Older people and social isolation

A review of the evidence

Sarah Kinsella
Wirral Council Business &
Public Health Intelligence Team
April 2015

Older people and social isolation: a review of the evidence

by Sarah Kinsella,
Senior Public Health Information Analyst,
Wirral Council Business and Public Health Intelligence Team,
Old Market House, Hamilton Street, Birkenhead, Wirral CH41 5AL

☎ 0151 666 5145
✉ sarahkinsella@wirral.gov.uk

Current Version: 0.2

Version History	Date	Author	Reviewer	Actions
0.1	12/5/2015	Sarah Kinsella	Brendan Collins, Beverley Murray, Fiona Johnstone	Minor amends e.g referencing

Report Overview

Abstract	Review of the current literature and evidence on effective interventions to tackle social isolation amongst older people.
Intended or potential audience	**External** • Community & voluntary sector organisations who work with older people in Wirral • Councillors • CCG and CT colleagues **Internal** • JSNA Bulletin • One Brief • DMT (plus other departmental DMTs) • Colleagues from DASS
Links with other topic areas	• Long term conditions • Carers • Transport • Arts/social & cultural activities • Continuing adult education • Mental health, dementia • Bereavement

Executive Summary

Reducing social isolation is likely to have positive effects on health and mortality: Greater benefits were observed (in reducing mortality) from improving levels of social isolation, compared to reducing loneliness.

Targeting has the greatest impact: Focussing public health intervention efforts on those most at risk, e.g those who live alone, are on low incomes, have poorer health, been recently bereaved or are carers – rather than *all* older people - is more effective.

There is still considerable stigma attached to being lonely: and initiatives should bear this in mind. For example, their marketing materials, should not use the 'L' word (as Age UK call loneliness), particularly if they wish to attract more men

Initiatives based on evidence were more effective than those that were not: 87% of interventions based on evidence reported beneficial effects compared to 59% of interventions which were not. Studies aiming to achieve and maintain characteristics essential for positive mental health (e.g people realising their own abilities, having a purpose in life, a sense of belonging and support) appeared to be most effective.

Group activities achieve good outcomes: 79% of group based interventions reported at least one improved outcome, compared to 55% of one-to-one interventions.

Group activities which have an arts, educational learning or social focus are particularly beneficial: A systematic review supported this finding that group interventions involving some form of educational, training, arts or social activity that target specific groups of people are the most effective.

Participatory initiatives are most beneficial: Positive effects are reported in 80% of initiatives which were participatory, compared to 44% of non-participatory initiatives.

One-to-one initiatives (e.g befriending) only appears to be effective in certain circumstances: Namely, when the befriender and recipient have enough in common to build a genuine relationship. They do not appear to reduce use of health services, but can result in reductions in depression and improvements in quality of life. One-to-one interventions targeted at specific groups of older people (e.g the recently bereaved, or recently discharged from hospital), may offer more benefit than trying to reach to all older people. Currently, there is little evidence of benefit for mentoring support.

The impact of new technologies is inconclusive: The evidence is often contradictory on the subject of new technologies, but there is some evidence of benefit for training on the use of computers, the internet, Skype (particularly for specific groups such as carers)

Real and practical barriers to reducing isolation should be the focus of joint efforts by all agencies concerned with the wellbeing of older people: particularly those relating to transport, toilets, continence issues and long term health conditions

"Individuals who are socially isolated are between two and five times more likely than those who have strong social ties to die prematurely"
Marmot, M (2010)

Introduction

The terms 'loneliness' and 'isolation' are sometimes used in everyday conversation as if they were synonymous, but in the literature, a distinction is often drawn between these two linked, but different concepts. 'Social isolation' is usually defined as an objective measure of the number of social interactions a person has with other people, whilst 'loneliness' is seen as a more subjective feeling of dissatisfaction with the number (or quality) of existing social contacts. It is therefore possible to feel yourself to be lonely, without being isolated for example [Age UK, 2010]. However, for many, loneliness is triggered by the external environment (including being socially isolated). Regardless of the semantics, both conditions are generally experienced negatively and the resulting impacts (individual, community, societal) are likewise negative.

