerability to symptoms of depression in the presence of a social stressor, namely loneliness in this case, and has implications for the enhancement of well-being among older adults.</p>
<p>Shiovitz-Ezra S and Leitsch S (2010) The role of social relationships in predicting loneliness: The National Social Life, Health, and Aging Project., <i>Social Work Research</i> 34 (3) : 157-167</p>	<p>Using data collected (July 2005-March 2006, two-hour in-home interviews) with 3,005 adults, older people and very old people (57-85 years, 1,445 men and 1,550 women), during the National Social Life, Health and Aging project in the United States, this study uses hierarchical linear regression to look at the associations between measures of objective and subjective social network characteristics and how they relate to predictions of loneliness, across marital status, in later life.</p>	<p>Objective indicators such as frequency of contact with social network members were negatively associated with feelings of loneliness, net of background characteristics. However, the contribution of subjective perceptions of social ties, the quality of marriage in later life for those engaged in marital or cohabitating relationships, and the quality of familial ties for the non-married older adults are important. In a married-cohabitating subsample, the subjective perceptions of one's relationship with the partner explained, by itself, 7% of the variance in loneliness, while the quality of family ties explained an additional 6% of the variance in loneliness in the non-married sample.</p>

<p>Cacioppo J T, Hughes M E, Waite L J, Hawkley L C, and Thisted R A (2006) Loneliness as a specific risk factor for depressive symptoms: Cross-sectional and longitudinal analyses., <i>Psychology and Aging</i> 21 (1) : 140-151</p>	<p>Two population based studies to determine the extent to which loneliness is a unique risk factor for depressive symptoms</p> <p>In Study 1, a nationally representative sample of persons aged 54 and older completed a telephone interview as part of a study of health and aging.</p> <p>In Study 2, detailed measures of loneliness, social support, perceived stress, hostility, and demographic characteristics were collected over a 3-year period from a population-based sample of adults ages 50-67 years from Cook County, Illinois.</p>	<p>Higher levels of loneliness were associated with more depressive symptoms, net of the effects of age, gender, ethnicity, education, income, marital status, social support, and perceived stress.</p> <p>Loneliness was again associated with more depressive symptoms, net of demographic covariates, marital status, social support, hostility, and perceived stress. Latent variable growth models revealed reciprocal influences over time between loneliness and depressive symptomatology.</p>
<p>Adams K B, Sanders S and Auth E A (2004) Loneliness and depression in independent living retirement communities, <i>Aging and Mental Health</i> 8 (6) : 475-485</p>	<p>The Geriatric Depression Scale (GDS) and the UCLA Loneliness Scale to examine loneliness and depressive symptoms for older Americans aged 60-98 living in two retirement communities</p>	<p>Depression was predicted by being older, the number of chronic health conditions, grieving a recent loss, fewer neighbour visits, less participation in organised social activities and less church attendance. Grieving a recent loss, receiving fewer visits from friends, and having a less extensive social network predicted loneliness. In addition, loneliness scores explained about 8% of the unique variance in depression scores, suggesting it is an independent risk factor for depressive symptoms.</p>

<p>Long M V and Martin P (2000) Personality, relationship closeness, and loneliness of oldest old adults and their children, <i>Journals of Gerontology: Series B, Psychological Sciences and Social Sciences</i> 55B (5) : 311-319</p>	<p>This study examined the effects of personality, attachment, and dimensions of family solidarity on the loneliness of oldest old adults (i.e., 85 years and older) and their adult children. Parent-child dyads were formed with data collected from 100 parents and their children.</p>	<p>Results from path analyses indicated that oldest old adults' loneliness was reduced by affection both for and from their children. Although an anxious personality decreased affection, perceptions of attachment to children increased feelings of affection. In addition, parents and children who had anxious personalities were more likely to be lonely, whereas loneliness was decreased for those with an extraverted personality. Children's loneliness also was decreased by association with their parents and by the quality of their friendships. Perceptions of childhood attachment to parents increased current affection and association with and fulfillment of parents' expectations.</p>
<p>Foxall M J, Barron C R, von Dollen K, Jones P A and Shull K A. (1992) Predictors of loneliness in low vision adults, <i>Western Journal of Nursing Research</i> 14 (1) : 86-99</p>	<p>93 adults (aged 22-94 yrs) with low vision (LV) completed the UCLA Loneliness Scale, Self-Consciousness Scale, Life Orientation Test, and Social Support Questionnaire.</p>	<p>Subjects were lonely rarely or sometimes; thus, low vision does not necessarily cause more difficulty in adjustment than complete loss of vision. Pessimism was a factor in the loneliness of some subjects, and subjects with greater social anxiety reported significantly higher levels of loneliness. Satisfaction with social support was a better predictor of loneliness than was social support network. Thus, adults with low vision who are pessimistic, socially anxious, and dissatisfied with their existing social supports are at especially high risk for loneliness.</p>

**c) Reviews and overviews of interventions**

<b>Study</b>	<b>Findings</b>
<p>Cohen-Mansfield J and Perach R (2014) Interventions for Alleviating Loneliness Among Older Persons: A Critical Review, <i>American Journal of Health Promotion (in press)</i></p>	<p>34 interventions studied of which 12 were found to be effective and 15 potentially effective. 66% were group and 34% individual interventions. Group interventions were less often effective compared with individual interventions.</p> <p>Only one study reduced loneliness in comparison to a matched control group therefore this review suggests “there is no solid evidence of efficacy of any current intervention for older community-dwelling persons”</p> <p>Overall the use of technology was found to be effective in both on-to-one and group formats. Educational programmes appear to be effective in both on-to-one and group formats. Shared activities including indoor gardening, physical activity and visual art discussion appear to be effective.</p> <p>Videoconferencing between nursing home residents and family members showed particular promise</p>
<p>Hagan R, Manktelow R, Taylor B J and Mallett J (2014) Reducing loneliness amongst older people: a systematic search and narrative review, <i>Aging &amp; Mental Health</i></p>	<p>Seventeen relevant studies relating to loneliness interventions were analysed. Three studies reporting on new technologies and one on a group work intervention identified significant reductions in loneliness.</p>

<p>Fenney D (2013) <i>"Let's start assessing not assuming": a report about the approaches to tackling social isolation within Welsh local authorities</i>, Welsh Government: Social Research no 55/213</p>	<p>Author's synopsis:</p> <p>Despite a large amount of research into social isolation, there is still a limited evidence base around effective ways of tackling it. The evidence base can point to certain characteristics of effective initiatives but is much less clear about what is definitely not effective. The characteristics of effective interventions that have been identified thus far are:</p> <ul style="list-style-type: none"> <li>I. Groups with an educational theme or a specific support function</li> <li>II. Target specific groups, for example women, carers, or people with a health need, and the sample of participants in the evaluation reflects this targeting</li> <li>III. Participants consulted before the group was set up, or involved in some way in the running of the group (the element of co-production)</li> <li>IV. Interventions developed within or run by an existing service.</li> </ul> <p>Other initiatives may have significant value to the people who use them, but this is not the same as being effective. Additionally, in the case of older people, evaluations which rely solely on user feedback may be problematic.</p>
<p>Bernard S (2013) <i>Loneliness and social isolation among older people in North Yorkshire</i>, Social Policy Research Unit; University of York</p>	<p>Author's synopsis:</p> <p>One-to-one interventions such as befriending and community navigator services appear to be successful in alleviating loneliness and are valued by service users, although "before and after" evaluations tend to be lacking.</p> <p>Regular one-to-one contact is considered to be particularly successful for people who are frail and housebound.</p> <p>The success of group services in combating loneliness is unclear, with different studies reporting inconsistent findings, but they appear to be effective in improving health and wellbeing.</p>

