Evidence-based Guidelines on Health Promotion for Older People:

Social determinants, Inequality and Sustainability

Overview on health promotion for older people in the Netherlands

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Contents

1 Introduction

In the Netherlands, an extensive shift is taking place within the elderly population, with regard to both the number of elderly people and their life expectancy. As is the case in other European countries, the number of Dutch elderly people is rising strongly. On 1st January 2005, there were 4.2 million aged 55 years or older (de Boer, 2006). In 2035, there will be almost 6 million elderly Dutch people, comprising 40% of the total population. Even another, more common approach to the concept of 'elderly people', defining them as people aged 65 or older, shows an enormous increase in their numbers. In terms of percentage, 22% of the population will be over 65 years of age, compared to 14% at this moment. Among this age group, the number of people aged 80 and older grow the most in relative terms. In 2050, of those older than 65, 35% will be aged 80 and older, compared to 25% in 2005. The composition of the elderly population will change, because the percentage of women is decreasing. As of yet, women still make up for the majority of elderly people older than 55, with 54% in 2005. But in 1990 their share was 56%. Among the older elderly, however, their percentage swiftly increases. In 2005, 61% of those aged between 75 and 84 were female, and 73% of those older than 85. These figures are directly related to the sexual difference with regard to the risk of mortality: at every age, the chance to die is higher for men than for women. While the number of elderly people is on the rise, their life expectancy is going down. In 2005, the life expectancy for women was 81,16 years; for men, it was 76,67 years. While these figures are going down internationally, in the Netherlands the decline of the mortality rate among the elderly is stagnating, even showing a slight increase among elderly people older than 85.

In light of these changes within the elderly population, Dutch policy makers are convinced of the necessity to promote the health of elderly people. Many different organisations on the national, regional, and local levels are involved in either health promotion or disease prevention targeting the elderly. Yet, there is no national organisation to co-ordinate these interventions. The result is a broad and fragmented array of efforts. On all levels, the emphasis of the prevention focused on elderly people is on the same themes: exercise, healthy nutrition, and the prevention of falling, depression, and loneliness. There are interventions targeting the general state of health, as well. For the most part, these preventive interventions take place on a local or regional level, on a small scale. Two interventions are offered to all elderly people: the influenza vaccination and the screening for breast cancer. The final report of the HALE project (Healthy Ageing: a Longitudinal study in Europe) describes how the effects of ageing can be influenced by nutrition and lifestyle (smoking, alcohol consumption, and exercise), and factors related to these. Mediterranean nutrition, moderate alcohol consumption, abstinence from smoking, and regular exercise all contribute, separately but especially in combination with each other, to decreasing the mortality rate (Bogers, 2005).

2 Policy initiatives for older people/health promotion

From the Fifties of the last century on, the Dutch policy for the elderly has known three fixed subjects. All policy memorandums regarding elderly people have paid attention to housing,

income, and health. With regard to health, time and again, priority has been given to safe-guarding the care for elderly people suffering from physical and mental ageing symptoms. Policy targeted the secondary and tertiary prevention: combating further health deterioration and coping with chronic illness. Only in recent years has primary prevention, the prevention of the start of diseases, gained more attention from policy makers.

In 2005, in its memorandum 'Policy for the elderly in the context of the greying population' ['Ouderenbeleid in het perspectief van de vergrijzing'], the Dutch Cabinet listed the continuing health of elderly people as the first operational objective of its policy for the elderly (VWS 2005a). The government wants to stimulate activities aimed at keeping the elderly fit and healthy for as long as possible. According to the Cabinet, a healthy old age begins with a healthy lifestyle at a younger age. People need to learn to pay attention to healthy nutrition, exercise, the moderation of alcohol use, and abstinence from smoking on a permanent basis. The Cabinet assumes that in the future, more elderly people will be confronted with the consequences of an unhealthy lifestyle than is the case now. But it also acknowledges that many people are unable to live up to their own responsibility for their health, because they lack sufficient insight into the relationship between their health and their behaviour. For this reason, the Cabinet now acknowledges the government's responsibility for prevention. The groups at risk for an unhealthy old age are people with little education (smoking, lack of exercise), the highly educated (alcohol abuse), older women (lack of exercise), and the chronically ill (lack of exercise) (de Boer, 2006).

Recently, a report was published by the Special Second Chamber Commission on Policy for the Elderly, titled 'Long shall we live' (Tweede Kamer 2005-2006, 29549, nr. 5). In this report, the Commission argues that the Cabinet should reserve more funds for prevention, because that is the way to make large health gains within the care for the elderly. The Commission defines prevention broadly: "Prevention is needed in the areas of nutrition, health, well-being, and social living conditions, and it should be aimed at all age groups." In an earlier memorandum on prevention, published in 2003, the Cabinet has designated elderly people as an important target group for interventions, alongside adolescents and people with a low education (Ministerie van VWS, 2003). Yet, at the same time, the elderly hardly appear in the elaboration of the objectives of national prevention policy, or in measures (Deeg, 2002). In the recently published memorandum on prevention 'Choosing a healthy life' ['Kiezen voor gezond leven'] (Ministerie van VWS, 2005b, 2006), no target groups for this policy are mentioned. This has to do with the decentralisation of public health policy. Responsibility for preventive interventions has been delegated to local government. In the memorandum, the following focal points are mentioned for local policy: smoking, alcohol abuse, obesity (exercise and nutrition), diabetes, and depression. The aim of these focal points is to be directive for the priorities set down in the local memoranda on public health for 2007.