Social isolation and loneliness are not experiences which are limited to older people - they can be experienced at any age. The risk factors which make them more likely however, do occur more frequently in older age (e.g bereavement, reduced income following retirement, poor physical health etc..), and this puts older people at particular risk.

Social isolation and loneliness is of importance to public health, because social relationships are central to well-being and are critical for maintaining good health [Steptoe et al 2013]. Conversely, the lack of them in older age puts people at higher risk of a variety of poorer outcomes such as depression, re-hospitalisation (4 to 5 times more likely within a year of discharge), falls, unhealthy behaviours such as heavy drinking and smoking, being sedentary, lack of adherence with medical treatment or medication and an increased susceptibility to infectious diseases such as the common cold [Steptoe et al 2013, Nicholson et al 2012]. An increased risk of dying from cancer, CHD, stroke or after heart surgery has also been observed, as well as increased mortality from any cause [Cacciopo et al 2003, Steptoe et al 2013]. Increases in blood pressure have been found which are independent of age, gender, race, cardiovascular risk factors (including smoking), medications, health conditions and the effects of depressive symptoms [SCIE, 2011].

The impact on mortality of social isolation has been found to be comparable with the major, well established risk factors for premature death such as smoking and alcohol consumption, and exceeds that of physical inactivity and obesity [Wirral PHAR 2012-13, Holt-Lunstad et al 2010]. Those who are socially isolated have higher usage of health and social care services [Windle et al 2014] and are also at increased risk of entering institutional care [Nicholson et al 2012].

Psychological impacts are equally poor, including increased risk of suicide (for men), cognitive decline and dementia. Conversely, participation in social activities and having an extensive social network is a protective factor against dementia [Nicholson et al 2012, Pitkala et al, 2011].

Although research has indicated that the greatest reductions in mortality would result from reducing isolation [Steptoe et al 2013], there is also value in reducing loneliness as this would improve quality of life, reduce health and social care service use, limit dependence on more costly intensive services and 'compress' morbidity (time spent in poor health). Supporting social engagement may also provide benefits to the wider community, e.g possible 'harnessing' of potential contribution via volunteering and caring [Windle et al 2011, Ubido et al 2014].

There is also an increasing focus on enabling people to maintain a healthy independence, as well as the traditional focus on helping those older people already living in a poorer health – and an important part of this is achieving and maintaining positive mental health. Psychological theory defines several criteria as being crucial for positive psychological functioning; self-acceptance, positive relations with others; autonomy, environmental mastery, purpose in life and personal growth. NIHCE have also adopted a definition of positive mental health which includes a feeling of optimism, life satisfaction, people realising their own abilities, having a purpose in life and a sense of belonging and support [NIHCE, 2008].

Isolation is being by yourself. Loneliness is not liking it"
[Beach et al, 2014]