<p>Nicholson N R (2012) A review of social isolation: an important but underassessed condition in older adults, <i>The Journal of Primary Prevention</i> 33 (2-3) : 137-152</p>	<p>There is an overabundance of evidence demonstrating numerous negative health outcomes and potential risk factors related to social isolation. However, there is scarce evidence that public health professionals are assessing social isolation in older persons, despite their unique access to very socially isolated, homebound older adults. Additionally, few viable interventions were found; therefore, it is advisable to focus on the prevention of social isolation in older adults.</p>
<p>Masi C M, Chen H Y, Hawkley L C and Cacioppo J T (2011) A meta-analysis of interventions to reduce loneliness, <i>Personality and Social Psychology Review</i> 15 (3) : 219-266</p>	<p>Qualitative reviews have identified four primary intervention strategies: (a) improving social skills, (b) enhancing social support, (c) increasing opportunities for social contact, and (d) addressing maladaptive social cognition.</p> <p>An integrative meta-analysis of loneliness reduction interventions revealed that single-group pre-post and nonrandomized comparison studies yielded larger mean effect sizes relative to randomized comparison studies. Among studies that used the latter design, the most successful interventions addressed maladaptive social cognition.</p>
<p>Dickens A P, Richards S H, Greaves C J and Campbell J L (2011) Interventions targeting social isolation in older people: a systematic review, <i>BMC Public Health</i> 11:647</p>	<p>Thirty two studies were included in the review. There was evidence of substantial heterogeneity in the interventions delivered and the overall quality of included studies indicated a medium to high risk of bias. Across the three domains of social, mental and physical health, 79% of group-based interventions and 55% of one-to-one interventions reported at least one improved participant outcome. Over 80% of participatory interventions produced beneficial effects across the same domains, compared with 44% of those categorised as non-participatory.</p> <p>Of interventions categorised as having a theoretical basis, 87% reported beneficial effects across the three domains compared with 59% of interventions with no evident theoretical foundation.</p> <p>Intervention type: 86% of those providing activities and 80% of those providing support resulted in improved participant outcomes, compared with 60% of home visiting and 25% of internet training interventions. Fifty eight percent of interventions that explicitly targeted socially isolated or lonely older people reported positive outcomes, compared with 80% of studies with no explicit targeting.</p> <p>Conclusion: Common characteristics of effective interventions were those developed within the context of a theoretical basis, and those offering social activity and/or support within a group format. Interventions in which older people are active participants also appeared more likely to be effective. Future interventions incorporating all of these characteristics may therefore be more successful in targeting social isolation in older people.</p>

<p>Windle K, Francis J and Coomber C; Social Care Institute for Excellence - SCIE (2011) <i>Preventing loneliness and social isolation: interventions and outcomes</i>, Social Care Institute for Excellence: Research briefing - 39 : 15pp</p>	<p>Classifies the types of interventions that are used in reducing social isolation and loneliness as: one-to-one interventions, including befriending, mentoring and gatekeeping (Community Navigator or Wayfinder initiatives); group services; and wider community engagement. Finds that: befriending or Community Navigator services were effective in reducing loneliness, social isolation and depression, and were cost-effective compared with usual care; the outcomes from mentoring services were less clear; older people who were part of a social group intervention seemed to have a greater chance of survival than those who had not received such a service; and users reported high satisfaction with services, benefiting from such interventions by increasing their social interaction and community involvement, taking up or going back to hobbies and participating in wider community activities.</p>
<p>Cann P, Jopling K, Victor C R, Scharf T, Burholt V, de Jong Gierveld J Fokkema T, van Tilburg T and Cattan M; Campaign to End Loneliness; Age UK Oxfordshire (2011) <i>Safeguarding the convoy:a call to action from the Campaign to End Loneliness</i>, Abingdon, Oxon: Age UK Oxfordshire : 60pp</p>	<p>A comprehensive overview of loneliness by several authors:</p> <p>Burholt noted women (but perhaps not men) residing in particularly sparsely populated areas could be one of the target groups for social activity intervention. As men seem to be affected by emotional loneliness (lack of a significant other), it is unlikely that interventions to promote social interaction will have an impact on this dimension of their lives, unless the intervention specifically precipitates the formation of a new emotionally close personal relationship (perhaps through befriending).</p> <p>De Jong Gierveld notes two successful projects. The first project, Esc@pe, was designed to reconnect chronically ill people with society via the internet. The second project aimed to promote friendly contacts between residents of an assisted living complex via small-scale group activities such as meeting each other at coffee time and participation in discussion groups.</p> <p>Cattan notes that effective interventions shared several characteristics: - they were group interventions with a focused educational input, or provided targeted support activities - they targeted specific groups, such as women, care-givers, the widowed, the physically inactive, or people with serious mental health problems - they were representative of the intended target group - they enabled some level of participant and/or facilitator control or consulted with the intended target group before the intervention - they were developed and conducted within an existing service.</p> <p>see also Cattan et al (2005) below</p>

<p>Cattan M, White M, Bond J and Learmouth A (2005) Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions (Structured abstract), <i>Ageing and Society</i> 25 : 41-67</p>	<p>Cochrane synopsis</p> <p>Thirty studies, with over 6,556 participants, were included in the review. Of these, 16 were randomised controlled trials (RCTs) and 10 were non-randomised controlled trials.</p> <p>Group activities with an educational input: five of the nine group interventions with an educational input demonstrated a significant reduction in loneliness. Two studies demonstrated that a structured approach to physical activity decreased loneliness.</p> <p>Group interventions providing social support: a social activation programme in a senior citizens' apartment building, bereavement support for recently widowed older people, therapy-type discussion groups for older people with mental health problems, and peer- and professionally-led counselling or discussion groups for adult daughters and daughters-in-law who were primary carers, all reported a significant reduction in loneliness or social isolation.</p> <p>One-to-one interventions: the majority of one-to-one interventions did not show a significant effect in reducing social isolation and/or loneliness.</p> <p>Home visits to provide assessment, information or provision of services: the only study in this category to demonstrate a significant reduction in social isolation and loneliness was a one-off home visit by a nurse to patients aged 75 years or more, which included a health assessment, advice, written health information and referrals if required. Three other RCTs did not show a significant effect in reducing social isolation and/or loneliness.</p> <p>Home visits or telephone contact to provide directed support or problem-solving: the four studies that investigated the effectiveness of directed support and problem-solving did not show a significant effect in reducing social isolation and/or loneliness.</p> <p>Social support in one-to-one interventions: the two studies that investigated one-to-one social support did not show a significant effect in reducing social isolation and/or loneliness.</p> <p>Effective interventions shared several characteristics: they were group interventions with a focused educational input, or they provided targeted support activities; they targeted specific groups; they stated that the experimental sample was representative of the intended target group; they enabled some level of participant and/or facilitator control or consulted with the intended target group before the intervention; they evaluated an existing service or activity or were developed and conducted within an existing service; the participants were identified from agency lists, obituaries or mass-media solicitation; they included some form of process evaluation and their quality was judged to be high. Physical activity interventions were also effective.</p> <p>Ineffective interventions shared one characteristic, they were one-to-one activities conducted in people's own homes.</p> <p>Authors' conclusions: Educational and social activity group interventions that target specific groups of people can alleviate social isolation and loneliness among older people. The effectiveness of home visiting and befriending schemes remains unclear</p>
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<p>Findlay R A E (2003) Interventions to reduce social isolation amongst older people: Where is the evidence?, <i>Ageing and Society</i> 23 (5) : 647-658</p>	<p>Reviews the empirical literature published over the last 20 years on the effectiveness of interventions that target social isolation amongst older people. Although numerous such interventions have been implemented worldwide, there is very little evidence to show that they work. Concludes that future intervention programmes aimed at reducing social isolation should have evaluation built into them at inception, and that the results of the evaluation studies, whether positive or negative, should be widely disseminated. Where possible, as a cost-effective measure, pilot or demonstration projects should precede these interventions.</p> <p>Suggests the following guidelines for future development. First, high quality approaches to the selection, training and support of the facilitators or co-ordinators of the interventions appear to be one of the most important factors underpinning successful interventions. Second, interventions are more likely to be successful if they involve older people in the planning, implementation and evaluation stages. Third, interventions have a greater chance of success if they utilise existing community resources and aim to build community capacity – the gatekeeper programme being a prime example.</p>
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**d) Information and education**