3 Health determinants

In 2005, the Public Health Council predicted a steep rise in the appeal of the elderly on public health care. The lifestyle of Dutch people aged between 55 and 64 was less healthy in 2002/2003 than in 1992/1993 (Visser, 2005). Various diseases will occur more often. The number of diabetics will increase, because people have become more obese and less active

physically. According to the Council, the rise of health problems is caused in part by the unhealthy lifestyle of the elderly. Since the end of the Eighties, for instance, among elderly people the number of smokers has stopped going down. The nutritional habits of elderly people are far from optimal, too, and a majority exercises too little. This unhealthy behaviour can lead to higher blood pressure, a higher cholesterol level, and obesity. Within the present population, 32% of the elderly suffers from high blood pressure, and no less than 55% is obese. According to the Public Health Council, preventive policy should aim for behavioural change: to make people stop smoking, start with a healthier diet and with more exercise when they get older. Risk groups among elderly people are: people with a low education (smoking and too little exercise), men (smoking, alcohol abuse), older women (too little exercise), and the chronically ill (too little exercise).

Beside the factors related to behaviour aiming at a healthy lifestyle, socio-economic factors play a role, too. We have already seen, for example, that very old single women (widows) are extra vulnerable. But there also is an unequal life expectancy related to ethnicity. Turkish, Moroccan and Surinam elderly people more often suffer from bad health than elderly people originating from the Antilles, the Molucca Islands, or the Netherlands (Schellingerhout, 2004). 46% of the Turkish, 57% of the Moroccan, and 25% of the Surinam elderly people have to contend with severe physical limitations. For the elderly originating from the Antilles this is 12%, against 11% of the Moluccan elderly and 15% of the elderly of Dutch origin. The causes of this poorer health are related to socio-economic factors like income, a low education, and a low degree of socio-cultural integration.

4 Search strategy

The search and the selection of the literature were limited, because it was expected – and confirmed by our first search – that we would find very much literature on health promotion for older people in the Netherlands.

A search was performed in the following databases:

1. International Scientific databases (Pubmed, Psychinfo, Sociofile, DoPHER, Cochrane);
2. National literature databases (Picarta (=Dutch Central Catalogue) and websites of 8 national research institutes);
3. Specialised databases (reviews: DoPHER, Cochrane).

The following keywords were used:

‘Elderly’ or ‘Aged’ or ‘Very old’ or ‘Successful aging’ in combination with ‘Health promotion’ or ‘Health education’, and Dutch equivalents for these keywords.

The selection of the literature was limited to research literature, especially literature evaluating intervention projects or programs. A total number of 109 publications were selected and included in the literature database. Due to the search and selection strategies the literature database consists mainly of peer reviewed scientific articles reporting or reviewing empirical research (n=36); and books/monographs (mainly PhD or MD dissertations and published research reports from national research institutes) (n=39). Because most of the selected literature was found in the first two categories, it was decided to perform a second search in the national databases. We selected recent (grey) research

reports which are not yet published as scientific articles or books/monographs (n=11) and some articles from professional journals (n=3).

With regard to the qualitative analyses of the themes we focused on recent literature, and also literature evaluating health promotion programs for elderly that could be interesting for the second phase.

5 Themes

5.1. Promoting mental health

General remarks

Mental health is addressed in 35 of the 109 publications in the literature database with a focus on interventions addressing depression (10) and cognitive functioning (6). Stress and burn-out and self-respect/dignity were addressed once in combination with depression. No literature was related to emotional support. We added coping/self management.

With regard to the decisive factors for mental health or sickness, a distinction is made between personal factors (psycho-biological vulnerability), environmental factors (social vulnerability), and the events in an individual's life and the individual's way of responding to these (the attribution of meaning, and coping) (Maas & Jansen, 2000).

5.1.1 Addressing depression

In the Netherlands, these past years, a lot of attention has been paid to the development and implementation of prevention programmes, targeting depression in the elderly (de Boer, 2006).

The risk factors increasing the chance of depression are, among others: heredity, low self-esteem, a depressed coping style, being single or a widow, and the lack of a social network. Groups at risk are those elderly, who experience their own state of health as being bad and who feel they have little grip on their life; who have lost their partner during the past twelve months; as well as those elderly who live in relative social isolation and who already suffer from some form of depression (Bohlmeijer, 2005a). Since the social living environment plays an important part in depression, in the Netherlands, an integral approach has been developed, focusing on different policy areas, such as care, welfare, housing, and safety (Bohlmeijer, 2005b). Two interventions using this approach have proven to be effective: a project focused on early detection by attendants, and a cognitive behaviour therapy in the form of a course.

The effects of a multifaceted secondary prevention intervention in residential homes in the Netherlands were examined, using a quasi-experimental design (Cuijpers, 2001). In five experimental residential homes, the caregivers received three training sessions on detecting depression and on supporting depressed residents. Furthermore, an information session was organised for all personnel, a further session was organised for residents and their relatives, and several group interventions were offered. 213 residents participated in the study. 211

residents of five other residential homes, matched on basic variables, served as a comparison group. Effects on depressive symptoms and health related quality of life were measured at pretest and after the intervention, one year later. The results suggest that general approaches aimed at a residential home are capable of influencing depressive symptoms in inhabitants. Possibly, it may not be necessary to wait until depressive symptoms have escalated and inhabitants need extensive treatment.

