Evidence-based Guidelines on Health Promotion for Older People:

Social determinants, Inequality and Sustainability

Overview on health promotion for older people in the United Kingdom

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Contents

1 Introduction

The total population of the United Kingdom is 60.2 million (Office of National Statistics 2006a) spread between the four nations – England (50.4 million), Wales (3 million), Scotland (5 million) and Northern Ireland (1.7 million). Overall, the proportion of people aged 65 and over has risen from 13% (1971) of the population to 16% (2005) or 9.6 million. Of this number, an increasing proportion is over 85, from 7% in 1971 to 12% in 2005 – totalling 1.2 million people. There are 18% more women over-50 than men, with this differential increasing with age so that there are three times as many women over 90.

There are currently four national health services within the UK, each with a different relationship to Westminster. The entire system has been based on the principle of 'free-health care at the point of access' since the inauguration of the National Health Service in 1948. Though this model holds true for most health care provision, prescription and dental charges now exist. Moreover, and of particular effect for certain older people, social care, which is not deemed to tackle health needs, is not provided by the NHS. Hence, long-term care of frail or disabled older people, for example those experiencing Alzheimer's disease, are provided for by the Social Services departments of local government and are means-tested, meaning those with savings or property are liable to pay up to €600 per week (Glasby, 2006).

These organisational disparities create a fertile ground for health inequalities to exist. Indeed they are both prevalent and persistent in the UK. The Acheson Report (1998) underlined the continuing disparities in mortality and morbidity linked to social class. Life expectancy for men in central Glasgow is 69.9 years compared with 82.2 in the Kensington and Chelsea area of London (Office of National Statistics 2006b), largely explainable through socio-economic inequalities. Seven of the ten local authorities with the lowest life expectancy for men were in Scotland.

2 Policy initiatives for older people/health promotion

Much of recent UK health policy, particularly in terms of public health, has focused on key targets such as reducing mortality and morbidity from cancer, coronary heart disease and promoting sexual health. Services for older people, especially regarding mental health, have tended to be a neglected area in terms of both funding and policy initiatives and have long been described as a 'Cinderella service' (Means and Smith 1985; Bernard and Phillips 2000). Choosing Health (Department of Health, 2004) is the latest main strategy designed to help people make informed, healthy lifestyle choices, though there is no explicit mention of older people.

March, 2001 however saw the enactment of the National Service Framework for Older People, a key policy document setting out standards of care and treatment. Key aspects of this strategy include tackling of age-discrimination and creating integrated services based around patient-centred care, fitted to the needs of older people (Department of Health 2001: p. 4). The framework gives a particular focus to several key aspects of health promotion amongst older people, including stroke and falls prevention, and the promotion of active, healthy living and mental health. This latter aspect is to be serviced by a more integrated approach. € 2 billion was committed annually by The NHS Plan (Department of Health 2000) from 2004 in order to assist more effective provision for the health care of older people. The policy document recognised the importance of improvements which were both 'systematic and sustainable' (Department of Health 2001: p. 24). Towards these ends, the standards set by these proposals were to have their delivery ensured through the system of clinical governance (which institutionalises the improvement and of service delivery and professional skill- and knowledge-bases) and monitored by the Healthcare Commission and Performance Assessment Framework. Long-term goals have been combined with short-term milestones

where specific improvements must have been put in place by certain dates. For example, by April 2004 General Practices will have been identifying and managing people at risk of stroke according to agreed protocols; by April 2005 all health and social care systems will have out in place an integrated falls service. Whilst milestones have been successfully applied and met in some areas, there are a number of areas where targets have not been reached.

'Keep Warm; Keep Well' is a multi-agency approach to improve health during the winter months and is aimed especially at disadvantaged older people, combining information booklets, increasing pensions (through one-off payments of up to €420) and since 2005, all over-65s have been encouraged to receive a flu-vaccine (from 1998 over-75s had been targeted).

November 2006 has seen the launch of the Department of Health's Dignity in Care Campaign. The 'Dignity Challenge' puts forward a range of expected national standards of care which look at 10 different facets of dignity, based on research into what dignity represents for older people. An New Ambition for Old Age (ibid, 2006) and Our health, our care, our say (ibid) both point towards a future of healthcare for older being as home- and community-based as possible, moving away from hospital medicine.

'Older People's Champions' is an initiative which seeks to encourage health service professionals and managers, local government representatives and older members of the wider community to promote effective health care amongst older people and to advocate on behalf of older people. Champions are encouraged to act within health care settings, the community and through their links with local government and Strategic Health Authorities to elicit reforms which improve the health care and day-to-day lives of older people.

Scotland has its own National Framework for Service Change in the NHS in Scotland: Building a Health Service Fit for the Future (Scottish Executive, 2005) where older people are a clear priority. Improving Health in Scotland – The Challenge (ibid, 2003) is another broader policy document with a specific concern for older people. Central to this approach is a strategically integrated delivery of services aimed at holistic wellbeing. A similar approach is taken by the 'Mental Health and Well-being in Later Life Programme' which attempts to harness research into the experiences of older people with the aim of enacting more effective policy, whilst at the same time supporting smaller projects on the ground. Better outcomes for older people: Framework for Joint Services (ibid, 2005) seeks to encourage local providers of services for older people to facilitate independence, choice and control for older people whilst allowing them to stay in their own homes as far as possible.

The Welsh Assembly (2003) has developed its own 'Strategy for Older People' and whilst the Northern Ireland Assembly is currently suspended, past policies brought in free personal care for older people. More recently Ageing in an Inclusive Society (OFMDFMNI, 2005) has aimed to create an 'enabling environment' (ibid, 9) for older people, both socially and in terms of service provision.

3 Health determinants

Evident within the literature is a wealth of interest and perspectives on health determinants concerning older people. Half of the items covered in the literature review referred to health determinants in some shape or form. There was a general dualism between determinants of specificities such as falls or hospital admissions (eg Bernard 1998; Bellingham 2001) and aspects affecting a more general quality of life (eg Smith 2004).

An overview of the literature makes clear the complex interaction of many of the independent and dependent variables addressed. For example, there would seem to be an inverse correlation between psychiatric morbidity (anxiety and depression) and physical exercise (eg Mather 2002), yet the positive links between anxiety and alcohol consumption (Hajat 2004),

and between alcohol and falls (Patton 2002), make for potentially vicious circles whereby deteriorating mental and physical health or capacities reinforce one another, see also (Bowling 1997).