<b>Study</b>	<b>Methods</b>	<b>Findings</b>
<p>Nicholson N R Jr and Shellman J (2013) Decreasing social isolation in older adults: effects of an empowerment intervention offered through the CARELINK program, <i>Research in Gerontological Nursing</i> 6 (2) : 89-97</p>	<p>To test the effects of a university student model of care intervention offered through the CARELINK program on social isolation in a sample of community-dwelling older adults (N = 56). CARELINK is a community-university partnership program that provides health assessment and teaching by student nurses to community-dwelling-elderly clients with chronic health conditions, and links them to health and social service organizations in the community.</p>	<p>Older adults in the comparison group, who had not yet received the CARELINK program, were nearly 12 times more likely to be socially isolated. Results indicate the empowerment intervention offered through the CARELINK program had positive effects on reducing social isolation in older adults.</p>

e) Group interventions

Study	Methods	Findings
<p>Contact the Elderly <i>Reaching isolated older people: results of a project to evaluate alternative methods of service delivery and support to isolated and lonely older people,</i></p>	<p>A self assessment by participants of the effectiveness of Sunday afternoon tea parties  (*no indication of numbers and no control group)</p>	<p>General benefits</p> <ul style="list-style-type: none"> <li>• 60% felt less lonely</li> <li>• 51% felt more part of their community</li> <li>• 65% said they had made new friends</li> <li>• 82% had something to look forward to</li> </ul> <p>Health benefits</p> <ul style="list-style-type: none"> <li>• 50% said they feel their general health has improved</li> <li>• 26% said they see a doctor less often</li> <li>• 75% said they generally feel more optimistic and cheerful as a result of being a member of a group</li> </ul>
<p>Stacey J and Edwards A (2013) Resisting loneliness' dark pit: a narrative therapy approach, <i>Tizard Learning Disability Review</i> 18 (1) : 20-27</p>	<p>The study explored the group process, examined participants' experiences of the narrative therapy approach, and used an amended version of the UCLA loneliness scale to evaluate its effectiveness. All participants (n=5) were receiving a service from Oxfordshire Learning Disability NHS Trust. Over the eight two-hour sessions, the group enabled participants to develop "experience near" descriptions of loneliness and its effects, to identify and strengthen their abilities, strengths, and resources and to develop action plans.</p>	<p>Qualitative feedback from participants indicated that they found participation in the group a positive experience and it helped them to feel less lonely. Quantitative feedback on an adapted version of the UCLA loneliness scale suggested that most participants felt less lonely following the intervention. The small size of the study limits its generalisability.</p>

<p>Travers C and Bartlett H P (2011) Silver Memories: implementation and evaluation of a unique radio program for older people, <i>Aging &amp; Mental Health</i> 15 (2) : 169-177</p>	<p>Evaluation of a radio program, Silver Memories, specifically designed to address social isolation and loneliness in older people by broadcasting music (primarily), serials and other programs relevant to the period when older people grew up.</p> <p>One hundred and thirteen community-dwelling persons and residents of residential care facilities, aged 60 years and older participated in a three month evaluation of Silver Memories. They were asked to listen to the program daily and baseline and follow-up measures of depression, QOL and loneliness were obtained. Participants were also asked for their opinions regarding the program's quality and appeal.</p>	<p>A statistically significant improvement in measures of depression and QOL from baseline to follow-up but there was <b>no change on the measure of loneliness</b>. The results did not vary by living situation (community vs. residential care), whether the participant was lonely or not lonely, socially isolated or not isolated, or whether there had been any important changes in the participant's health or social circumstances throughout the evaluation.</p>
<p>Chiang K-J, Chu H, Chang H-J, Chung M-H, Chen C-H, Chiou H-Y and Chou K-R (2010) The effects of reminiscence therapy on psychological well-being, depression, and loneliness among the institutionalized aged, <i>International Journal of Geriatric Psychiatry</i> 25 (4) : 380-388</p>	<p>In an experimental study design, 92 institutionalised over 65 year old males were recruited and randomly assigned to two groups. Those participants in the experimental group received reminiscence therapy eight times over a 2 month period to examine the effects of this therapy on their psychological well-being.</p>	<p>After providing the reminiscence therapy to the experimental group, a 3 month follow-up review identified significant positive short-term effect on depression, psychological well-being, and loneliness, as compared to those in the control group.</p>

<p>Pettigrew S and Roberts M (2008/05) Addressing loneliness in later life, <i>Aging and Mental Health</i> 12 (3) : 302-309</p>	<p>Social and solitary pastimes with the potential to ameliorate older people's experiences of loneliness were investigated with the purpose of informing future interventions designed to reduce the negative consequences of social isolation. Several pastimes were described by 19 Australian interviewees as instrumental in determining whether the increasing social isolation they experience in older age are results of feelings of emotional isolation and thus of loneliness.</p>	<p>Specific behaviours that were found to ameliorate loneliness included using friends and family as an emotional resource, engaging in eating and drinking rituals as a means of maintaining social contacts, and spending time constructively by reading and gardening.</p>
<p>Ollonqvista K, Palkeinen H, Aaltonen T, Pohjola T, Puukka P, Hinkka K and Pöntinen S (2008) Alleviating loneliness among frail older people - findings from a randomised controlled trial, <i>International Journal of Mental Health Promotion</i> 10 (2) : 26-34</p>	<p>To determine the effects of a new rehabilitation model on loneliness among frail older people. The main part of the rehabilitation was based on group physical activities such as exercises in a sitting position, pool exercises, or resistance training in the gym. This randomised controlled multi-centre trial with a 12-month follow-up was implemented in Finland. A total of 708 community-dwelling people aged 65+ years with progressively decreasing functional capacity participated. Participants were randomly allocated to the intervention group (n = 343) or to the control group (n = 365). The intervention consisted of a network-based group rehabilitation programme designed for frail older people.</p>	<p>A 0.9-fold decrease in the proportion of participants feeling lonely was observed in the intervention group and a 1.1-fold increase in the control group. The results suggest that a physically orientated rehabilitation programme may reduce emotional loneliness</p>
<p>Winningham R G and Pike N L (2007) A cognitive intervention to enhance institutionalized older adults' social support networks and decrease loneliness., <i>Aging &amp; Mental Health</i> 11 (6) : 716-721</p>	<p>Institutionalised older adults were exposed to either a cognitive enhancement programme designed to enhance social networks or a control group. Measures of perceived social support and loneliness were administered before and after a 3-month, group-based intervention.</p>	<p>Those who did not participate in the intervention experienced a decrease in perceived social support and an increase in perceived loneliness. Participants in the intervention group stayed the same on the above measures.</p>