A field study explored the prognostic factors of the immediate and long-term effects of the Coping with Depression course for older adults (CWD) (Haringsma, 2006). With the aim of both indicated as well as secondary prevention, the course is provided by the prevention departments of the community mental health care system in the Netherlands. A total of 317 course participants (age 55-85 years; 69% female) took part in this study; 41% had a major depressive disorder (MDD). A variety of demographic, clinical, psychosocial and treatment factors of possible relevance for indicated and secondary prevention were investigated. The course was beneficial for all participants, and the level of depression reached at the end of the course was maintained over the next 14-months. Current MDD, high levels of anxiety, less previous depressive episodes and more education predicted a larger benefit. However, the clinical significance of these predictors was too small to justify further triage.

5.1.2 Cognitive issues: memory training

A study was executed to examine the effectiveness of two types of memory training (collective and individual), compared to control (waiting list), on memory performance (Valentijn, 2005). Participants were 139 community-dwelling older individuals recruited through media advertisements asking for people with subjective memory complaints to participate in a study. Data were collected at baseline, and at 1 week and 4 months after the intervention. Training efficacy was assessed using measures of subjective and objective memory performance. After the intervention, participants in the collective training group reported more stability in memory functioning and had fewer feelings of anxiety and stress about memory functioning. In addition, positive effects were found on objective memory functioning. Compared with the other two groups, the collective training group participants had an improved recall of a previously learned word list. Compared to controls, participants in the individual training group reported fewer feelings of anxiety and stress in relation to memory functioning.

Other: Coping/self-management

Successful aging calls for effective adaptation, which in turn implies flexible use of coping strategies to optimize personal functioning and well-being. That was the conclusion of a study of the adaptive choice behaviour of older, independently living persons faced with complications in their houses (Slangen-de Kort, 2001). The goal was to gain insight into the concrete coping process and its outcome in terms of the choice of assimilative versus accommodative strategies, and in the role of 3 determinants on this process. The determinants were perceived self-efficacy, importance of the problem, and personal dispositions (flexibility and tenacity). A sample of 199 independently-living older persons (aged 61-84 years) participated in an experiment that was based on a scenario and

questionnaire method, with problems stemming from the domain of independent living. Results mainly underlie the crucial role of perceived self-efficacy and are discussed in view of the concept of successful aging.

Self-management ability (SMA) is the ability to obtain those resources necessary for the production of well-being. With age, SMA becomes increasingly important, if one has a large variety of resources, physical and psychosocial losses due to the aging process can be substituted or compensated for. A study examined whether an increase in SMA would ensure sustainable levels of positive well-being among slightly to moderately frail older people (Frieswijk, 2006). A bibliotherapy, i.e. reading a self-help book for the treatment of psychosocial problems, was developed to increase the SMA of slightly to moderately frail older people, and to help these persons to sustain a certain level of well-being. Bibliotherapy may provide an important cost- and time-saving alternative to more traditional interventions with extensive counselling and group sessions. The effectiveness of this bibliotherapy was examined by comparing the SMA, mastery, and subjective well-being of 97 older people participating in the bibliotherapy to those of 96 older people in a delayed-treatment control condition. The bibliotherapy resulted in a significant increase in SMA and mastery compared to the delayed-treatment control condition, and for SMA, this effect still existed 6 months after the intervention. The author concludes that cheap and easily accessible interventions, like the self-management bibliotherapy described in this article, may provide a useful addition to more traditional gerontological interventions.

5.2 Empowerment

In the literature database 29 of the 109 publications are related to empowerment.

In the Netherlands empowerment and social participation are often addressed together, as they are strongly interrelated. Some health promotion programs for elderly have been developed that address empowerment as well as social participation. These programs especially address prevention of loneliness among older people. Involvement in activities by older adults is associated with a higher degree of wellbeing, especially among unmarried older adults, those who experience health problems and those who have a low income (Kocken, 2000).

Successful Aging (Voorham & Kocken, 1998; Kocken, 2000; Voorham, 2003) is a program which focuses on empowerment and multiple aspects of social participation. Successful Aging is a senior health education course guided by peers aged 55 years and over. In this course older adults discuss health related topics like memory problems, housing and use of medicines. The general aim is to promote social participation, social support and wellbeing. According to Kocken (2000) the course Successful Aging was born out of discontent with traditional health education programs in the Netherlands. These programs focus too much on the problem side of disease and too little on health promotion. Furthermore, the programs are often designed by professionals with little or no contribution to the program planning from older adults. In Successful Aging the peer educators aged 55 and over (in the project called senior health educators) were involved strongly in the planning and guidance of the course. The effectiveness of Successful Aging was studied by means of a quasi-experimental approach. The study showed that the course improved social support and subjective health, However, no effect was found on social participation and wellbeing in the short time span of

a three months follow-up. The experimental group did not take up more activities, However, the follow up period of three months may have been too short to show an effect. The beneficial effect of social participation on wellbeing could not be confirmed in this study (Kocken & Voorham, 1998; Kocken, 2000, Voorham, 2003).

5.3 Social participation – inclusion

General remarks

Social participation is addressed in 47 of the 109 publications. 32 are related to lifelong learning/education of older people and 17 to social support/networks. In the Netherlands health promotion activities for elderly addressing social support/networks are especially directed to the prevention of loneliness (n=13).