Socio-economic inequalities were a recurring theme within the literature, with deprivation likely to have a negative impact on both mental health, for example in helping explain differences in psychiatric morbidity between ethnic groups (Silveira 1999), as well as physical health. Often the latter was linked to nutrition (eg (Pearson 2004), housing and winter deaths (Donaldson 2003). Gender was another recurring theme, seen by some studies as amplifying other determinants such as social-inequalities. Hence older women are more likely to be poor, due to less access to work-based pensions, and to experience poverty for a longer period of time due to their increased life-expectancy, by which they often outlive their partners and therefore cannot split the daily costs of living (Milne 2000: p. 703).

The importance of social support and networks to health promotion amongst older people is crucial and psychosocial factors are key in explaining catastrophic decline in health status (Ayis 2006). Older people may be less likely to seek healthcare or other help due to a complex mix of accessibility, issues around feeling valued, ageism and other socio-cultural and psychopathological factors (Howse 2005). The importance of empowerment will be discussed below, but at this point it is worth underlining the need for social support to avoid interpersonal exchanges which might be interpreted as 'infantalisation and stereotyping' (Ballinger 2002) and consequently discouraging to service-users.

Mental health is seen as central to healthy older life and its interaction and interdependence with physical wellness has been discussed above (eg Bowling 1997). This prevalence of physical and mental co-morbidity is mirrored in that occurring between depression and other types of mental illness (Katona 1997).

4 Search strategy

The literature search can be described as comprising five main stages. Firstly medical science databases Medline and Ovid/CINAHL were searched under keywords 'older people' 'elderly' 'health promotion' and 'public health'. These same keywords were repeated to search in scholar.google. Then a wider non-scientific search was inaugurated using google in an effort to pick up grey literature and other local authority, health service or non-governmental organisation material. 'Evaluation' was added here as another keyword to make the search more specific. Approximately 1700 separate web-pages were viewed in this part of the search. Fourthly the members of the National Panel were asked for suggestions as to specific items or types of literature which could be sought. Finally, pre-designated key themes that were poorly represented after the previous stages were specifically followed up. Hence 'nutrition', 'alcohol' and 'empowerment' were combined as a keyword with 'older people' and/or 'elderly' in order to search for relevant material in scholar.google and google. The search was halted at 150 items due to limitations of time and in order to manage the sheer volume of material, all of which had to be read in full in order to complete the discussion of the literature found below. Due to the constraints of the project's parameters, searched literature was limited to that published in the UK or by British-based authors, between 1995 and 2006.

The review was dominated by scientific literature – 77% of the items articles from academic journals. 16% of the items were final reports of projects and grey literature. This reflected partly the scientific search engines used for the primary part of the search but moreover the availability and ease of location of the scientific literature, in contrast to the rest of the literature which was either very hard to locate or lacking any evaluative discussion of the study. Furthermore there was a distinct contrast between one-dimensional, short-term interventions, often randomised controlled trials, which were purposefully evaluated and other, more imaginative, longer-term and multi-dimensional projects, with little or no detailed

evaluation. A small number of exceptions did exist however and these tended to shed the most light on effective health promotion strategies.

5 Themes

5.1. Promoting mental health

Mental health is related to 55 of the 152 sources, this is evidence of its importance in terms of wider health promotion. The National Service Framework stresses that local government and health authorities should promote mental health amongst older people (Drennan 2005).

5.1.1 Addressing depression

A large scale random sample suggests that whilst the majority of older people are mentally well, there is a significant rate of co-morbidity between depression and "with subjective memory loss, sleep disturbance, somatic complaints, anxiety disorders or activities of daily living (ADL) limitation" (Katona, 1997. p. 57). Furthermore the vast majority are not in receipt of pharmacological help (ibid). Katona and colleagues explain this by stating that depressive symptoms can be masked under other physical and mental conditions. This is a concern given that depression has been shown to be important, when it interacts with personality disorders and traits, in explaining a sample of suicides amongst older people (Harwood 2001). Based on a review of the relevant literature, there is a case for increased screening for depression although screening in itself may not be sufficient to encourage effective treatment (Katona 2000). Whilst screening might not be viable in terms of the entire older population, it can be more efficient if targeted at certain 'at risk' populations. A cross-sectional survey suggests that ethnic elders are more likely to experience mental health problems, mainly due to inequalities in housing, support through social networks, financial circumstances and physical health (Silveira 1999). A project working in an underprivileged and ethically diverse area described great need and potential for health promotion (Patel 1999).

Exercise has been shown to have modest positive benefits in terms of depression, for example when conducted in a group-based intervention (Mather 2002). Local community based projects can be useful in such mental health promotion and these often require very small levels of funding, although it is important that these resources are sustainable and secure (The UK Inquiry into Mental Health and Wellbeing in later life 2006). The 'Regenerate' project combines such a service, specifically aimed at isolated older people, with meal services and support groups (Heer 2002). This work in South West London also found bereavement to be a significant problem amongst older people. Those who had suffered loss were supported through companionship with others who had gone through similar experiences (ibid). Insomnia, which is more common amongst older adults, may also make depression more likely. A systematic review of randomised controlled trials suggests exercise offers a potential solution through its relaxation effects (Montgomery 2002).

5.1.2 Addressing stress and burn-out

Housing conditions and temperatures are linked to both depression and stress, with damp affecting both of these according to a recent report (Baker 2001). Anxiety, though less prevalent than depression, also seems to be a problem amongst older people, with a community study suggesting it affects more than one in seven (Manela 1996). A drama based intervention helped reduce anxiety levels in 60% of its participants (Scottish Executive 2004) based on informed participant feedback and the use of depression scales. The drama specifically sought to raise awareness of mental health issues as well as increasing the knowledge of the staff and managers involved.

5.1.3 Cognitive issues: memory training

Cognitive function is another apparent theme in the literature surveyed, referred to in 6% of the sources. Dementia affects and is affected by other aspects of physical and mental health,

as a risk factor for falls (McMurdo 2001) and in its association with depression (Katona 1997). Data from a large-scale multi-centre longitudinal epidemiological study of ageing, suggests cognitive impairment, as with other impairments, is more likely to affect women than men (Jagger 2001).