<p>Andersson L (1985) <i>Intervention against loneliness in a group of elderly women: An impact evaluation</i>, 20 (4) : 355-364</p>	<p>An intervention program, based on an interpretation of everyday loneliness as consisting of two parts - emotional and social estrangement - is assessed. The main variables were (1) availability of a confidant, (2) social comparison and (3) personal control (the CCC-design). The intervention took the form of small group meetings. The sample consisted of elderly women living in Stockholm and interviews were held before, and 6 months after participation in the program.</p>	<p>Participants had less feelings of loneliness, and also less feelings of meaninglessness, more social contacts, higher self-esteem, greater ability to trust and lower blood pressure (both systolic and diastolic) after the intervention. Women with several years of adult employment on the same job experienced the greatest decrease in feelings of loneliness. Also, woman who had had much contact with their grandparents, and women who had experienced a serious or protracted illness in the family during childhood, had the greatest decline in blood pressure. It was concluded that change in blood pressure operates through some other mechanism than the one which affects feelings of loneliness.</p>
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**f) Individual interventions – buddying, befriending, companionship, friendship enrichment / assisted friendship**

Study	Methods	Findings
<p>Knapp M, Bauer A, Perkins M and Snell T (2010)  <i>Building community capacity: making an economic case</i>, PSSRU</p>	<p>POPPs                      The evidence from POPPs showed that these activities were cost-effective: for every extra £1 spent on the POPP services, there was approximately a £1.20 additional benefit in savings on emergency bed days. Evidence also showed that for users receiving ‘well-being or emotional’ interventions, a category that included befriending, fewer reported being depressed/anxious following the intervention: 58% before and 63% after the intervention (Department of Health, 2009).</p> <p>The BFG                      Users of befriending services across parts of West Kent were very positive about the value to them of the support and links offered. This came through from the evaluation of the BFG – the Kent Brighter Futures Group project (Knapp et al. unpublished report, 2009). Under the BFG, befriending interventions were set up in a small number of sites. Using data on average costs of the services combined with robust evidence from previous research on the extent of loneliness and the effects of befriending, a model was developed to estimate some of the economic pay-offs from the programme. The costs of running the befriending groups (which were mostly reliant on volunteers) appeared to be smaller than the amount saved by the NHS from not having to treat so many older people with depression.</p>	

<p>Martina C M S and Stevens N L (2006) Breaking the cycle of loneliness?:psychological effects of a friendship enrichment program for older women, <i>Aging &amp; Mental Health</i> 10 (5) : 467-475</p>	<p>The study examines effects of participation in the friendship enrichment program, an intervention that is designed to stimulate improvement in friendship, self-esteem and subjective well-being, as well as reduction in loneliness among older women. The intervention group was compared to a control group of women who were interested in the program or in improving their friendships. All respondents had been studied at three points in time: at a baseline, prior to the program; three months later, and 9-10 months after baseline.</p>	<p>The program was successful in attracting lonely older women who were willing to work on their friendships. Many participants reported improvement in the quantity and quality of their friendships. The program was moderately successful in stimulating improvement in subjective well-being and awareness of the need for an active stance toward achieving goals in social relations, especially in friendship. Loneliness among the participants was reduced, but it also declined in the control group, and both groups continued to experience loneliness.</p>
<p>Butler S S (2006) Evaluating the senior companion program: a mixed-method approach, <i>Journal of Gerontological Social Work</i> 47 (1/2)</p>	<p>A mixed-method assessment of the Senior Companion Program (SCP), a federal program in the United States which provides volunteer opportunities with small stipends to low-income older adults, 60 years of age and older, who provide companionship and offer assistance to frail community elders. Through four standardized scales and open-ended questions regarding the impact of the SCP in their lives, 34 Senior Companion volunteers and 32 of their clients were interviewed.</p>	<p>Informants reported relatively large social networks and low levels of depression and loneliness. Thematic analysis of the qualitative data revealed the benefits of the program for both volunteers and their clients. Themes emerging from the narratives included: companionship, independence, reduced anxiety, giving, and rewards.</p>

<p>Stevens N L, Martina C M S and Westerhof G J (2006) Meeting the need to belong:predicting effects of a friendship enrichment program for older women, <i>The Gerontologist</i> 46 (4) : 495-502</p>	<p>Two studies from the Dutch Friendship Enrichment Program. A combination of semi-structured interviews and structured questionnaires was used to collect the data. A comparison group was also drawn from a nationwide representative sample. Participants were characterised by deprivation on the need to belong, that is, loss of a partner, higher levels of loneliness and negative affect, and lower positive affect compared with a a nationwide representative sample of same-age women.</p> <p>[See also Stevens N (2001)]</p>	<p>Participants were more likely than women in the control group to report development of new friendships and an improvement in friendship. The combination of new and improved friendships contributed to a significant reduction in loneliness within a year. There was no evidence of satiation in the need to belong among those who did not expand or improve friendships. Loss of partner had no influence on friendship development, but age did. Older participants were less likely to improve friendships.</p>
<p>Andrews G J, Gavin N, Begley S and Brodie D (2003) Assisting friendships, combating loneliness:users' views on a "befriending" scheme, <i>Ageing and Society</i> 23 (3) : 349-362</p>	<p>This study examines the opinions of the users of a local home-visiting befriending service in the United Kingdom. The befrienders are volunteers, and most users were introduced to the service by female relatives or health service professionals.</p>	<p>Positive opinions of the service predominated, and users placed a high value on the reliability of their befrienders. The service provided the users with an opportunity to develop a new bond, and many reported friendly reciprocity, which they recognised as an ingredient of "real" friendship. These friendships sometimes developed beyond the agreed rules and remits of the "formal" service, and incorporated various forms of supplementary assistance and social activities.</p>

<p>Stevens N (2001) Combating loneliness: a friendship enrichment programme for older women, <i>Ageing and Society</i> 21 (2) : 183-202</p>	<p>A study was designed that follows women as they attempt to realise their goals in friendship after finishing the programme. Interviews were held within a month and 10 to 12 months after the 12th lesson. Forty women who had participated in the friendship programme completed both interviews.</p>	<p>12.5 per cent were not lonely, 42.5 per cent were moderately lonely and 45 per cent were very lonely. The percentage of lonely persons was much higher than within the representative survey in which 28 per cent were moderately lonely and only four per cent very lonely. Thus the programme appears to be successful in attracting lonely older women, the majority of whom lacked a partner and lived alone.</p> <p>There was a significant reduction in average loneliness during the year following the friendship programme, from 7.0 (sd. 3.0) to 4.3 (sd. 3.1; <math>z = -4.75</math>, <math>p &lt; .001</math>). The percentage of women who were not lonely increased from 12.5 per cent to 35 per cent, while there was a dramatic decrease in the percentage that were very lonely from 45 per cent to 15 per cent.</p>
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**g) Individual interventions – companion birds and animals**