Prevalence

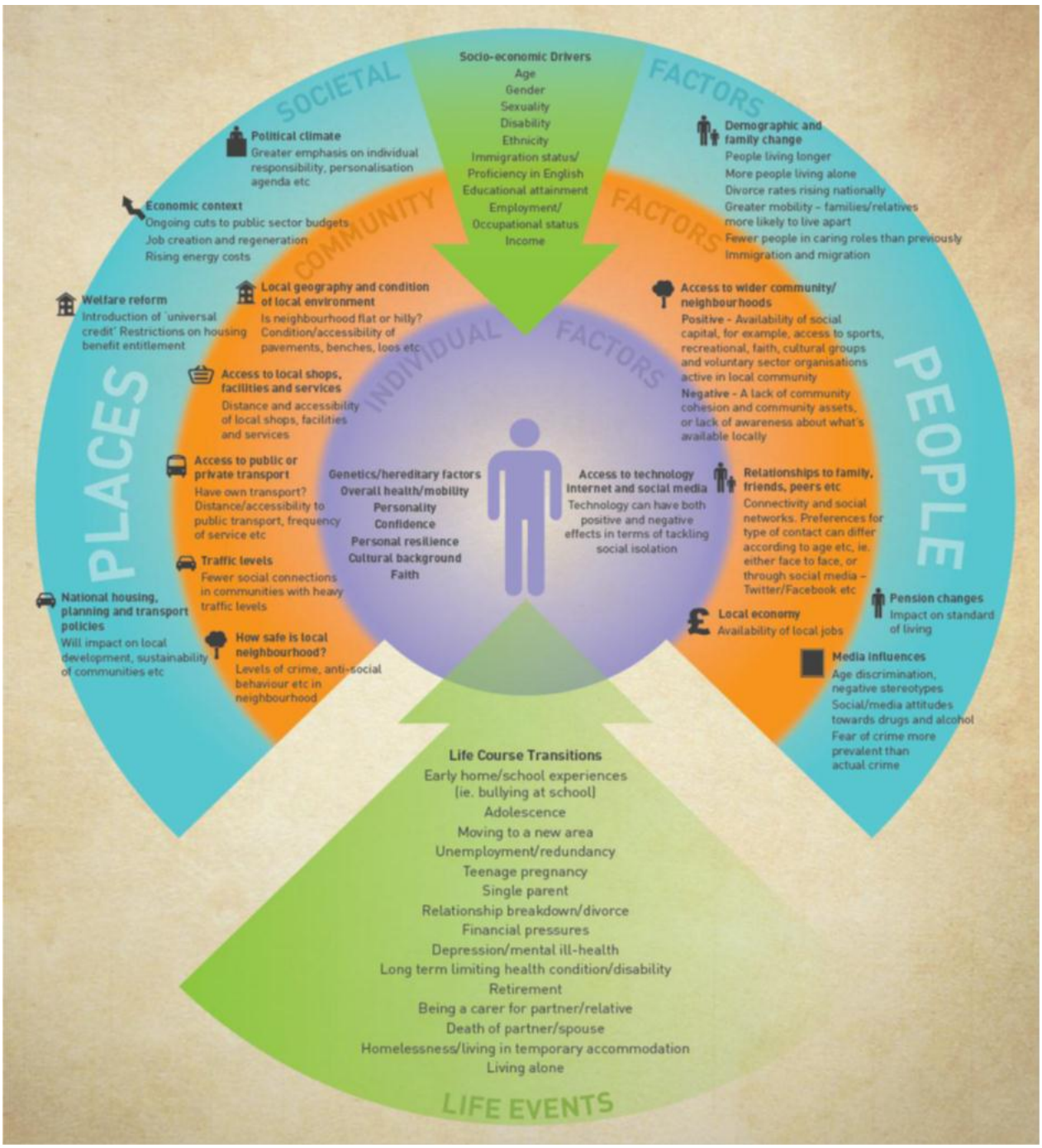
Current estimates indicate that anything between 10% and 43% of older adults (living in the community) experience social isolation [Nicholson et al 2012], while between 5% and 16% per cent report loneliness [SCIE, 2014]. Amongst those aged 80+ this figure rises significantly, with half reporting that they are lonely [IRISS, 2014].Increasing family dispersal and growing numbers of older people, particularly the 'older-old' (those aged 80+) mean that the number of older people experiencing social isolation are highly likely to increase [Windle et al 2011].

One in five of the population of Wirral are aged over 65 (20.2% of all residents). In numbers, this means there are 65,000 older people aged 65+ living in Wirral, with 18,000 aged 80 and over (ONS mid year population estimates). This means that anything between 6,200 and 25,000 older people aged 65+ are socially isolated in Wirral. Wirral has a slightly higher percentage of its population in the older age groups, so it is likely that social isolation is an even more pressing issue locally than it is nationally.

Risk factors for social isolation

Anybody can be socially isolated, but older age is in itself, one of the more significant risk factors for social isolation. This is due to older people being more likely than younger people to experience a higher number of the risk factors such as impaired mobility, a reduction in income, becoming a carer, or the death of close friends or relatives [Windle et al 2014]. An overview of the risk factors is summarised in the diagram below.

Figure 1: Social isolation: an overview of the risk factors



Source: Bristol City Council, 'Sensory Impairment & Social Isolation' (2014)

Identifying those at risk and assessment

One of the first steps to tackle social isolation is to identify those most at risk. It should be remembered however, that loneliness is a stigmatising and individual experience, which can make it difficult to identify people experiencing it [Jopling et al 2015]. Men in particular appear loath to admit to feelings of isolation and loneliness [Beach et al 2014]. The Campaign to End Loneliness have recommended that Local Authorities should try to map where lonely and isolated older people are likely to live in their areas and locally, the Wirral Business & Public Health Intelligence Team have already done this (in a piece of work linked to this one) and identified several areas of Wirral where efforts to reduce isolation and loneliness could be concentrated. This review will cover what the evidence shows to be promising initiatives in the field.