A survey of 205 caregivers suggests the nature of Alzheimer's disease and dementia is often misunderstood. Carers often believe the person experiencing the condition has behavioural control and underestimate the continued long-term degeneration (Paton 2004). The symptoms of these conditions and the difficulties experienced by carers can mean aspects of physical health are neglected such as nutrition (Manthorpe 2003) and exercise. Whilst health promotion in this area cannot improve health due to the typically irreversible nature of the conditions, memory clinics can offer valuable services. They can identify those who might be assisted by pharmacological intervention and work together with occupational therapists, social work and community mental health teams, as is the case with the Dundee Memory Clinic (Thompson 1997). The multi-agency nature of the clinic is also reflected in the assessment which is carried out independently by a physician, psychologist and psychiatrist. The Sing for Your Life project demonstrates that socially supportive, entertaining, group-based activities can also be applied to promote cognitive capacity (Sing for your life, 2005). Songs are specifically created to engage and stretch cognitive and short-term memory whilst maintaining an entertaining social environment.

5.1.3 Self-respect / dignity

See empowerment

5.1.4 Emotional support

Emotional support is, for obvious reasons, very important for mental health. Preventing isolation for example may have a significant effect on mental wellbeing amongst older people (Cattan 2005). This systematic review found more substantial evidence for the effectiveness of group activities offering education and/or support than for one-to-one interventions, around which the evidence-base remains unclear (ibid). Emotional support appears in the literature in a much richer and wider context than merely preventing isolation. It is discussed in 12% of sources in conjunction with a wide range of interventions and environments. It has been apparent in a falls intervention programme (Allen 1999), as a way to empower and engage participants in projects promoting healthy ageing (Secker 2005) and, according to large-scale nationwide survey of older people, is a key component of quality of life (Bowling 2004). Retirement villages may be one means of promoting networks of social support around older people. The benefit of this approach is that health and social services can be more conveniently targeted whilst still offering the older person a large degree of independence, combined with added security (Croucher 2006).

5.2 Empowerment

Research has shown the possibilities for caring for people with dementia in an empowering way (Martin 2000). It is important that the notion of quality applied in project development is the same as that understood by a wide range of older people, rather than one which is imposed by service providers (Clark 2001).

An inclusive approach is important when developing strategies of health promotion. A qualitative study involving focus groups found that self-esteem is damaged when older people are excluded from decisions, patronised or looked on as objects (Woolhead 2004). In a conceptual paper, Thompson (2001) distinguishes between a caring model of practice, rooted in the bio-medical and which is still prevalent today, and an empowering model that proactively promotes healthy ageing. Projects run by Help and Care (2004) found that those which are sufficiently flexible to actively incorporate older peoples' views and meet expressed needs are more likely to empower, thus enhancing self-esteem. Measuring self-

esteem and life satisfaction as part of the evaluation of health promotion projects is another means of ensuring empowering practice. One project which combined regular exercise with education on physical and mental well-being was effective in significantly improving both these aspects (Dungan 1996).

5.3 Social participation – inclusion

5.3.1 Life long learning / education of older people

Nineteen of the 24 items referring to education and life-long learning have also already been discussed under various exercise, accident and illness prevention headings, and this makes clear the link between the two in health promotion strategies. Whilst a healthy childhood and mid-life are often seen as important in determining health in older age (Sanders 2006), health education and promotion among older people has already been seen to have significant health benefits and moreover is central to the National Service Framework (Biley 2002). Health information needs of older people should not be seen as different to those of the wider population (Cawthra 1999), but making efforts to ensure that these needs are met may well have positive benefits and encourage social inclusion (ibid). One health maintenance programme found that education, especially when combined with exercise in a group setting, was effective in lowering blood pressure and improving flexibility, self-esteem and life satisfaction (Dungan 1996). An overview of the studies reviewed here would suggest that this type of education that is incorporated into an interpersonal activity is more likely to be taken onboard than that which is merely disseminated as information.

The health promotion value and sustainability of interpersonal projects is evident in the Bromley-by-Bow Centre, an arts based community centre in London. Arts were seen as useful means by which local older people can be brought in to the project and share in its wider programme of 'health promotion, social entrepreneurship, active citizenship, integrated working and community regeneration' (Frogett 2005). 'Sing for your life' is another arts based project, though one that goes out into the community in order to engage older people. The sessions consisted of fortnightly communal singing and music. These were specifically tailored to older people, taking place in community centres and residential homes, and they actively promote cognitive capacity as well as other benefits in physical health and fostering social interaction (Sing for your Life 2005).

5.3.2 Social support / networks

Though social isolation and loneliness is a recognised phenomenon, Cattan and colleagues, in their systematic review, note that educational and social activity groups can be effective in dealing with loneliness (2005). However in another study based on interviews with older people and practitioners, it is suggested that many groups are understandably run with current participants in mind, meaning that those outside circles of the 'socially active' are not included (Cattan 2003). Whilst gender is not in itself a predictor of loneliness, national survey data suggests that older women are more likely to be widowed and live alone (Victor 2006) and thus experience loneliness more than men. Poverty can also limit older peoples' mobility and ability to join in with social activities (UK Inquiry into Mental Health and Wellbeing in Later Life 2006). The Western Health Action Zone in Northern Ireland saw rural isolation and loneliness as a key issue, advocating means of dealing with 'transport poverty' as one potential route to tackle the problem (O'Hara 2005).

Social support and networks of course do far more than relieve anxiety, they can also promote physical health in older people, though it is important not to draw too clear a line between the two. A large-scale multi-centre survey/assessment study found that decreases in physical functioning may well contribute to isolation and are correlated with poor mental health (Bowling 1997), underlining the importance of a holistic approach (Budgen 2005) to health promotion. Health visiting and community nursing would seem to be one means of tackling this problem, though evidence for the effectiveness of such schemes in terms of mental health is, as noted above, uncertain (Cattan 2005). Information gathered from a large-

scale survey of community nurses in Scotland points toward a case for increasing the profile of health promotion within community nursing (Runciman 2006), especially in targeting certain populations and 'at risk' groups. Project outcomes were effective when this approach was carried out in a multi-disciplinary setting (Drennan 2005; London Older People's Service 2003). Another project report stressed the need for health promotion to be seen as an essential rather than a 'luxury' (Patel 1999).