<b>Study</b>	<b>Methods</b>	<b>Findings</b>
<p>Gilbey A, McNicholas J and Collis G (2007) <i>A longitudinal test of the belief that companion animal ownership can help reduce loneliness.</i>, 20 (4) : 345-353</p>	<p>Over a six-month period, 59 participants completed the UCLA-Loneliness Scale when they were seeking to acquire a companion animal. Participants' loneliness was measured again six-months after their initial recruitment, by which time 35 of the 59 participants had acquired a new companion animal.</p>	<p>There was no evidence that companion animal acquisition helped to reduce levels of loneliness, irrespective of whether participants already owned a companion animal at the time of seeking to acquire a new companion animal, or the type of companion animal that was acquired. There was no evidence that participants who ultimately acquired a new companion animal differed from participants who did not, suggesting that the findings were not a consequence of a self-selection bias.</p>
<p>Banks M R and Banks W A (2002) The effects of animal-assisted therapy on loneliness in an elderly population in long term care facilities, <i>Journals of Gerontology: Series A, Biological Sciences and Medical Sciences</i> 57A (7) : M428-M432</p>	<p>To determine whether Animal-assisted therapy (AAT) in long-term care facilities can objectively decrease loneliness. Of 62 residents, 45 met inclusion criteria in the study. These 45 residents were administered the Demographic and Pet History Questionnaire (DPHQ) and Version 3 of the UCLA Loneliness Scale (UCLA-LS). They were then randomised into three groups (no AAT; AAT once a week; AAT 3 times a week) and retested with the UCLA-LS near the end of the 6-week study.</p>	<p>Use of the DPHQ showed that residents volunteering for the study had a strong life history of emotional intimacy with pets, and wished they currently had a pet. Compared with the no AAT group, AAT was shown to significantly reduce loneliness scores.</p>

<p>Essen J J, Cardiello F and Baun M (1996) Avian companionship in alleviation of depression, loneliness, and low morale of older adults in skilled rehabilitation units, <i>Psychological Reports</i> 78 (1) : 339-348</p>	<p>Assessed the effects of a companion bird on the depression, morale, and loneliness of 40 older adults (aged 65-91 yrs) in a skilled rehabilitation unit. Self-reported measures of depression, loneliness, and morale were completed on admission and 10 days later.</p>	<p>With the presence of a companion bird the experimental subjects showed a significant decrease in depression but none in morale or loneliness compared with the 20 controls who were without a bird.</p>
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**h) Individual interventions – coping strategies, leisure, mindfulness, meditation and mentoring**

Study	Methods	Findings
<p>Toepoel V (2013/08) Ageing, Leisure, and Social Connectedness: How could Leisure Help Reduce Social Isolation of Older People?, <i>Social Indicators Research</i> 113 (1) : 355-372</p>	<p>This study investigates the relation between leisure activities and the social status of the elderly based on a heterogeneous sample of the Dutch population. Close relationships are also analyzed to identify which people could serve as successful stimulators of leisure participation.</p>	<p>The social profile confirms that older people have fewer social contacts and often feel lonely. This study shows that leisure activities explain a significant part of older people's social connectedness. Voluntary work, cultural activities, holiday, sports, reading books, hobbies and shopping are found to be successful predictors for social connectedness of older people. Watching TV, listening to the radio, and spending time behind the computer (passive activities) were not associated with social connectedness. Friends correlate positively to participation in leisure activities. Partners play a role in participation in cultural activities and sports; parents play a role in participation in voluntary work and holidays; siblings play a role in voluntary work and sports; and children play a role in cultural activities, reading books, and shopping.</p>

<p>Schoenmakers E C, van Tilburg T G and Fokkema T (2012) Coping with loneliness: what do older adults suggest?, <i>Aging and Mental Health</i> 16 (3) : 353-360</p>	<p>Ways of coping with loneliness can be categorised into 2 types: active coping by improving relationships; and regulative coping by lowering expectations about relationships. This study explored how often older adults suggest these options to their lonely peers in various situations, and to what extent individual resources influence their suggestions. The participants were 1187 respondents aged 62-100 years from the Longitudinal Aging Study Amsterdam. The participants were presented with 4 written vignettes of lonely individuals, discriminated with regard to age, partner status, and health, were asked whether this loneliness can be alleviated by using various ways of coping.</p>	<p>In general, the respondents suggested both ways of coping. However, active coping was suggested less often to people who are older, in poor health, or lonely and by older adults who were employed in midlife and have high self-esteem. Regulative coping was suggested more often to people who are older and by older adults with a low educational level and with low mastery.</p>
<p>Creswell J D, Irwin M R, , Burklund L J, Lieberman M D, Arevalo J M G, Ma J, Crabb Breen E and Cole S W (2012) Mindfulness-based stress reduction training reduces loneliness and pro-inflammatory gene expression in older adults: A small randomized controlled trial., <i>Brain, Behavior, and Immunity</i> 26 (7) : 1095-1101</p>	<p>The present study tested whether the 8-week Mindfulness-Based Stress Reduction (MBSR) program (compared to a Wait-List control group) reduces loneliness and down-regulates loneliness-related pro-inflammatory gene expression in older adults (N = 40).</p>	<p>Mixed effect linear models indicated that the MBSR program reduced loneliness, compared to small increases in loneliness in the control group (treatment conditionxtime interaction: <math>F(1,35) = 7.86, p = .008</math>). Moreover, at baseline, there was an association between reported loneliness and upregulated pro-inflammatory NF-B-related gene expression in circulating leukocytes, and MBSR downregulated this NF-B-associated gene expression profile at post-treatment. Finally, there was a trend for MBSR to reduce C Reactive Protein (treatment conditionxtime interaction: <math>(F(1,33) = 3.39, p = .075)</math>). This work provides an initial indication that MBSR may be a novel treatment approach for reducing loneliness and related pro-inflammatory gene expression in older adults.</p>

<p>Dickens A P, Richards S H, Hawton A, Taylor R S, Greaves C J, Green C, Edwards R and Campbell J L (2011) An evaluation of the effectiveness of a community mentoring service for socially isolated older people: a controlled trial, <i>BMC Public Health</i> 11 : 218</p>	<p>This prospective controlled trial compared a sample of mentoring service clients (intervention group) with a matched control group recruited through general practice. One hundred and ninety five participants from each group were matched on mental wellbeing and social activity scores. Assessments were conducted at baseline and at six month follow-up. The primary outcome was the Short Form Health Survey v2 (SF-12) mental health component score (MCS). Secondary outcomes included the SF-12 physical health component score (PCS), EuroQol EQ-5D, Geriatric Depression Score (GDS-10), social activity, social support and morbidities.</p>	<p>The study found no evidence that mentoring was beneficial across a wide range of participant outcomes measuring health status, social activity and depression. No statistically significant between-group differences were observed at follow-up in the primary outcome (<math>p = 0.48</math>) and in most secondary outcomes. Identifying suitable matched pairs of intervention and control group participants proved challenging. Conclusion: The results of this trial provide no substantial evidence supporting the use of community mentoring as an effective means of alleviating social isolation in older people.</p>
<p>Duncan L and Weissenburger D (2003) Effects of a Brief Meditation Program on Well-being and Loneliness., <i>TCA Journal</i> 31 (1)</p>	<p>This study tested the hypothesis that brief meditations practiced daily over a short period of time would increase individuals' well being and decrease their susceptibility to loneliness. Twenty graduate students in a transpersonal psychology course served as participants in the study. Thirteen of the students practiced a brief meditation program, while seven students in the same class formed an untreated group who did not meditate. Their progress was measured by comparing their pre- and post-test scores on the Outcome Questionnaire-45 (OQ-45) and the UCLA Loneliness Scale</p>	<p>The brief meditation program contributed to a decrease in feelings of loneliness. Exposure to the transpersonal psychology class and meditation contributed to positive changes in their feelings of well-being.</p>