In clinical settings, the Lubben Social Network Scale (LSNS) has been shown to be successful at identifying those at risk of social isolation [Nicholson 2012]. There is an extended 18-item version, and a shorter, 6-item version, which may be more practical for services and initiatives working with older people to use.

In other settings, having 'guided' conversations, in a safe environment, about how someone is feeling and what support they might need has been recommended in the recent report, Promising Approaches to Tackling Loneliness and Isolation in Later Life (Jopling, 2015).

Findings from the literature

Five million people regard the television as their main form of company in the UK
Campaign to End Loneliness (2015)

<u>Identifying and targeting those at risk works best</u>

A recent systematic review found that only 12 out of 38 studies on social isolation specifically targeted people who identified as being socially isolated, leading the authors to make the point that if some or all study participants do not *have* the issue being addressed by an intervention at baseline, the true treatment effects cannot be known [Dickens et al, 2011].

The 2012 report of the English Longitudinal Study of Ageing (ELSA) suggested that focussing public health intervention efforts on less wealthy, less healthy older people and on improving access to transport is likely to have the greatest impact in alleviating social isolation [Bristol Council, 2014]. Other research has suggested targeting people following pivotal moments in their lives, e.g the recently bereaved, those who have recently become carers (REF).

There is still a stigma attached to being lonely and isolated

Although as the above point makes clear, initiatives *should* be targeted, it is also apparent from the literature that many older people, are deterred from taking part in an initiatives aimed at 'lonely people' because there is still a stigma and shame attached to being lonely [Beach et al 2014]. The authors note that many older men in particular do not identify with being older, will not admit to being lonely and do not wish to be the passive recipient of a service [Beach et al 2014]. So whilst it may therefore be sensible to target those at highest risk of social isolation, this should not be made this explicit in marketing materials, particularly those aimed at men. The limited participation of men in initiatives is of concern (notwithstanding some of this effect will be due to the women living longer into older age than men).

Initiatives which are participatory are most beneficial

Positive effects are reported in 80% of initiatives which were participatory, compared to 44% of initiatives which were classed as non-participatory [Dickens et al, Windle et al 2011]. Put simply, initiatives which ask older people what they want are most effective because they allow the intervention to be tailored to a groups specific needs [Windle et al 201]). This, along with the evidence (see below point) that group activities are slightly more successful than one-to-one activities also support the findings of a recent report which examined the impact of community assets in Wirral [Whelan et al 2014]. It found that regardless of initial aims and objectives, all the initiatives (or assets) examined had a 'marked' impact upon health and wellbeing, particularly mental health. The report concluded that community assets helped individuals, "feel positive about themselves, provided a sense of purpose... and helped people overcome loneliness and social exclusion", particularly for more vulnerable members of society, such as older people and those with disabilities. Building community capacity was mentioned by the Marmot Review as having an important role in maintaining and improving health and wellbeing (Marmot, 2010).

Group based support and activities appear to have the best outcomes

A Finnish study found that socially stimulating group activities not only reduced isolation and loneliness in older people, but improved well-being and cognitive function and were cost-effective [Pitkala et al 2011]. Three activities were trialled (depending on the persons preference, the older people were involved in choosing their own activities (other research highlights the importance of this), exercise, art activities and therapeutic writing – all three also contained discussion opportunities.

Research has long pointed to positive effects on cognition from increased exercise, but the Finnish trial found positive effects for all three of the *mentally* stimulating activities examined. The positive effects were found to have persisted at 1-year follow up and this was attributed to participants making new friends and continuing to meet independently after the study period [Pitkala et al, 2011]. The authors did note that all of the older

people became involved because they wanted to change their lives and none had sensory impairments or mobility issues (to ensure greater homogeneity of the group), so success and replicability in other contexts could well differ from that achieved here.