5.3.1 Life long learning / education of older people (health)

An important aspect of much health promotion activities is health education. For example, the Healthy and Vital programme (see 5.4.2) also consists of health education next to physical exercise. The topics all relate to maintaining good health: successful ageing, exercise, nutrition, physical and mental resistance and endurance, safety in and around the home, symptoms related to ageing (Hopman-Rock et al, 2002).

5.3.2 Social support / networks

In the Netherlands many projects to prevent loneliness have been developed. However, many are rather limited, for example in size and location, have limited results, or are not evaluated (well). Two well developed and evaluated programs are a friendship enrichment programme for older women (Stevens, 2001) and a loneliness intervention program called In Good Company (IGC) aimed at older adults (Kocken, 2000, 2001). Furthermore, in the period 2001-2005 a program called Loneliness among elderly was established and financed by a particular fund. In this program 17 intervention projects were financially supported and evaluated (Fokkema & van Tilburg, 2006). However, most projects had no or limited effects in reducing loneliness, were rather limited in size and location and are not clearly related to health (no information on health related measures? Check) Some are promising or interesting because of addressing specific groups, for example buddy care for elderly homosexuals in Amsterdam (Bakker et al., 2004). Stevens (2006) gives an overview of the effectiveness of nine interventions that are organized on different levels with different goals.

As friendship contributes to wellbeing in later life an educational programme on friendship enrichment for older women was developed in the 1990's to stimulate improvement in friendship and to reduce loneliness. The decision was made to focus on older women because in later life women tend to be widowed and to live alone more often than men. The friendship programme's main goal is empowerment, it helps women clarify their needs in friendship, analyse their current social network, set goals in friendship and develop strategies to achieve goals. Reduction of loneliness, when present, is also an important goal of the programme. Since the manual became available in 1995 it has been distributed to over 200 agencies providing social services to older persons, adult education centres, community

mental health centres and women's organisations A study followed 40 participants during the year after the programme. The study design has no baseline measurement, because the author feared that asking women to participate in a study would increase the barriers to participation and interfere with recruitment. Instead a study was designed that follows women as they attempt to realise their goals in friendship after finishing the programme. The study demonstrates that a majority succeeded in developing new, or improving existing, friendships and significantly reducing their loneliness. The loneliness intervention program in good company (IGC) is aimed at prevention and diminishment of loneliness in older adults and intermediates, aged 55 years and above. The IGC program included both behaviour and environmental activities. An important fallacy in health promotion is the top down introduction of programs after they have proven efficacious in an isolated experimental evaluation design (Kocken, 2000, 2001). Kocken studied the influence of linkage of program designers' ideas and users' needs on the users' satisfaction with the program. The program was active in three neighbourhoods successively and the linkage approach in every neighbourhood was different. The needs assessment among older adults and intermediates showed that there was a demand for change of environmental determinants using meeting and recreational activities for older adults, instead of behaviour oriented support groups and skills courses which had been proven efficacious from research. It was concluded that the use of democratic linkage strategies, like needs assessments, local action plans and two way communication between program designers and users, is essential for successful dissemination of health promotion activities (Kocken, 2000, 2001).

Stevens (2006) described nine interventions. In only three interventions participants showed a significant decline in loneliness. Typical characteristics of these interventions are their focus on specific target groups of older persons, their relatively long duration and the influence of participants on the methods that were applied in the intervention. Two of the three interventions involve group work. She concluded that more research is necessary to identify for whom an intervention is more and less likely to be effective so that more systematic referral is possible. Also development of individualized trajectories that include a series of interventions on different levels is recommended (Stevens, 2006).

5.4 Lifestyle

Most of the sources in the literature database are related to one of more lifestyle issues (85 of 109). Lifestyle interventions for elderly in the Netherlands are especially directed to physical activity (38) and/or safety (16) and/or the prevention of disease (20), nutrition was addressed 12 times, mostly in combination with other lifestyle issues.

5.4.1 Nutrition

In a PhD-study (de Jong, 1999) several descriptors of the nutritional and health status of frail elderly compared to healthy elderly were addressed. Furthermore, it was investigated whether two types of feasible interventions (nutrition and exercise) could improve or maintain the nutritional and health status of frail eldery and to analyse the appraisal of newly developed foods. The study consisted of a 17-week randomized placebo-controlled intervention trial with four groups (nutrient dense food group, exercise group, combination

group, control group). Blood nutrient levels in the frail elders significantly improved after 17 weeks consumption of nutrient dense foods, while homocysteine concentration significantly decreased (elevated levels of homocysteine are regarded as a potential risk factor for cardiovascular disease and impaired cognitive functioning). Also the results cautiously suggest that nutrient dense foods may have a beneficial effect on several bone parameters. Exercise may complement the effects of nutrient dense foods, as a preserving effect was observed on lean body. The author concluded that long-term effects should be investigated in the future. However, the qualities of nutrient dense foods should be optimized in order to be suitable for a long-term application. According to the author the most important goal in implementing programs for elderly should be maintainance or improvement of enjoyment in life. Healthy appetizing foods, as well as pleasant and feasible exercise programs, may help to achieve that goal (de Jong, 1999).

5.4.2 Physical activity

With regard to lifestyle issues in the Netherlands most attention has been dedicated to the promotion of physical activity among the elderly. In the last decennia three main programs were developed and evaluated: The Groningen Active Living Model (GALM), More Exercise for Seniors (MBvO in Dutch), and Healthy and Vital (formerly known as 'Ageing well and healthy').