**i) Regional and environmental interventions – community and health networks, community shops, community agents**

<b>Study</b>	<b>Methods</b>	<b>Findings</b>
<p>Barrett H and Alcock J (2012) <i>Addressing rural isolation in the Central and Eastern region: the role of community shops</i>, Co-operative Group; Central and Eastern Region</p>	<p>Uses three case studies of English rural community shops to describe different approaches to tackling the problem of rural isolation. Describes the work of 'The Shop' in North Marston, Buckinghamshire which serves a population of about 700 people and outlines its value to the community; 'The Village Shop' in Feckenham, Worcestershire which has 90 volunteers, 300 shareholders, provides a catalyst for friendships and contacts new residents to personally invite them to use the shop; and 'The Village Store and Cafe in Cottingham, Northamptonshire' which has four part-time employees and serves a community of 900.</p>	<p>Concludes that community shops provide access to essential goods and services in areas where there is no alternative supply, can help to prevent and actively reduce social isolation, and deliver additional services such as cafés, post offices, refreshments, home deliveries.</p> <p>(*No formal evaluation of effect on loneliness)</p>

<p>Saito T, Kai I and Takizawa A (2012) Effects of a program to prevent social isolation on loneliness, depression, and subjective well-being of older adults: a randomized trial among older migrants in Japan, <i>Archives of Gerontology and Geriatrics</i> 55 (3) : 539-547</p>	<p>Using a randomized trial, this study examined the effect of a social isolation prevention program on loneliness, depression, and subjective well-being of the elderly in Japan. Among the elderly people who relocated to suburban Tokyo, 63 who responded to a pre-test were randomized and assessed 1 and 6 months after the program. Four sessions of a group-based program were designed to prevent social isolation by improving community knowledge and networking with other participants and community "gatekeepers." The Life Satisfaction Index A (LSI-A), Geriatric Depression Scale (GDS), Ando-Osada-Kodama (AOK) loneliness scale, social support, and other variables were used as outcomes of this study. A linear mixed model was used to compare 20 of the 21 people in the intervention group to 40 of the 42 in the control group.</p>	<p>The intervention program had a significant positive effect on LSI-A, social support, and familiarity with services scores and a significant negative effect on AOK over the study period. The program had no significant effect on depression. The findings of this study suggest that programs aimed at preventing social isolation are effective when they utilize existing community resources, are tailor-made based on the specific needs of the individual, and target people who can share similar experiences</p>
<p>Hatamian A, Pearmain D and Golden S (2012) <i>Outcomes of the active at 60 community agent programme: research report</i>, Department for Work and Pensions</p>	<p>The Active at 60 Community Agents programme was a Department for Work and Pensions fund to encourage community groups and their volunteers to help people approaching and post retirement (particularly those at risk of social isolation and loneliness in later life) to stay or become active and positively engaged with society. The programme aimed to reduce the risk of older people becoming socially isolated and lonely and to help improve people's later life, encouraging them to play an active role in their communities.</p>	<p>The evaluation found that the programme did contribute to alleviating these problems for many of the older people who took part and who did benefit, to varying extents and in many different ways, from the funded groups and activities. The opportunity to make friends and socialise, and get out of the house, were the two most commonly identified benefits to older people. Almost three-quarters (73 per cent) of group leaders who responded to the final funded groups' survey felt the programme had improved the mental wellbeing of older people at their group.</p>

<p>Trickey R, Kelley-Gillespie N and Farley O W (2008) A look at a community coming together to meet the needs of older adults: an evaluation of the Neighbors Helping Neighbors program, <i>Journal of Gerontological Social Work</i> 50 (3-4) : 81-98</p>	<p>The purpose of this study was to evaluate the effectiveness of the Neighbors Helping Neighbors program. The study included surveys of 49 community-residing older adults and 26 community volunteers.</p>	<p>Older adults perceived their quality of life to have improved after receiving social and environmental services; volunteers felt that their contributions to the program had made a significant difference in their community.</p>
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**j) Telephone based interventions**

<p><b>Study</b></p>	<p><b>Methods</b></p>	<p><b>Findings</b></p>
<p>Kime N, Cattan M and Bagnall A-M (2012) The delivery and management of telephone befriending services: whose needs are being met?, <i>Emerald Quality in Ageing and Older Adults</i> 13 (3) : 231-240</p>	<p>The “Call in Time Programme” was funded by the national charity Help the Aged and comprised eight telephone support projects in different locations, managed by different voluntary or charitable organisations. Researchers used semi-structured interviews and a Delphi questionnaire to obtain the views of project coordinators.</p>	<p>Although the projects were found to provide a much needed service for socially isolated and lonely older people, the study identified four key areas of concern: operational structure; promotion and publicity; recruitment of volunteers; referral processes.</p>

<p>Cattan M, Kime N and Bagnall A-M (2011) The use of telephone befriending in low level support for socially isolated older people:an evaluation, <i>Health and Social Care in the Community, vol 19, no 2</i> : 198-206</p>	<p>Despite lack of evidence, telephone befriending has been considered an effective low-level method to decrease loneliness among older people. This study evaluated the impact of a national befriending scheme for isolated and/or lonely older people, involving eight project sites across the UK 2007-2008. The purpose was to assess the impact of different models of telephone-based befriending services on older people's health and well-being. A mixed methods approach was used. This paper reports on the findings from 40 in-depth interviews with older service recipients.</p>	<p>The most important finding was that the service helped older people to gain confidence, re-engage with the community and become socially active again. Three topics were identified: why older people valued the service, what impact it had made on their health and well-being and what they wanted from the service. In addition, nine subthemes emerged: life is worth living, gaining a sense of belonging, knowing they had a friend, a healthy mind is a healthy body, <b>the alleviation of loneliness and anxiety</b>, increased self-confidence, ordinary conversation, a trusted and reliable service, the future-giving something back.</p>
<p>Morrow-Howell N, Becker-Kemppainen S and Judy L (1998) Evaluating an intervention for the elderly at increased risk of suicide, <i>Research on Social Work Practice</i> 8 (1) : 28-46</p>	<p>The programme targets older people at risk of suicide by virtue of depression, social isolation, and unmet needs. A two-group pre-test-post-test design with randomisation was used to test its effectiveness. After receiving standard crisis intervention, 31 participants provided a waiting list control group, whereas 30 participants received immediate treatment.</p>	<p>At 4 months, the amount of social contact was improved, and there was a trend toward the reduction of depressive symptomatology. At an 8-month observation, the difference between the clients' pre-test scores and post-test scores on unmet needs was marginally significant, with clients having fewer unmet needs after receiving services. This outreach strategy and telephone intervention is moderately effective in treating older adults with depressive symptomatology, social isolation, and unmet needs.</p>