Approaching older people as active rather than passive subjects (Carter 1998) is crucial, not just ethically but in order to invoke co-operation, especially in cases of dementia where findings based on a six-month initiative suggests that support can be given in a way that empowers and offers choice (Martin 2000). Social support is important not just for the subjects of health promotion but equally their carers. Carers may lack understanding of certain conditions, for example in the case of Alzheimer's or dementia (Paton 2004) and thus there is a case for education as to how to promote the health of the cared for. One drama-based intervention, offered by volunteers, was effective in combining mental health promotion among older people with equipping their carers with new skills, as well as heightening awareness of mental health issues among professionals (Scottish Executive 2004).

5.3.3 Volunteering

Such volunteer based programmes are typical of health promotion, much of which is organised through, or in co-operation with, the third sector; for example in co-ordinating walks programmes (Countryside Agency 2005) and self-help groups to deal with mental illness (Heer 2002). The strength of volunteers is not only in financial sustainability but also builds on the skills of volunteers themselves, especially if they are older people. Such self-help or facilitation is empowering and engenders autonomy and confidence.

5.4 Lifestyle

5.4.1 Nutrition

Issues surrounding lifestyle were obviously common themes in the literature, with 82% of the items relating to this theme. The importance of nutrition was referred to by 15% of the literature reviewed. Many studies assessed reasons for poor diet, noting that disease and illness are common causes of under-nutrition and emphasising the importance of screening in order to identify this (Todorovic 2001). One study linking national survey results to clinical data found that poor dental and oral health were other reasons given to explain poor nutrition (Sheiham 2001), and this was in turn linked to socio-economic status (McGrath 1999) based on the same national survey. The vicious cycle whereby poor nutrition leads to, and is caused by, poor health has been highlighted in a review paper (Gariballa 2004). An empirical study found that the increased likelihood of oxidative stress in a sample of older people was combined with limited anti-oxidant intake, accordingly increasing mortality rates (Fletcher 2003). This picture becomes further complicated by the difficulties certain groups have in choosing and eating healthy food, due to frailty (Tolson 2002) and associated access problems (Wylie 1999) which were also linked to locality (McKie 1999), and made especially problematic due to 'decentralisation' of food stores (Wilson 2004). Review articles note that vulnerable groups, for example those experiencing dementia (Manthorpe 2003), were seen as especially susceptible to poor dietary intake. Whilst one trial found that nutrition in terms of calcium and vitamin D may do little to reduce risk of fractures amongst older women (Porthouse 2005; Grant 2005), a small number of interventions successfully improved strength (Price 2005) and bone density (Tedstone 2003) through supplementation.

A review article stresses the importance of health care professionals encouraging older people to eat and drink independently, linking this problem to lack of effective staff training (Copeman 2000). Other tactics used to promote healthy eating included one-day information events (Amber Valley PCT 2005) and combining empowerment and reminiscence to produce a nutritional leaflet (Robinson 2000). The Food Standards Agency, Wales ran a large

campaign which distributed 50,000 booklets, targeted at over-65s, called 'Eat Well This Winter', including recipes and nutritional information. Though the content was well received by the focus groups in the evaluation, it was clear that the campaign had not achieved much awareness among its target audience. A more interactive, longer-term intervention was a 'Get Cooking!' course designed by Sustain and run by Age Concern (Sustain 2000). Small groups of older people and psycho-geriatric referrals were led through a 10 week course which encouraged cooking skills as well as providing knowledge about nutrition and value for money.

5.4.2 Physical activity

Whilst exercise will be discussed at greater length below in terms of fall prevention, 10 studies reported interventions aimed at general health/quality of life improvements and although take-up and/or adherence was often low (eg Harland 1999), such programmes can be more cost-effective than medical interventions (Munro 2004), especially when sensitive recruitment strategies result in high numbers of participants (Stevens 1998). As with falls prevention, seated exercise was found by one study to have an unproven effect on quality of life or physical capacity (Witham 2005), although daily activity increased. Insignificant results were found for various forms of home-based interventions (McMurdo 1995) and occupational therapy for rheumatoid arthritis (Hammond 2004). Indeed, McMurdo (1999) warns against wrapping up older people in cotton wool, suggesting that exercise capacity of older people is limited more by under-estimated perceptions of aptitude than by physical ability itself. Even the very old (79-91) are capable of aerobic exercise that was found to prolong functionality and thus independence (Malbut 2002). One study found that whilst resistance training may have significant effects on the strength of women aged over-75, this was not necessarily translated into increased functionality (Skelton 1995). A clinical review (Young 2005) suggests that interventions for frailer older people should be specifically linked to daily tasks such as getting up or using the bus. This review also acknowledges the non-physiological value of exercise such as counteracting isolation.

Exercise was also found to have modest positive effects on older people experiencing insomnia, a condition increasingly prevalent with age (Montgomery 2002). Research into why people tend not to participate in exercise programmes found that attitudes and fears about the limited abilities of older people to participate in exercise were predominant, as were issues surrounding access (Crombie 2004). For example, Yardley (2001) notes how balance disorders are often accompanied by psychological responses that inhibit effective responses to physiological programmes of treatment. Targeting those about to retire was seen as one possible way of ensuring active lifestyles were pursued into older age (Berger 2005). Organised walks were seen as a popular activities among over-50s and were found to be sustainable and cheap to resource (The Countryside Agency 2005). Environmental provision such as building cycle-paths was another possible method of intervention (Lawlor 2003), though requiring different types of evaluation.

The 'Newcastle Exercise Project' used a randomised controlled trial to assess the effectiveness of various means of promoting physical activity such as brief interviews, more intensive, twelve week programmes of motivational interviewing, with and without financial incentives towards leisure activities (Harland, 1999). Whilst none of the modes of intervention produced statistically significant behaviour to the control, the more intensive mode was more successful in terms of behavioural change. The study cautions that in spite of the popularity of such programmes within primary care, there is a lack of rigorous evaluation and associated evidence.

5.4.3 Alcohol

Whilst various studies suggest the incidence of excessive alcohol consumption amongst older people may form a 'silent epidemic' (O'Connell, 2003, p.664), no interventions covered by the literature review approached this issue.