The Groningen Active Living Model (GALM) (e.g. de Jong et al, 2006) was designed to recruit and stimulate leisure-time physical activity in sedentary and underactive older adults aged 55-65. Interesting aspects are the special strategy for recruitment of the elderly for this program and the tailoring of activities to participant's preferences and needs. All older adults receive a written invitation and were visited at home during which potential participants are screened. More Exercise for Seniors (MBvO) (e.g. Stiggelbout, et al., 2004) is a moderately intensive exercise programme specifically designed for people of 65 years and older, offered once a week, that was started on experimental basis in 1966 and has been implemented widely since 1980. The goal of the programme is to promote optimal physical, mental and social functioning in older adults. Currently (2004), more than 300.000 older people over 65 years of age participate weekly in various types of this programme. The basic form consists of gymnastics once a week. The Healthy and Vital programme consists of health education and physical exercises. This programme was adapted for Turkish immigrants in the Netherlands. Education was adapted to the culture and knowledge of older Turks and offered by a Turkish peer educator, in Turkish (Reijneveld, et al., 2003).

Furthermore, in 2005 a national governmental campaign 'Bewegen met plezier: FLASH!-beweegcampagne voor 55-plussers' (Moving with pleasure. Flash! moving campaign for people aged over 55) has been has been organised. A 'moving tour' (beweegtournee) visited 40 housing/careservices in the Netherlands. In each of these services a large number of movement activities have been organised during 4 or 5 days. Aim of this moving week was to provide an example for intra- and extramural policies for people aged 55 and over (van Overbeek et al., 2006).

The three mentioned programmes have been evaluated by means of a randomised controlled trial design or a community intervention trial. The Flash campaign was evaluated by means of qualitative research.

The GALM intervention group showed significant increases in energy expenditure for recreational sports activities, other leisure-time physical activity, health indicators, and perceived performance-based fitness. However, contrary tot the expectations, the same increases were found for the control group. Some explanations that the authors provide for this result is priming by the intensive door-to-door recruitment, increased participants' knowledge by the baseline assessments, and not offering an alternative non-physical activity program to the control group (de Jong et al, 2006).

In the evaluation of MBvO the GALM recruitment procedure was used and a health education programme (excluding information about the benefits of physical activity, exercise and nutrition was offered to the control group. Two types of MBvO were compared: one given weekly (MBvO1) and one twice weekly (MBvO2). MBvO gymnastics once a week did not provide benefits in the health related quality of life and the functional status after 10 weeks. However, participants with a low level of physical activity at baseline, showed the only improvement found on the Vitality Plus Scale (one of the HRQoL measures). The authors conclude that once a week is not enough. To improve the health of the general public, sedentary older adults should be recruited and encouraged to participate in MBvO at least twice a week or combine MBvO with the health enhancing physical activity guidelines (i.e. at least five days a week participation in a minimum of 30 minutes moderate physical activity daily) (Stiggelbout, et al., 2006). One explanation is that studies with short term follow up have certain limitation. Older participants may need several weeks to adapt to the initial rigour of the training and need a longer adaptation period to gain the optimal benefit from an exercise program (Stiggelbout, et al., 2006).

In a community intervention trial to evaluate the effectiveness of Ageing Well and Healthy (or: Healthy and Vital) the authors found an improvement in vitality and subjective health after six weeks. However, at baseline the participants in this programme had a lower physical activity score than the MBvO population in the afore mentioned study. The adapted Health and Vital programme for Turkish immigrants aged 45 and over showed an improvement of mental health and in the oldest subgroup also in mental wellbeing. No improvements were seen in physical wellbeing and activity, nor in knowledge. The authors conclude that 'painstaking cultural adaptations to contents and method of delivery are essential' to reach this improvement in mental state of deprived immigrants (Reijneveld, et al, 2003).

The Flash! campaign addressed the importance of moving organisations wide, but did not affect the policies or supply in half of the interviewed locations. Furthermore, the activities led a growth of the existing groups and new (tailored) group activities. In half of the services the number of participants increased with 10-20% (van Overbeek, et al., 2006).

Critical note to focus on physical activity: In a study into physical activity and self-rated health among 55-89-year-old Dutch people the findings suggest that in the elder population, increasing perceived physical self-efficacy, i.e. perceived physical competence, may be more important for perceived health than raising the level of physical activity (Parkatti, et al., 1998). According to Bandura (Parkatti, et al, 1998), there are four principal sources of self-efficacy: a) past and present performance, b) vicarious experience of observing others perform, c) verbal persuasion and other kinds of social influence, and d) states of physiological arousal. Physically less active elderly are at risk of poorer perceptions of their physical self-efficacy which may result in a poorer evaluation of their health.

Critical note to physical exercise programs: Many studies have shown that regular exercise is beneficial to basic physical functioning in older adults, increasing muscle strength, balance, endurance, and flexibility, but the effects on the performance of daily tasks have not been proven indisputably (de Vreede, et al., 2004). The authors suggest that this may be because most exercise interventions are not specific for the more complex functional tasks. Functional tasks involve an interplay of cognitive, perceptual and motor functions and are closely linked to the individual's dynamic environment. A new functional tasks exercise to improve functional performance of community-dwelling older women was developed and evaluated in a pilot study by comparing it with a resistance exercise program and to determine its feasability. It was concluded that the functional tasks exercise program is feasible and shows promise of being more effective for functional performance than a resistance exercise program (de Vreede et al., 2004). (NB implementation and results?).