## k) The use of technology – computers, the internet and videoconferencing

Study	Methods	Findings
Lelkes O (2013) Happier and less isolated: internet use in old age., <i>Journal of Poverty and Social Justice</i> 21 (1) : 33-46	The analysis is based on a large cross-sectional dataset, the European Social Survey (ESS2), which includes nationally representative samples of 50,000 individuals from 26 countries. <sup>3</sup> Altogether 11,000 persons aged 65 or over (our definition of old age) are included in the sample, of whom 2,471 are aged 80 or over. The fieldwork was conducted in 2010 and 2011. Uses three key measures of social isolation: lack of a close friend, meeting socially less than once a month and feeling lonely.	Those who use the internet regularly have a lower chance of being isolated, more so for those who use the internet every day, controlling for personal characteristics such as income, marital status, gender and health condition. Thus, personal social meetings and virtual contacts are complementary, rather than substituting for each other. Internet use may be a useful way of reducing social isolation. The positive impact of internet use is strongest among some of the most disadvantaged groups.

<p>Choi M, Kong S and Jung D (2012) Computer and internet interventions for loneliness and depression in older adults: a meta-analysis (Provisional abstract), <i>Database of Abstracts of Reviews of Effects</i> : 191-198</p>	<p>A meta-analysis to examine the effectiveness of computer and Internet training interventions intended to reduce loneliness and depression in older adults. Searches were performed to retrieve studies that had been published in peer-reviewed journals from January 2001 to July 2012 and written in English or Korean from PubMed, CINAHL, Scopus, the Cochrane Library, PsycINFO, KoreaMed, KMBase, KISS, MEDLIS, and RISS. A meta-analysis was employed to summarize the findings of studies on computer and Internet interventions for older adults. An overall mean weighted effect size for each outcome was calculated, and Q statistics were used to test the heterogeneity of variance in the effect sizes of the selected studies. As the Q statistics revealed heterogeneity, random effects models were chosen for the meta-analysis.</p>	<p>The overall mean weighted effect size for loneliness from five studies was statistically significant for decreased loneliness (<math>Z = 2.085</math>, <math>p = 0.037</math>). However, the overall mean weighted effect size for depression from five studies was not statistically significant (<math>Z = 1.528</math>, <math>p = 0.126</math>). These results suggest that computer and Internet programs were effective in managing loneliness among older adults.</p> <p>Computer-mediating social support was increased when older adults spent more time using the Internet, had more knowledge of the Internet, were of a lower age group, were women, and had fewer physical barriers.</p>
<p>Blazun H, Saranto K and Rissanen S (2012) Impact of computer training courses on reduction of loneliness of older people in Finland and Slovenia., <i>Computers in Human Behavior</i> 28 (4)</p>	<p>A quasi-experimental study to evaluate and discuss the self-reported level of loneliness of older people in Finland and Slovenia before and after a computer intervention. The study was conducted among 58 older participants at the baseline (<math>M = 72.4</math> years) and 45 older participants at the follow-up research study (<math>M = 72.9</math> years).</p>	<p>The study showed a significant difference in the reduction of loneliness between the countries, and a decreased level of loneliness of older people after completing the computer training course.</p>

<p>Ballantyne A, Trenwith L, Zubrinich S and Corlis M (2010) 'I feel less lonely': what older people say about participating in a social networking website, <i>Quality in Ageing and Older Adults</i> 11 (3) : 25-35</p>	<p>Findings from a qualitative pilot project that implemented an internet social networking intervention and evaluated the effect it had on older people's experience of temporal loneliness. The project was implemented over a three-month period and utilised an in-home, one-on-one education strategy. Six older people aged 69 to 85 years were recruited from a community aged care programme in South Australia. All participants were connected to the internet and provided with one-on-one tutoring in how to use the social networking site. To evaluate the project, data were collected through in-depth interviews with older people at the commencement and completion of the project. (Qualitative analysis)</p>	<p>The key findings to emerge from the inductive analysis of the data resulted in four major themes, these were: the participants' experience of loneliness; technology as an enabler; providing a supportive environment; connectivity.</p> <p>The findings from this pilot project demonstrate that the utilisation of an ISNW has the potential to reduce loneliness in older people, specifically temporal loneliness, but also loneliness as connectedness.</p>
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<p>Tsai H-H, Tsai Y-F, Wang H-H, Chang Y-C and Chue H H (2010) Videoconference program enhances social support, loneliness, and depressive status of elderly nursing home residents, <i>Aging and Mental Health</i> 14 (8) : 947-954</p>	<p>A quasi-experimental study was to evaluate the effectiveness of a videoconference intervention program in improving nursing home residents' social support, loneliness, and depressive status. Fourteen nursing homes were selected from various areas of Taiwan by purposive sampling. Elderly residents (N=?57) of these nursing homes, who met the inclusion criteria were divided into experimental (n=?24) and control (n=?33) groups. The experimental group received five min/week of videoconference interaction with their family members for three months, and the control group received regular care only. Data were collected through face-to face interviews on social support, loneliness, and depressive status using the Social Supportive Behavior Scale, University of California Los Angeles Loneliness Scale, and Geriatric Depression Scale, respectively, at three points (baseline, one week, and three months after baseline). Data were analyzed using the generalized estimating equation approach.</p>	<p>Subjects in the experimental group had significantly higher mean emotional and appraisal social support scores at one week and three months after baseline than those in the control group. Subjects in the experimental group also had lower mean loneliness scores at one week and three months after baseline than those in the control group, and lower mean depressive status scores at three months after baseline.</p> <p>Conclusion: The videoconference program alleviated depressive symptoms and loneliness in elderly residents in nursing homes.</p>
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<p>Ando R and Sakamoto A (2008) The effect of cyber-friends on loneliness and social anxiety: Differences between high and low self-evaluated physical attractiveness groups., <i>Computers in Human Behavior</i> 24 (3) : 993-1009</p>	<p>This study examined the causal relationships between the number of cyber-friends participants had and their social anxiety or loneliness. A two-wave panel study was conducted with 178 Japanese undergraduate students (63 men and 115 women; mean age was 20.29).</p> <p>[this study was of younger people and may not be transferable to older age groups]</p>	<p>Those who gave a low evaluation of their physical attractiveness, having a large number of cyber-friends lowered their social anxiety and reduced the loneliness felt in friendships. These effects differed by gender of the cyber-friends. In particular, for those who gave a low evaluation of their physical attractiveness, having a large number of cyber-friends of the same sex had a positive effect on social anxiety. In contrast, cyber-friends of the opposite sex had no effect on social anxiety, but had a complex effect upon loneliness. Namely, while a large number of cyber-friends of the opposite sex reduced the loneliness felt in friendships, it also heightened the loneliness felt in family relationships.</p>
<p>Fokkema T and Knipscheer K (2007) Escape loneliness by going digital:a quantitative and qualitative evaluation of a Dutch experiment in using ECT to overcome loneliness among older adults, Taylor &amp; Francis <i>Aging &amp; Mental Health</i> 11 (5) : 496-504</p>	<p>The study evaluates the outcome of an Internet at Home intervention experiment intended to decrease loneliness in chronically ill and physically handicapped older Dutch people through introducing them to the use of an electronic communication facility. To determine the effectiveness of the experiment in terms of reducing loneliness, 15 older people were interviewed three times: shortly before the start, two years later and immediately after termination of the experiment, while their loneliness scores at zero and post-measurement were compared with those of a control group.</p>	<p>Both participants and control groups experienced a reduction in loneliness over time, significantly greater for participants compared to controls. When looking in more detail, the effect of the experiment was only significant regarding emotional loneliness and among the highest educated.</p> <p>E-mail was found to facilitate social contact. Furthermore, the computer and Internet were often used to pass the time, taking people's minds off their loneliness. Unexpectedly, the intervention also improved people's self-confidence.</p>