The evidence base appears to show that the arts, musical and learning/education type activities have positive effects on mental health and wellbeing and increase social contacts. A 14 week community singing group initiative in the UK for example, found positive results (reductions in depression and anxiety, increases in mental health related quality of life at 3 months). Reductions in depression and anxiety had disappeared by 6 month follow-up, although health related quality of life improvements remained however [Skingley et al, 2015]. Similarly, a song-based reminiscence initiative from Canada found significant increases in life satisfaction following participation in the project [Haslam et al 2014], as did a hen-keeping project where volunteers were trained to establish hen-houses and support other older people to maintain them [Cook et al 2013]. Interestingly, the hen-keeping project did not result in any changes in reported loneliness, but there was a significant improvement in well-being at 9 month follow up ($p=0.000$). Encouraging older people to sign up for courses with The University of the Third Age (U3A, which is available online and face to face, with many groups in Wirral) may be effective in delaying cognitive decline and increasing social contacts [Swindell, 1993].

'Group based activities' is a term which encompasses a huge number of very different projects, but the common factors to those which appeared to have successful results were: initiatives which were participatory; initiatives which targeted their clients and those which provided arts and/or learning related content. In addition, the aims of many of the studies which found positive results are consistent with many of the criteria identified by WHO and NICE for achieving and maintaining positive mental health, such as the projects enabling people to realise their own abilities, have a purpose in life and foster a sense of belonging and support.

<u>One-to-One support (e.g Befriending, Wayfinders, mentoring, Community Navigators)</u>

The evidence around one-to-one support is a little more mixed than is the case for group intervention. For example, one systematic review [Catton et al 2005] found one-to-one interventions to be ineffective in reducing loneliness, but it has since been noted that this may be because the evidence shows that these type of schemes work best when the befriender is 'like' the recipient and a reciprocal relationship can be built. Of all the studies considered by the 2005 review (n=30), none of the one-to-one studies had this characteristic. The authors also point out that a previous systematic review suggested that one-to-one mental health promotion interventions are valuable when targeted at specific groups of the older people, such as the bereaved (particularly widowed people) and carers.

A more recent systematic review [Knapp et al 2010] showed that, compared with usual care and support (which could be doing nothing), befriending did have a modest but significant effect on depressive symptoms in the short term. They do not appear to be

cost-effective (in the short-term) when usage of health services alone is considered, but are cost-effective when positive effects on quality of life are factored in [Knapp et al 2010].

A London School of Economics (LSE) review of the cost-effectiveness of various mental health related projects (of which befriending was one), found that befriending interventions were unlikely to achieve cost savings to the public purse, but they did improve quality of life at a low cost (their conclusions were partly based on the above Knapp study). Several studies have noted that targeting befriending specifically at those of high risk for social isolation and loneliness (e.g. older people discharged from hospital) may potentially offer better returns than befriending aimed at older people in general [LSE 2011, Bristol Council, 2014].

The evidence regarding mentoring (support including signposting and activities and services by trained volunteers) is inconclusive, with one UK study finding significant improvements in social support at 1 year follow up [Greaves et al 2006], whilst another paper which examined *the same intervention*, concluded there was no impact on mental wellbeing [Dickens et al, 2011].

<u>There is little evidence about interventions for the most frail and/or excluded older people</u>

There are few studies on interventions specifically for men, people who live in care homes, or people from BME communities. Although women are over-represented amongst older people, so it is appropriate interventions focus on them, the literature tends to be dominated by studies concentrating on relatively healthy, older women and this does affect how much the results can be extrapolated to other populations [Windle et al 2014).

<u>The evidence on the role of new technologies is inconsistent</u>

A study from Norway looked at how computer classes for carers (caring for a spouse) impacted on social contacts and their sense of support and found positive effects [Torp et al, 2008]. An observational study from Sweden found a programme which promoted social activities based on the internet, increased social contacts and increased independence [Larsson et al 2013]. Telephone and internet based befriending however, found no significant improvements [Mountain et al, 2014].

Studies which have examined computer training courses have also found mixed results, with four studies [Blazen et al 2012, White et al 2002] finding that computer training and subsequent use of the internet was associated with lower levels of loneliness (none of the 4 were from the UK however), whilst two other studies found no improvements in wellbeing or loneliness [Slegers et al 2007, Lagana et al 2013].