5.4.4 Safety – e.g. prevention of falls, accidents and injuries

64% of the total literature surveyed referred to disease or accident prevention, or both in a recognition of potential interdependence. For example bone strengthening and the avoidance of osteoporosis were regularly linked to falls programmes and interventions. Falls proved a popular topic, with 15% of the studies dealing with this issue. A systematic review suggests 30 % of community-dwelling over-65s suffer falls each year with one fifth of accidents requiring medical treatment though less than one tenth resulted in fracture (Gillespie 2001). It would seem though that falls are often under-reported (Oliver 2005), perhaps due to their impact on important issues of identity and autonomy, which were found in qualitative interviews and focus groups to be useful in explaining negative attitudes to falls education and advice (Yardley 2006). The prevalence and effect of falls have been respectively linked to alcohol consumption (Patton 2002) and economic deprivation (Pearson 2004). McMurdo (2001) points out the lack of research into falls and dementia. There is some evidence substantiating the cost- and outcome-effectiveness of falls interventions (Parle 2002), especially when these are conducted in a multi-factoral, multi-disciplinary manner and take environmental and other risk factors into account (ibid).

The 14 falls interventions included in our review covered a wide-range of factors, though the effects of some of these were measured on a single-factor basis due to the experimental nature of randomised controlled trials (RCTs). Six included some type of exercise. Chair-based interventions such as that carried out in Selby where trained staff led programmes (Health Inequalities Directory 2004) were popular with participants who believed their mobility and flexibility were improved and accordingly their independence enhanced. Though another study based on an RCT questioned whether chair-based exercise was effective due to their lack of vigour and/or a balance component (McMurdo 2000).

Two recent reviews note the importance of tailoring interventions to the precise group of older people (Skelton 2003; McInnes 2004). This was found to be important in terms of the likely participation of older people in such programmes (ibid), as well as the actual effectiveness of the programmes themselves. One intervention based on brisk walking, whilst modestly increasing bone density, actually lead to an increase in the incidence of falls amongst participants (Ebrahim 1997). Specific targeting of older people is thus imperative –

“it is clear that the target population must be at risk or already fallers, they must be "not too fit" and "not too frail". Supervised home-based exercise programs may be effective in those aged over 80 because they fall more frequently, injure more easily, and recover more slowly. In younger, community-dwelling, fallers multifactorial group interventions including targeting of balance, strength, power, gait, endurance, flexibility, co-ordination and reaction may be more effective” (Skelton 2003 p. 77).).

It is also underlined that balance training can complement exercise programmes to enhance efficacy of the programme (ibid). One randomised controlled trial (McMurdo 1997) found that exercise, in combination with calcium supplementation, typically led to a ‘modest’ increase in bone density and moreover, fewer falls. Another RCT, based on the notion of specifically targeting a particular group, was able to significantly lower the fall rate and longer-term outcomes of older women who had previously been frequent fallers through balance and strength training (Skelton, 2005). As mentioned above in relation to more general physical exercise, the authors acknowledged the largest benefit as being in terms of social interaction and reduced isolation.

The Coventry City Council Keeping Active Programme combined information booklets on fall prevention with free-vouchers to encourage older people into exercise sessions as well as address the difficulty of accessing sports centres experienced by older people, especially ethnic minorities (Chartered Institute of Environmental Health 2006). More than 250 people

have made use of the exercise classes offered by this programme.

Education was another common form of intervention either through peer education (Allen 2003; 2004), day hospital/care settings (Masud 2006; Mitchell 2006) or via pharmacists (Bellingham 2001) who, through their regular contact with certain groups of older people, proved a cost-effective and sustainable vehicle for falls avoidance advice. By far the most comprehensive programme both in interventions and evaluations was the Warrington Falls Management and Prevention Service (Caiels 2005) which was successful in reducing falls, increasing physical function and tackling social isolation through a range of exercise programmes, home safety checks, information on risk factors and the provision of hip-protectors. Ease of access to community facilities was found to be a crucial to engaging the target group which in turn determined the long-term success of the programme.

5.4.5 Prevention of disease

As well as using nutrition to prevent disease, more direct methods were also advocated. Identifying 'at risk' individuals either directly through GPs (Drennan 2005) or via their computer records (de Lusignan 2003) represent an opportunity for a more efficient targeting of resources either in terms of specific diseases such as osteoporosis, or based on more general associated risk factors. However concerns were raised over the capabilities of primary care IT to meet such a goal (ibid). A structured nurse-led patient concordance programme was found to be effective in preventing recurrence of conditions such as leg ulcers (Brooks 2004) and demonstrated the potential for other interventions subject to resources. A systematic review/meta-analysis found associated more general home visiting with both reduced mortality rates and long-term admissions (Elkan 2001). Targeting entire older populations for flu vaccinations is a recent policy development in the UK. A qualitative interview study suggested uptake rates may be improved by taking more account of lay risk perceptions towards influenza and the vaccine itself (Telford 2003). A separate trial involving 2000 older people found that targeting those who typically avoid vaccination with home-based health checks was effective in increasing uptake (Arthur 2002). A parallel group study found that vaccinating health professionals who work with older people has also been seen to have a marked influence on mortality rates (Carman 2000).

Community matrons have been launched to improve the case management of chronic conditions in order to prevent patient decline and hospital admissions (Murphy, 2004). Initial research based on hospital admissions data suggests this approach may have limited success in reducing the latter (Gravelle, 2007).

6 Transversal issues

6.1 Research Methods

Of the 152 sources covered by the literature search, 42 of these were theoretical papers without empirical research, often looking at policy or more normative issues surrounding health determinants and/or healthy ageing. Of the remaining 110 studies, the slight majority 60 (55%) were purely quantitative in nature. 23 of these were randomised controlled or cluster trials. The remaining 37 were a mix of structured questionnaires and surveys, or studies based on analysis of statistics – for example relating to falls (Porthouse 2005), cost effectiveness (Parle 2002), or psychiatric morbidity (Harwood 2001).