**I) Multi-component interventions**

<b>Study</b>	<b>Methods</b>	<b>Findings</b>
<p>Honigh-de Vlaming R, Haveman-Nies A, Heinrich J, van't Veer P and de Groot L C (2013) Effect evaluation of a two-year complex intervention to reduce loneliness in non-institutionalised elderly Dutch people, <i>BMC Public Health</i> 13 : 984</p>	<p>This loneliness intervention includes multiple intervention components targeting individuals and their environment. Intervention components included a mass media campaign, information meetings, psychosocial group courses, social activities organised by neighbours, and training of intermediaries.</p> <p>A quasi-experimental pre-test post-test intervention study was conducted among non-institutionalised elderly people aged 65 years and over to evaluate the effectiveness of the intervention by comparing the intervention community and the control community. Data on outputs, initial and long-term outcomes, and the overall goal were collected by self-administered questionnaires. Data of 858 elderly people were available for the analyses. To assess the effect linear regression analyses with adjustments for age, gender, church attendance, and mental health were used. In addition, the process evaluation provided information about the reach of the intervention components.</p>	<p>After two years, 39% of the elderly people were familiar with the intervention programme. The intervention group scored more favourably than the control group on three subscales of the initial outcome, motivation (-4.4%, 95% CI-8.3--0.7), perceived social support (-8.2%, 95% CI-13.6--2.4), and subjective norm (-11.5%, 95% CI-17.4--5.4). However, no overall effects were observed for the long-term outcome, social support, and overall goal, loneliness.</p> <p>Conclusion: Two years after its initiation the reach of the intervention programme was modest. Though no effect of the complex intervention was found on social support and loneliness, more favourable scores on loneliness literacy subscales were induced</p>

<p>Local Government Association (2012) <i>Combating loneliness: a guide for local authorities</i></p>	<p>This guide offers a brief summary of key research on the issue of loneliness, and some practical steps every local authority, working in partnership with other statutory bodies and their partners, can take to tackle loneliness, setting them in the context of an overall framework for action. The described framework comprises 3 tiers of actions: at the strategic level across the local authority; at the level of the community; and at the level of the individual.</p> <p>The guide suggests the following</p> <p>Key messages</p> <ul style="list-style-type: none"> <li>• Loneliness is a significant and growing issue for many older people.</li> <li>• Its impacts are devastating and costly – with comparable health impacts to smoking and obesity; and close links to deprivation.</li> <li>• Loneliness is amenable to a number of effective interventions, which are often low cost, particularly when voluntary effort is harnessed.</li> <li>• Taking action to address loneliness can reduce the need for health and care services in future.</li> <li>• Effective action to combat loneliness is best delivered in partnership.</li> <li>• Action to combat loneliness should take place in the context of a wider strategy to promote older people’s wellbeing.</li> </ul>	<p>Framework for action</p> <ul style="list-style-type: none"> <li>• Include ‘addressing loneliness’ as an outcome measure of council strategies for ageing – ensuring that it is recognised and acted upon across every area of the authority’s work.</li> <li>• Work at the neighbourhood level, to understand and build on existing community capacity and assets.</li> <li>• Recognise and respond to individual needs and circumstances by both making sure general services are geared up to meet the needs of those who are lonely, as well as providing specific interventions as required.</li> </ul> <p>First steps</p> <ul style="list-style-type: none"> <li>• Engage with other partners – loneliness is a multi-faceted issue and effective responses should be delivered in cross authority partnerships including the voluntary and community sectors.</li> <li>• Define the local loneliness issue – understand the nature of the problem and who is at risk in your area.</li> <li>• Agree a plan of action to reduce loneliness, and a way of measuring progress over time.</li> <li>• Involve older people, including those experiencing or at risk of loneliness, in mapping local assets, determining responses, and co-producing solutions.</li> </ul>
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<p>Ferguson L (2012) Tackling loneliness in older age: why we need action by all ages, <i>Quality in Ageing and Older Adults</i> 13 (4) : 264-269</p>	<p>Collates academic research, along with more informal evidence from voluntary sector groups to support an approach to policy and practice that tackles loneliness in older age. Supports the view that preventing loneliness through action by all ages will ultimately improve the health and wellbeing of older people, and that an asset-based, cross-agency movement to creating and maintaining connections in older age could deliver savings to both health and social care in the long term.</p>	<p>Supports a multi-component approach. Drawing on evidence from UK and US research that states the health impact of loneliness, a view of the multi-layered action required shows that local health bodies, charities and groups as well as neighbours and businesses have crucial parts to play</p> <p>(*presents no additional evidence)</p>
<p>Bartlett H, Warburton J, Lui C-W and Peach L (2008) <i>Cross Government Project to Reduce Social Isolation of</i>, Brisbane: Australasian Centre on Ageing, The University of Queensland</p>	<p>An evaluation of the Queensland Cross-Government Project to Reduce Social Isolation of Older People covering Greenvale: Seniors Connecting; Hervey Bay: Connecting Points, Connecting People; Fitness Queensland: Steady Steps Falls Prevention Program; Multicultural Development Association: Culturally Appropriate Volunteer Service (CAVS) and Brisbane City Council: Linking Seniors Social Inclusion Project</p>	<p>Three key success factors were identified across the five demonstration projects:</p> <ul style="list-style-type: none"> <li>a) focus on the causal factors of social isolation</li> <li>b) models that clearly linked activities to local needs</li> <li>c) effective leadership.</li> </ul>

**m) Interventions in residential care**

<b>Study</b>	<b>Methods</b>	<b>Findings</b>
Victor C R (2012) Loneliness in care homes: a neglected area of research?, <i>Future Medicine Aging Health</i> 8 (6) : 637-646	Approximately 5% of older people aged 65 years and over in developed countries live in care homes and these represent the frailest and most vulnerable members of this population group. Levels of morbidity, especially dementia and cognitive impairment, are high, making it challenging to conduct research with these groups. The prevalence of severe loneliness among older people living in care homes is at least double that of community-dwelling populations: 22-42% for the care population compared with 10% for the community population.	This review failed to identify compelling evidence for the effectiveness of interventions to remediate loneliness in care home populations.
Tsai H-H, Tsai Y-F, Wang H-H, Chang Y-C and Chue H H (2010) Videoconference program enhances social support, loneliness, and depressive status of elderly nursing home residents, <i>Aging and Mental Health</i> 14 (8) : 947-954	See the use of technology – section k	
Winningham R G and Pike N L (2007) A cognitive intervention to enhance institutionalized older adults' social support networks and decrease loneliness., <i>Aging &amp; Mental Health</i> 11 (6) : 716-721	See group interventions – section e	

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