A small US study looking at whether coaching isolated older people (some coaching was automated) in the use of Skype and a webcam would encourage increased socialisation, did find that each older person had on average, contacted 5 other people and new friendships were developing [Jimison et al 2013]. It was however a very small project (9 older people), but is currently being rolled out more widely, and will include the Lubben scale as a before and after measure when fully evaluated.

There are numerous, real barriers which prevent older people socialising more

These barriers include reduced long term conditions (particularly mobility and/or sensory impairments), reduced incomes, the availability of public toilets and access to transport [Bristol Council, 2014, Ubido et al 2014]. Improvements in physical health have been linked to reduced levels of loneliness, suggesting that the treatment of chronic and long-term health conditions could assist in combatting loneliness (Ubido et al 2014).

There appears to be a disconnect between what older people want/believe and what services can provide or recommend. Research indicates that older people emphasise the importance of family and preserving *existing* connections, while services often focus on creating new connections and support provided by strangers for example [IRISS, 2014]. Older people often cite transport difficulties as a reason they do not get out and about more, yet this is often beyond the scope or abilities of small initiatives to deal with.

Another disconnect relates to continence issues, which are associated with social isolation and withdrawal (people fear the shame of being 'caught short' whilst out and about). Incontinence issues have been named by older people as second only to dementia as their top fear related to ageing [Bichard et al 2011]. The research and professional approach stress its treatability (and even reversibility in many cases), while lay beliefs characterise the condition as an inevitable part of ageing that has to be endured [Mitteness et al 1995], which is part of the reason that only 30% of people with continence issues ever seek help or treatment [Hägglund et al 2007].

Recommendations

Interventions should be targeted at those most at-risk: Focussing public health intervention efforts on those most at risk, e.g those who live alone, are on low incomes, have poorer health, been recently bereaved or are carers – rather than all older people - is likely to have the greatest impact

Initiatives should not use the word 'lonely' in their advertising: There is still considerable stigma attached to being lonely and initiatives need to bear this in mind, particularly if they wish to attract more men

Initiatives need to base their activities on the evidence of what works: 87% of interventions based on evidence reported beneficial effects compared to 59% of interventions which were not [Dickens et al 2011]. Those studies which aimed to achieve and maintain characteristics identified by WHO and NICE as being essential for positive psychological functioning (such as people realising their own abilities, having a purpose in life, a sense of belonging and support) appeared to be most effective.

Initiatives should concentrate on providing group activities, particularly those which have an arts, educational learning or social focus and are participatory: 79% of group based interventions reported at least one improved outcome, compared to 55% of one-to-one interventions. Systematic review supports the finding that group intervention involving some form of educational, training, arts or social activity that target specific groups of people are the most effective (Catton et al, 2005). Positive effects are reported in 80% of initiatives which were participatory, compared to 44% of initiatives which were classed as non-participatory [Dickens et al 2011, Windle et al 2011].

Particular new technologies could be explored further: For example, training on how to use the internet and Skype at particular points in life (such as when people have recently become carers) appeared to be beneficial, and could therefore be explored further, despite the inconclusive evidence regarding new technologies overall.

Real and practical barriers to reducing isolation should be the focus of joint efforts by all agencies concerned with the wellbeing of older people: particularly those relating to transport, toilets, continence issues and long term health conditions

References

Antrobus A, Edwards J, Devane C, Farmer P, Herklots H, Khan O, Hughes J, Kramer J, Owen T, Taylor J and Sutherland R. Alone in the crowd: loneliness and diversity. Campaign to End Loneliness and Calouste Gulbenkian Foundation UK (May 2014) Available at: http://gulbenkian.org.uk/publications/publications/112-Alone-in-the-crowd--loneliness-and-diversity.html

Beach B, Bamford SM. Isolation: the emerging crisis for older men: a report exploring experiences of social isolation and loneliness among older men in England. Independent Age & International Longevity Centre (ILC-UK) (2014). Available at: http://www.independentage.org/media/828364/isolation-the-emerging-crisis-for-older-men-report.pdf