32 studies (29%) were researched qualitatively. These ranged from quite tentative surmising based on process evaluations (Food Standards Agency Wales 2001) to rather more classic qualitative methods such as ethnographic approaches of participant observation and semi-structured interviews (Ballinger 2002). Ballinger's study is typical in that interviews are used to research an issue *around* the topic of health promotion (in this case the construction of risk of falling by older people) rather than in direct evaluation of an intervention. Generally the qualitative evaluations are process evaluations with little consumer voice. There were a small

number of exceptions such as the detailed participatory action-based research into an osteoporosis health education activity (Whitehead 2001), which used group meetings and reflective journals. Perhaps the most innovative research framework was one that used metaphor and simile to engage older people with dementia in research (Killick 1999). Killick argues that through abandoning the usual research structures such as a set interview time and immersing oneself in the language and expression of the patient it is possible to illicit meaningful responses from the most confused of respondents. Whilst this approach is successfully used in patients experiencing limited cognition, virtually all interventions seeking to tackle mental illness (for example depression) were researched and evaluated quantitatively, using various standard depression scales. Though the validity of such measures has been soundly tested, there remains the question of whether aspects of the experience and understandings of older people experiencing mental illness are nonetheless overlooked.

A smaller number of studies combined both quantitative and qualitative methods in their analysis – 18 (16%). Often this was through 'questionnaire style' closed-questions being supplemented with more open-ended questions administered through interviews or written responses. Such triangulation provides detailed insights into the effectiveness of programmes, or pervasiveness of determinants, both by comprehending **what** is happening on a wider level, but moreover providing an understanding of **why**, in a more intricate, personal manner (Moore 2000). By far the most multi-method and detailed analysis of an intervention was offered by Caiels (2005). By implementing a quantitative assessment based on falls data and changes in physical capacity, combined with qualitative responses from service users, an effective insight is offered both of what works and why.

6.2 Strategies of health promotion

Whilst it is difficult to generalise due to sheer number of studies included, there would seem to be a correlation between the type of institution making an intervention and the particular strategy adopted. Taking the prevention of fractures through falls as an example, where interventions are enacted by medics and associated organisations, there is a tendency to focus on the physiological. Whether this is through nutrition (Porthouse 2005), strength training (McMurdo 1997), or correcting poor vision (Harwood 2005), the focus is often on improving the body's ability to cope with trauma. In the context of the wider community such as community nursing and non-medical academia, there is a greater propensity towards educational interventions, either through peers (Allen 2004) or professionals (Mitchell 2006). Multi-agency programmes tend to apply multi-factorial interventions and examples of these (Caiels 2005) are held to be the most effective (Parle 2002).

Equally, in terms of mental health, interventions organised by psychiatry and medicine tend to employ mental health teams (Banerjee 1996) or community nurses (Blanchard 1995), with the exception of an exercise intervention (Mather 2002). Wider community interventions ranged from drama (Scottish Executive 2004) through to the provision of transport and regular social events (Heer 2002), both with apparently positive results. Again there is a suggestion that "there is no single, simple solution. Energy and imagination need to be put into co-ordinated efforts" (The UK Inquiry into Mental Health and Wellbeing in later life 2006). In this sense it would seem that more effective, holistic strategies of health promotion tend to originate in multi-agency working. Although at the same time it would seem that such interventions are considerably rarer than uni-dimensional projects.

Professionals can be a useful means of identifying and diagnosing depression. Practice nurses can usefully identify depression when performing wider health checks, although a scheme to follow this up via a community mental health team was not significantly effective in improving depression scores (Arthur 2002), perhaps due to a lack of training amongst the professionals in dealing with older people (ibid). This hypothesis is given weight by the positive results of another randomised control trial, this time involving a psycho-geriatric team

(Banerjee 1996). Another intervention, this time through community nurses who regularly work with older age groups, also seemed to be effective in relieving depressive symptoms, especially in long-standing cases (Blanchard 1995). Therefore there would seem to exist a case for intervention, either particularly aimed at depression or through a wider health maintenance programme also involving exercise, health education and group participation (Dungan 1996).

In terms of health education, interactive approaches were preferred over simply providing information. Only two interventions were implemented which relied solely on promotional material, one by a local council to encourage exercise and active lifestyle (Chartered Institute of Environmental Health 2006), the other to encourage wellness during winter, focusing on healthy eating (Food Standards Agency – Wales, 2001). All other health education was done through interaction with older people, occasionally through one-off events (eg Amber Valley PCT 2005), though usually over longer timeframes. Of course, it is important to qualify all of these generalisations in terms of the nature of the literature search. The fact that scientific literature was more readily available may mean that the prevalence of quantitative, one-dimensional bio-medical interventions is overstated.

6.3 Settings

The overwhelming majority of sources referred to those living in the community as opposed to those in care home or hospital settings. One intervention was hospital-based, though in the context of a day ward (Masud, 2006), three more studies involved those in long-term care homes though only two of these were interventions (Caiels, 2005; Sing for your life, 2005). It would seem therefore that the many residents living in almost 14,000 care homes across the United Kingdom are largely ignored by health promotion strategies, or at least by the available literature, perhaps due to perceptions about the effectiveness of health promotion amongst those who are already frail, even though this has been contested (Dungan 1996).

Interventions targeting those living in the community are channelled through a number of contact settings. These range from pharmacies (Bellingham 2001), to community centres (Froggett 2005), with many interventions taking place in the private home of the older person. The effectiveness of using the home as a setting for health promotion activity as already been questioned, especially in terms of mental health where the evidence for individual focused interventions remains unclear (Cattan 2005). Though Cattan and her colleagues (2003) also note that promotion activities run on a group basis often serve the interests of current participants rather than being outward looking, hence more effort needs to be made to engage those who are not reached by such activities. Accessibility of community-based health promotion activities would seem to be important in this sense, both in terms of physically getting into the building (Caiels 2005) and having available transport for those who may live some distance away, especially rural dwellers (O'Hara, 2005).

6.4 Inequality/ Diversity

This latter issue of transport poverty can be seen as a form of inequality faced by many older people and one that two projects sought to redress (ibid; Heer 2002). More than one quarter (26%) of sources referred to inequalities in some sense, often with various inequalities reinforcing each other. Nutritional inequalities are a recurring them within the literature and its correlation with mortality (Fletcher, 2003) is accompanied with calls for increased intervention led by community nurses and other primary care individuals (Todorovic, 2001).