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

Many older persons are involved in falls each year in the Netherlands resulting in serious health problems; about 1700 persons in the age of 55 years and over die each year, 27.000 are hospitalised, 67.000 are treated at the emergency departments of hospitals and 48.000 are treated by the general practitioner. A large number of organisations are occupied with falling prevention for the elderly (de Boer 2006). On different locations throughout the Netherlands, falling clinics have been established. These are specialised outpatients' clinics, treating elderly people who have fallen more than once during the past year in a multidisciplinary way (Emmelot-Vonk 2005). Little is known, however, about the effectiveness of these falling clinics, and the number of patients referred by regular health authorities is as of yet still marginal.

In the current medical practice the focus is on the injury with little attention of the underlying cause, the risk factors for a new fall and the possibilities for future prevention (Emmelot-Vonk, 2005). Most of the falls are a result of multiple risk factors. Several of these factors are potentially modifiable. The Dutch Falls Prevention Collaboration have made a protocol to assist health care professionals at a standardised and evidence based way with their assessment of fall risk. With the risk factors identified in the assessment it is possible to make an individual multifactorial fall prevention program.

In 2006, the Consumer Safety Institute in the Netherlands will start a mass media campaign about prevention of injury among older persons, focussed mainly on falls prevention. TNO Quality of Life, section Physical Activity and Health, was requested to conduct a survey research in 2005, mainly as a baseline measure for the mass media campaign in 2006 (Wijlhuizen, 2005). In each of 12 selected Dutch municipalities (distributed over all 12 provinces in the Netherlands) in total 3465 questionnaires were send to randomly selected persons in the age of 55 years and over. The response was 35% resulting in 1207 respondents whose data were used for analysis. For the campaign, three potential high risk subgroups were defined as relevant, namely: Women, Frail elderly, and persons with low social economic status (Low SES). These groups were analysed separately. The main conclusions of the study are, that during the mass media campaign special attention should be given to: 1 Frail elderly; they appear to have highest fall risk; 2 Persons who fell recently; these persons appear to be most willing to take special measures in order to reduce the risk of falling; 3 The persons (children, family, persons outside the family or friends) that have

social or professional interaction with the older persons; they appear to be able to enhance the willingness of older persons to take special measures in order to reduce the risk of falling.

The problem of falls in the elderly has also become a topic of growing scientific interest. Numerous studies on risk factors for falls and preventive strategies have been published in the past decades (In database: 8). The development of fall prevention interventions has usually been based on these known risk factors. Some studies evaluate one intervention only, but most start from the assumption that determinants of falls are multifactorial. A few examples of each kind of these studies.

A research focuses on the preventive effects of house calls to independently living elderly people; a high risk section of the population with regard to falling or mobility impairments (Haastrecht, 2002). In this experiment, 316 people of the age of seventy and older were randomly alloted to either an intervention- or controlgroup. In the course of one year, the district nurse visited the people in the intervention group 5 times. Risk factors with respect to falling and mobility impairments were determined and measures were taken to decrease these risks. The research showed that these house calls did lower the risk of falling and of mobility impairments.

The objectives of another study were to determine the effects of moderate intensity group-exercise programs on falls, functional performance, and disability in older adults; and to investigate the influence of frailty on these effects (Bosscher, 2006). Two exercise programs were randomly distributed across 15 homes. The first program, functional walking (FW), consisted of exercises related to daily mobility activities. In the second program, in balance (IB), exercises were inspired by the principles of Tai Chi. Within each home participants were randomly assigned to an intervention or a control group. Participants in the control groups were asked not to change their usual pattern of activities. The intervention groups followed a 20-week exercise program with 1 meeting a week during the first 4 weeks and 2 meetings a week during the remaining weeks. It was concluded that fall-preventive moderate intensity group-exercise programs have positive effects on falling and physical performance in pre-frail, but not in frail elderly.

A study on prevention of falls evaluated a multidisciplinary approach in diagnosis and intervention in which healthcare and welfare organisations work closely together (Wijlhuizen, 2006). The aim of the study was to evaluate the feasibility of a pilot project of integrated care (health and welfare) centred around falls prevention among older persons. The method of evaluation was mainly qualitative (reviewing documents, interviews with stakeholders, questionnaire to representatives of geriatric fall clinics). It is concluded that a pilot project should be considered feasible, based mainly on the following developments: 1 Falls are generally recognised as an important threat for the health of older persons (Geriatic Giant). 2 Integration of care (health and welfare) is an important issue in (health)care policy, but needs examples of good practice; 3 Geriatric fall Clinics have already developed some integration of healthcare on falls prevention and also need evaluation of its impact on falls; 4 Many initiatives have started on preventive health centres for the elderly; falls prevention is a central issue in these centres. These developments should be connected or integrated in order to build and evaluate an example of good practice of falls prevention.

Another study reports on the development of a Dutch version of an American intervention for community-residing older persons in The Netherlands (Zijlstra, 2005). Adaptation of this

cognitive behavioural group intervention, to reduce fear of falling and avoidance of activity in older persons, was required before evaluation in a different setting. Adaptations were incorporated to improve the content, feasibility and didactic materials. The main adaptations were scheduling more time for some activities, changing session frequency from twice to once a week, adding a booster session after 6 months and adding more transparencies. The conclusion was that a systematic approach is recommended in the process of adapting an original intervention for use in a different setting.