Bichard J & Knight G. TACT3 (Tackling Ageing Continence through Theory Tools & technology): Challenging Environmental Barriers to Continence in Generational Review (newsletter of the British Society of Gerontology) January 2011. Available via: http://www.britishgerontology.org/DB/gr-editions-2/generations-review/tact3-challenging-environmental-barriers-to-contin.html

Helena Blazun H, Saranto K, Rissanen S. Impact of computer training courses on reduction of loneliness of older people in Finland and Slovenia. Computers in Human Behavior 28 (2012) 1202–1212. doi:10.1016/j.chb.2012.02.004

Brittain K & Shaw C (2007). The social consequences of living with and dealing with incontinence – A carers perspective. Social Science & Medicine 65; 1271-1283

Cacioppo JT., Hawkley LC. Social Isolation and Health, with an Emphasis on Underlying Mechanisms.Perspectives in Biology and Medicine. 2003;46:S39–S52.

Cattan M, et al Alleviating social isolation and loneliness among older people Journal article citation: International Journal of Mental Health Promotion, 5(3), August 2003, pp.20-30.

Cattan M, et al. Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. Ageing and Society, 25(1) January 2005, pp.41-67. doi:10.1017/S0144686X04002594

Cattan M, White M, Learmonth A, Bond J. Are Services and Activities for Socially Isolated and Lonely Older People Accessible, Equitable, and Inclusive? Research, Policy and Planning (2005); 23 (3): 149-164

Collins E et al. Preventing loneliness and social isolation in older people. Institute for Research and Innovation in Social Services (2014)

Courtin E, Knapp M. Health and wellbeing consequences of social isolation and loneliness in old age. NIHR School for Social Care Research (2015)

Cutler, D. Tackling Loneliness in Older Age – The Role of the Arts. Baring Foundation and Campaign to End Loneliness. October 2012.

Dickens et al. Interventions targeting social isolation in older people: a systematic review. BMC Public Health 2011 11:647.

Findlay, R. Interventions to reduce social isolation amongst older people: where is the evidence? Interventions to reduce social isolation amongst older people: where is the evidence?. Ageing and Society / Volume 23 / Issue 05 / September 2003, pp 647-658. DOI: http://dx.doi.org/10.1017/S0144686X03001296 2003

Greaves, C.J. and Farbus, L. Effects of creative and social activity on the health and well-being of socially isolated older people: outcomes from a multi-method observational study. The Journal of the Royal Society for the Promotion of Health (2006) Vol 126: no 3; pp 133−142

Hägglund D, and Wadensten B: Fear of humiliation inhibits women's care-seeking behaviour for long-term urinary incontinence. Scand J Caring Sci **21:** 305–312, 2007 Hemingway A, jack E. Reducing social isolation and promoting well-being in older people. Quality in Ageing and Older Adults, 14(1), 2013, pp.25-35.

Hidden Citizens: How can we identify the most lonely older adults? Produced by the University of Kent on behalf of the National Institute of Health Research (NIHR) School for Social Care Research and the Campaign to End Loneliness (2015). Available at: http://www.campaigntoendloneliness.org/hidden-citizens/

Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a meta-analytic review. Public Library of Science Medicine. 2010; 7:e1000316

Jimison HB, Member, Klein KA, and Marcoe JL. A Socialization Intervention in Remote Health Coaching for Older Adults in the Home* 35th Annual International Conference of the IEEE EMBS Osaka, Japan, 3 - 7 July, 2013

Jopling, K. 2015. Promising Approaches to reducing loneliness and isolation in later life. Age UK: London. Available at: http://www.campaigntoendloneliness.org/wp-content/uploads/Promising-approaches-to-reducing-loneliness-and-isolation-in-later-life.pdf

Knapp, M et al (2010). Building community capacity: making an economic case. PSSRU Discussion Paper 2772. Available at: http://www.pssru.ac.uk/pdf/dp2772.pdf

Lagana L, Garcia JJ. The Mental Health Impact of Computer and Internet Training on a Multi-ethnic Sample of Community-Dwelling Older Adults: Results of a Pilot Randomised Controlled Trial Int J Biomed Sci. (2013) Sep; 9(3): 135–147.