Socio-economic inequalities are another recurring theme, empirically linked again to mortality but also with health experience during the lifespan (South East Regional Director of Public Health, 2005), bone mineral density among older women (Pearson, 2004) and hospital admissions (Bernard 1998). A national survey found that socio-economic/mortality inequalities actually increase with age (Bowling, 2004) and are held by the literature to manifest themselves in a number of ways. Fuel poverty and problems attached to winter cold

is another apparent theme, though evidence is unconvincing in terms of an overall socio-economic correlation (Wilkinson, 2004). There appears to be a consensus that poorly heated housing affects older women more than men, especially those of lower socio-economic status (ibid; Donaldson, 2003), and that not enough attention is paid to experience of cold outdoors as opposed to simply in the home (Keatinge, 2001). Although there is state policy to alleviate fuel poverty (see policy section) this is argued as being insufficient (ibid), hence the importance of other winter warmth campaigns such as one which seeks to encourage healthy eating (Food Standards Agency Wales 2001).

One report describes how cold weather exacerbates already existing environmental conditions such as damp housing (Baker, 2001). These factors are useful for understanding the interaction between financial status, poor health and wider quality of life experience (Ong, 1997; Silveira 1999; Bowling, 2004). Whilst Smith (2004) cautions that subjective factors such as self-perceived financial status have a greater impact on quality of life experience than environmental issues, a cross-sectional survey suggests inequalities in mental health are crucially affected by housing experience (Silveira, 1999) and that this factor, along with social support, financial situation and physical health, is important in understanding ethnic inequalities in mental health (ibid). Grewal (2001) points out that the experiences of ethnic elders are often overlooked and that assumptions of family support help explain this lack of provision. There is correspondingly great value in explicitly targeting ethnically diverse areas, especially where these are also under-privileged, and an account of a project that has done so describes an increased need to promote healthy lifestyles in order to overcome social and economic inequalities (Patel 1999).

Multi-agency approaches offer a multi-dimensional means of trying to help ‘at risk’ individuals (Drennan 2005) which, given the complex, interdependent co-morbidity described above would seem to be beneficial. For example, alerting primary care professionals to the potential issues of those living alone could help reduce the inequalities between the ‘active lonely’ and others who are often missed out by interventions (Cattan, 2003), as well as addressing the problem of those living alone being less likely to seek help, for example for continence problems (Peters, 2004).

A relatively small number of studies (7%) addressed issues surrounding gender. Whilst one study found that men were more likely to drink in excess (Hajat, 2004), the rest of the studies mentioning gender differentials focused on women. The literature suggests older women are more prone to experiencing mental illness. One sociological article argued this was due in some degree to long-term and age-based inequalities and the inability mental health services to account for gendered oppression and its negative affect on mental well-being (Milne, 2000, p. 699). Older women’s poorer mental health may also be linked to their disproportionate experience of loneliness, though this is more affected by marital status, age and living arrangement than gender itself (Victor, 2006).

Hence there would seem to be a clear difference in experience of health inequalities due to gender (Bowling, 2004) which, as already mentioned, is further compounded by poorer women’s greater vulnerability to winter cold (Wilkinson, 2004; Donaldson, 2003) and a more general increased tendency towards cognitive and functional impairment suggested in a national study (Jagger, 2001).

This apparent need for health promotion amongst older women is reflected slightly in a few programmes specifically tailored towards their needs, either through exercise programmes (McMurdo, 1997; Ebrahim, 1997) to help overcome increased propensity for fractures linked to osteoporosis, or a wider programme which had a specific goal of reaching out to older Asian women (Chartered Institute of Environmental Health, 2006). Another study suggests that women may also be more likely to benefit from aerobic training (increasing VO2max) than men (Malbut, 2002).

6.5 Sustainability

Sustainability is addressed explicitly or more implicitly by 23% of the literature. Essential to the sustainability of any programme is the existence of personnel who are available and willing to facilitate it. Hence the limited availability of professionals can be problematic (Allen, 2004). Certain types of intervention seemingly relied on professionals' expertise and access to older people, for example in an education intervention to avoid the recurrence of leg ulcers (Brooks, 2004). Others though sought to encourage peer mentoring (Allen, 2003) or other forms of volunteering (Countryside Agency, 2005), thus lessening the potential over-reliance on certain professionals (Booth, 2005), not to mention the financial burden. Cost-effectiveness will be discussed in the following section, though it is essential for sustainability, especially to convince managers of a projects continued worth (Scottish Executive, 2004). It is paramount that managers see health promotion as a priority and not an optional extra (Patel, 1999) due to their ability to allocate time for busy professionals to focus on promoting health (Booth, 2005), increase its importance within day-to-day work (Runciman, 2006) and create instruments which ensure that changes in practice continue to be effective (Martin, 2000). Multi-agency projects are one means of lessening the burden on any one organisation, whilst offering a comprehensive, holistic service (London Older People's Service Development Programme, 2003), though effective intra-agency communication is essential for such an approach to be successful (National Public Health Service of Wales, 2005).

6.6 Cost-effectiveness

The importance of engaging participants is also fundamental to the sustainability (Caiels, 2005) and cost-effectiveness (Stevens, 1998) of any health promotion project. Greater numbers of participants usually mean greater numbers of people reached per £ which is vital in convincing those allocating finance to continue investing in projects. 9% of the literature addresses this and other cost-effectiveness issues. As mentioned above, equipping peer mentors to lead health promotion/education interventions is both financially efficient as well as empowering and sustainable. Even where such volunteers are not forthcoming or the level of required expertise is too high, there is a cost-effectiveness case for using professionals in health promotion activities due to the fact that prevention is usually cheaper than cure (Munro, 2004; Parle, 2002).

6.7 Consumer involvement

The voice of older people is considered by a large swathe of the literature (45%). As referred to in various preceding sub-sections, a large number of the studies that do seek opinions and feedback from older people do so quantitatively, usually through surveys, hence there was little qualitative research which sought to give older people a voice in a manner that was not potentially based on preconceived notions. Yet there were a number of studies which did encourage more open feedback, from focus groups (Caiels, 2005; Food Standards Agency Wales 2001), through innovative means of eliciting views from dementia sufferers (Killick, 1999), even as far as training older people to do evaluative work themselves (Dorset County Council, 2005).