In the last study we mention the researchers replicated a British randomized controlled trial which demonstrated the effectiveness of a multidisciplinary intervention program to prevent falls (Hendriks, 2005).The objective is to describe the design of a replication study evaluating a multidisciplinary intervention program on recurrent falls and functional decline among elderly persons at risk. The study consists of an effect evaluation, an economic evaluation and a process evaluation. This study is still carried out.

6 Transversal issues

6.1 Research Methods

The selected studies are mostly quantitative or both quantitative and qualitative. Some are only qualitative. For example, the Flash campaign was evaluated by means of qualitative research.

Different research methods were used in the studies we selected. Most of these are outcome evaluation studies with a (quasi-)experimental design (also due to the literature search and selection strategies). The following are a few examples of the methods most frequently used. The strictest form is a randomised controlled trial that is frequently used in for example the exercise studies. Control groups are offered either another intervention of are people on the waiting list. For example, in the effect evaluation of a health course a quasi-experimental approach was used. The effect on the experimental group of course participants was studied compared to a control group of older adults on the waiting list. The respondents filled out postal questionnaires at three time points (before starting the course (t0), immediately after termination (t1) and three months later (t2)). For the analysis a multivariate analysis procedure was used.

Comparative studies, for example between different countries, are quite rare. One example of such a study shows that this can be a fruitful exercise (van der Geest & von Faber, 2002). In this research the authors explore the conditions for successful aging from the perspective of reciprocity by anthropological research among older people in the Netherlands and Ghana. The Dutch study suggests that older people feel unsuccessful if something fundamental is missing in their social contacts. Physical and cognitive decline are of course a nuisance but normal if one grows older. One cannot blame them for it. Being deserted by children, other relatives, and friends is however experienced as personal failure. The Ghana study shows that older people are sure that they will receive material and emotional support from their children and others if they have invested in them during their vital years. Although carried out in very different societies, both studies underscore the decisive role of long-term reciprocity (general reciprocity). This paper critically examines this explanation of successful aging. It is suggested that long-term reciprocity is no absolute guarantee for the maintenance

of social contacts. Both in the Dutch and the Ghanaian study good social contacts appear to be the outcome of a mix of long- and short-term reciprocity. If conversations and meetings with older people lose their direct reciprocal dynamics (in ordinary terms: if they become unsatisfactory, boring) due to physical or cognitive limitations of the older person, the latter risks to become lonely, without deserving it (i.e., in spite of his/her social investments in the past). In such a situation life seems to end unfairly, or, to use Cicero's terms, life looks like a play with a sloppily written end.

A general conclusion is that, despite the amount of research found, so far little is known about the effectiveness of preventive interventions. In particular about cost effectiveness, no knowledge exists (de Boer, 2006).

One explanation for the lack of effect is that studies with short term follow up have certain limitation. Older participants may need several weeks to adapt to the initial rigour of the training and need a longer adaptation period to gain the optimal benefit from an exercise program (Stiggelbout, et al., 2006).

6.2 Strategies of health promotion

In the Netherlands, a number of health promotion strategies are being applied. Popular strategies focus on influencing the behaviour of the elderly. They must be motivated to choose a healthy lifestyle. The main point of departure of government policy is that healthy behaviour is the responsibility of the citizens themselves (de Boer 2006). Consequently, the strategies used also focus on influencing citizens' behaviour. A frequently used method is the dissemination of information, most often in the form of media campaigns on radio and television. Another often used method is to set up and execute education projects. Health education has been most frequently evaluated. Research shows that there is reason to doubt the effectiveness of these strategies, as demonstrated by the following analysis by Kok (1997).

Interventions to promote health that have been developed over the last 20 years in the relatively new scientific health education tradition, have often been evaluated for their effectiveness. Meta-analyses of effect studies on various subfields, show that these interventions generally have quite substantial effects (mean effect sizes, ES, of 0.46 for primary prevention and 0.49 for secondary prevention and patient education). A planned and systematic application of social science theory in intervention development is a strong determinant of effectiveness. However, learning principles such as rewards and feedback, that have been shown to increase effectiveness, are often not or not adequately applied. Also, too few interventions focus on possibilities to facilitate the desired behaviour (such as reminders, financial stimuli, and skills improvement). The potential effectiveness of interventions in practice may be increased by systematic development of adoption and implementation strategies, including the creation of 'linkage systems' between intervention developers and representatives of the target and user systems.

In the Netherlands, in recent years, we have seen the rise of health centres for the elderly. Elderly people can go there for information and advice. Recently, the first assessment of fifteen of these health centres has been published. The Knowledge Centre for the Elderly (KCO) made an inventory of initiatives for a health centre for the elderly. Fifteen health

centres have started or will start soon. This strategy focuses on the behaviour of elderly people as well (Visser, 2005).

Beside the interventions elaborated by the government and organisations to improve the health of elderly people, the question is how the elderly themselves engage in their own self-care. Recent research studied the relationship between proactive coping and successful ageing (Ouwehand, 2005). The results show that people between the ages of 50 and 70 prepare themselves for the difficult aspects of growing older, and possess the problem-solving and analytical skills to take proactive coping measures. Negative influences on coping behaviour are health problems, financial or relational problems, and socio-economic status (SES). People with a low SES (income, education, a job valued less) possess fewer skills to effectively engage in proactive coping. Moreover, they suffer from a poorer health than people with a higher socio-economic status. Nevertheless, this relation is not strong enough to simply make socio-economic status the point of departure for interventions. Our conclusion is that particular groups of people benefit more from receiving information on or getting trained for coping with their old age. The selection of the target groups should take place on the basis of either the presence or the lack of the skills needed.