Larsson E, Nilsson I & Larsson-Lund M. Participation in social internet-based activities: Five seniors' intervention processes. Scandinavian Journal of Occupational Therapy. 2013; 20: 471–480. doi: 10.3109/11038128.2013.839001

Loneliness and Isolation: Evidence Review. Age UK (2010). Available at: http://www.ageuk.org.uk/documents/en-gb/for-professionals/evidence_review_loneliness_and_isolation.pdf?dtrk=true

Marmot M. Fair Society Healthy Lives: Final Report (2010)

Martin Knapp, David McDaid and Michael Parsonage (eds). Mental Health Promotion and Prevention: The Economic Case. Personal Social Services Research Unit, London School of Economics & Political Science and the Department of Health (January 2011): www.lse.ac.uk/businessAndConsultancy/LSEEnterprise/pdf/PSSRUfeb2011.pdf

Mitteness LA & Barker J. Stigmatising a “normal” condition: urinary incontinence in later life. Medical Anthropology Quarterly 9 (2): 188-210 (1995)

Mountain GA, Hind D, Gossage-Worrall R, Walters SJ, Duncan R, Newbould L, Rex S, Jones C, Bowling A, Cattan M, Cairns A, Cooper C, Tudor Edwards J, Goyder EC. Putting Life in Years’ (PLINY) telephone friendship groups research study: pilot randomised controlled trial. Trials (2014) 15:141

Nicholson NR. A Review of Social Isolation: An Important but Under-assessed Condition in Older Adults.. J Prim Prev. 2012; 33(2-3):137-152. Available via: http://www.medscape.com/viewarticle/769914

NIHCE (2008) Guideline: Occupational therapy and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care: This guidance was previously entitled 'Mental wellbeing and older people'. Available at: https://www.nice.org.uk/guidance/ph16

Pettigrew S, et al. Older people's perceived causes of and strategies for dealing with social isolation. Ageing and Mental Health, 18(7), 2014, pp.914-920. Publisher: Taylor and Francis

Pitkala et al. Effects of socially stimulating group intervention on lonely older peoples cognition: a randomised controlled trial. Am J Geriatr Psychiatry 19:7 July 2011

Preventing loneliness and social isolation in older people. Institute for Research and Innovation in Social Services (IRISS). IRISS Insights (February 2014). www.iriss.org.uk

Slegers, K., Van Boxtel, M.P.J. and Jolles, J. Effects of computer training and internet usage on the well-being and quality of life of older adults − a randomized, controlled study. Journals of Gerontology: Series B, Psychological Sciences and Social Sciences, (2008) Vol 63B: no 3; pp 176−184.

Social Isolation and Physical and Sensory Impairment: Research Findings Report. Bristol City Council (2014). Available at: http://www.bristol.gov.uk/sites/default/files/documents/health_and_adult_care/Social%20isolation%20and%20physical%20and%20sensory%20deprivation_0_0_0.pdf

Social isolation. Annual Report of The Director of Public Health For Wirral, 2012-2013. Available via WirralJSNA website

Swindell, R. (1993). U3A (the University of the Third Age) in Australia: A model for successful ageing. *Ageing and Society*, *13*(02), 245-266.

Torp, S. et al. A pilot study of how information and communication technology may

contribute to health promotion among elderly spousal carers in Norway. Health and Social Care in the Community (2008) Vol 16: No. 1; pp 75−85.

Ubido, J & Scott-Samuel, A. Rapid Evidence Review Series No 97. Loneliness: The prevalence of loneliness, its impact on health and wellbeing and effective interventions that can be used to ameliorate these effects. Liverpool Public Health Observatory (2014)

Whelan G and Timpson H. Exploring the Social Value of Community Assets in Wirral. Wirral Council and Liverpool John Moores Centre for Public Health (2014) Available at: http://info.wirral.nhs.uk/document_uploads/JSNA2014/ABGD_Community_Assets%20_Report_May_2014.pdf

H. White , E. McConnell , E. Clipp , L. G. Branch , R. Sloane , C. Pieper & T. L. Box. A randomized controlled trial of the psychosocial impact of providing internet training and access to older adults. Aging & Mental Health (2002) 6:3;213-221. doi: 10.1080/13607860220142422

Windle K, Francis J and Coomber C. Preventing loneliness and social isolation: interventions and outcomes. Social Care Institute for Excellence (SCIE) briefing number 39 (2011)