7 Conclusions/summary

1.) Multi-agency/multi-factorial versus *one-dimensional interventions*

Based on the evidence and analysis discussed above, it is possible to draw out a number of summary points which the UK literature seems to point towards. Firstly, there was a general dualism in the literature between projects and approaches that sought to tackle one key element of health promotion and others that worked within a more multi-factorial framework. Often interventions appearing in the scientific literature were single-dimensional studies, due to the necessity to control for other independent variables. These were potentially over-represented due to the easy accessibility of this type of literature and the scientific database used in part of the literature search.

Usually the type of single-intervention was based on the models and typical practices employed in the institutional setting. Hence interventions organised by medical faculties focused on physiological aspects, often analysed quantitatively with little or no opinion being sought from the older people themselves.

Interventions organised in nursing settings or by social scientists tended to focus on more educational interventions aimed at changing behaviour. Many of these sought opinions of older people but typically through a highly structured questionnaire, thus allowing little expression of individual opinions, understandings or meanings given to behavioural responses to interventions.

Multi-dimensional interventions conversely were often the result of multi-agency partnerships. The evaluations of such projects were more likely to include qualitative methods, though these were not always reported in significant or meaningful depth.

Hence in spite of a body of evidence suggesting that health promotion is more effective through multi-dimensional approaches, such interventions are in the distinct minority. The one-dimensional programmes are not only more common but equally more likely to exclude the older person from evaluation. This is problematic paradox by which the approaches that are most successful are equally seen as less scientific, chiefly in terms of the difficulty in controlling for independent variables. Moreover, evaluations that give a voice to, and thus empower, older people are seemingly less common due to their lack of scientific generalisability and assumed validity. The organisational and communicative difficulties that hinder multi-agency co-operation indirectly encourage projects that focus on only one aspect of health promotion – typically based on a bio-medical, physiological model which cannot take into account the complex emotionalities and sensitivities which affect and determine the health status and quality of life of older people.

2.) Co-morbidity and the need for holistic approaches

The main reason why multi-dimensional approaches may indeed be more effective is the high degree of co-morbidity experienced by older people. Declining physical functionality both encourages, and is often dependent upon, declining mental health and cognitive functioning, hence that these aspects be tackled in tandem is paramount if either is to be successfully addressed. Equally projects that promote physical health and exercise can empower and boost the self-esteem of older people, thus having highly positive effects on the mental health of older people, counteracting isolation and aiding healthy sleeping patterns. The possibilities for either highly virtuous or vicious circles of health status underline the need for holistic interventions and increasing prioritisation of health promotion more widely.

Evidence in the literature suggests that socio-economic, gender and ethnic inequalities increases susceptibility to such vicious circles but equally presents greater opportunities and potential benefits from virtuous circles of effective, well-targeted health promotion strategies. Whilst the natures of these inequalities are too endemic, pathological and pervasive to be tackled in themselves, making health promotion strategies more sensitive and focused on such inequalities can help counteract their effects.

3.) Private home versus *community settings*

Evidence from the literature review suggests that there are very few health promotion initiatives targeting older people residing in care homes, with the vast majority seeking to benefit independent, community dwelling older people. Of these interventions, there is a general dichotomy between those providing services in the private home of the individual and those offering health promotion in the wider community, usually in municipal or other community buildings.

In terms of mental health, there is a clear argument for group-based interventions that, for obvious reasons, would usually take place in a community setting. Interventions limited to individual interaction between the older person and a professional or volunteer are less successful than those offering peer-group-based social interaction, support and shared experiences. Equally with regard to physical health, home-based, seated exercise programmes are less effective and greatly more resource intensive than group-based classes. The social support and mental health benefits of group-based physical exercise make it a more holistic method that is also more likely to encourage long-term adherence.

Accessibility of community buildings, both in terms of physically entering the building and the availability of transportation has been held to be crucial to the successful uptake of these projects. Yet as much as communal health promotion may be more effective for those able to benefit from it, there are many older people whose declining physical and/or mental functionality prevents them from accessing such programmes, and thus there is still a case for activities based in the private home. Even if these are likely to be limited to one-to-one interactions, they are in some cases preferable to no intervention at all, in the absence of other alternatives. Though projects that actively reach the isolated and overcome potential physical and/or mental limitations through the provision of transport and access are of great benefit.

4.) Engaging older people in health education

Though a couple of projects used leaflets to disseminate information on healthy eating or active lifestyles, the majority of health education was carried out in an interactive manner, either through peer-education or professionals. The former has been found to be useful not only in its value for money, thus aiding sustainability, but furthermore in its empowering effect on older people. The ability to engage older people in a non-patronising, participatory way can have an important positive affect on long-term adherence to health education.

5.) Combining effective projects with effective evaluation

Returning to some of the methodological questions raised in the first key-point, the dualism noted between, on the one hand, uni-dimensional interventions with scientifically rigorous, quantitative evaluations and, on the other, multi-agency projects with less positivist-orientated evaluations, is reinforced by the amount of information existing on such evaluations. The scientific/research motivation behind the one-dimensional interventions means that they are almost always written up in a thorough and informative manner. The multi-dimensional projects, which typically stem from multi-agency initiatives, are often

correspondingly co-ordinated by non-academic organisations, usually third-sector or local government, and therefore lacking in both a systematic evaluation and a detailed understanding of this process.

Frequently, discussion of these projects is limited to brief sketches of 'process evaluations' where the personnel involved feedback their own understandings of the effectiveness of the project, with limited apparent feedback from older people and little detailed description of the nature of these responses. This represents a frustrating problem in that many of the most innovative, potentially beneficial projects are accompanied by ineffective, poorly written up evidence of evaluatoins. A very small number of examples exist where effective, holistic projects are evaluated in a robust, informative way and it is these which often offer the most useful insights into quality in health promotion.

6.) *Policy priorities affecting types of intervention*

On the face of it, it seems that there is little influence between national policy priorities in the NHS and local interventions run by other agencies. However beneath the surface there would seem to be a link based on funding initiatives. For example the National Service Framework for Older People has focused on falls. Indirectly this has meant that large amounts of money have been made available to support interventions addressing this issue. It is reasonable to infer that there is a link between this and the large range of projects dealing with falls either directly or indirectly. Indeed certain projects whose primary intervention is not falls related, have included falls within the programme, perhaps in order to appeal to funding agencies. This represents a crucial way in which overarching national policies can have a direct and influential effect on the ground, although this link would seem to depend to a degree on the amount of money made available to support such plans.

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