6.3 Settings

Most health promotion activities are directed to elderly in communities (in particular municipalities), mostly elderly who are living at home (with of without support). Some are directed to elderly in residential homes and some are nation-wide (mass media campaigns). Furthermore, special health promotion settings for elderly have been and are being established: fall-clinics and health centres for elderly.

6.4 Inequality/ Diversity

In general, the studies do not differentiate much according to inequality, gender and ethnicity. At the most, a distinction is made between respondents according to their sex and age groups. Some studies take socio-economic status into account. For example, Kocken (2000) concludes that involvement in activities by older adults is associated with a higher degree of wellbeing, especially among unmarried older adults, those who experience health problems and those who have a low income.

There are, however, some special education programmes for specific ethnic groups or for women. An example is a special health education and physical exercise programme for Turkish first generation elderly immigrants (Reijneveld, 2003) (see 5.4.2). Another example is a loneliness intervention programme for elderly women, because in later life women tend to be widowed and to live alone more often than men (Stevens, 2001). Furthermore, we found a buddy care project for elderly homosexuals in Amsterdam (Bakker et al., 2004).

6.5 Sustainability

Stevens (2006) gives some indications about possible criteria for or characteristics of sustainable interventions. Typical characteristics of the interventions in which participants showed a significant decline in loneliness are their focus on specific target groups of older

persons, their relatively long duration and the influence of participants on the methods that were applied in the intervention. Two of the three interventions involve group work. She concluded that more research is necessary to identify for whom an intervention is more and less likely to be effective so that more systematic referral is possible. Also development of individualized trajectories that include a series of interventions on different levels is recommended (Stevens, 2006).

6.6 Cost-effectiveness

Cost effectiveness is not addressed in the selected literature. As mentioned earlier, no knowledge exists about cost effectiveness (de Boer, 2006).

6.7 Consumer involvement

Consumer involvement is and important characteristic of the programs addressing empowerment and/or social participation. For example, in Successful Aging the peer educators aged 55 and over (in the project called senior health educators) were involved strongly in the planning and guidance of the course (Kocken, 2000). He concluded that the use of democratic linkage strategies, like needs assessments, local action plans and two way communication between program designers and users, is essential for successful dissemination of health promotion activities (Kocken, 2000, 2001).

7 Conclusions/summary

Necessity of promoting health in the elderly population

In light of demographic changes within the elderly population, Dutch policy makers are convinced of the necessity to promote the health of elderly people. Priority has been given to safe-guarding the care for elderly people suffering from physical and mental ageing symptoms. Policy targeted the secondary and tertiary prevention: combating further health deterioration and coping with chronic illness. Only in recent years has primary prevention, the prevention of the start of diseases, gained more attention from policy makers.

In 2003 the national government has designated elderly people as an important target group for interventions, alongside adolescents and people with a low education. Yet, at the same time, the elderly hardly appear in the elaboration of the objectives of national prevention policy, or in measures (Deeg, 2002). In a recent national public health policy document no target groups for this policy are mentioned. Responsibility for preventive interventions has been delegated to local government. The following focal points are mentioned for local policy: smoking, alcohol abuse, obesity (exercise and nutrition), diabetes, and depression. The aim of these focal points is to be directive for the priorities set down in the local memoranda on public health for 2007.

Determinants of health in the elderly population

With regard to health determinants within the present population, 32% of the elderly suffers from high blood pressure, and no less than 55% is obese. According to the Public Health Council, preventive policy should aim for behavioural change: to make people stop smoking, start with a healthier diet and with more exercise when they get older. Risk groups among elderly people are: people with a low education (smoking and too little exercise), men (smoking, alcohol abuse), older women (too little exercise), and the chronically ill (too little exercise). Beside the factors related to behaviour aiming at a healthy lifestyle, socio-economic factors play a role, too. For example, very old single women (widows) are extra vulnerable. But there is also is an unequal life expectancy related to ethnicity. Turkish, Moroccan and Surinam elderly people more often suffer from bad health than elderly people originating from the Antilles, the Molucca Islands, or the Netherlands.

Efforts to promote health of the elderly are broad and fragmented

Many different organisations on the national, regional, and local levels are involved in either health promotion or disease prevention targeting the elderly. Yet, there is no national organisation to co-ordinate these interventions. The result is a broad and fragmented array of efforts. On all levels, the emphasis of the prevention focused on elderly people is on the same themes: exercise, healthy nutrition, and the prevention of falling, depression, and loneliness. There are interventions targeting the general state of health, as well. For the most part, these preventive interventions take place on a local or regional level, on a small scale.

Evidence based interventions focus mainly on depression, cognitive functioning, social support/networks, physical activity and fall prevention

We limited the search and the selection to the scientific research literature, with a focus on (recent) evaluation studies of health promotion activities for older people in the Netherlands. The most important issues are depression, cognitive functioning (memory training), social support/networks (loneliness intervention programmes), physical activity, and fall prevention.

With regard to promoting mental health in the past years, a lot of attention has been paid to the development and implementation of prevention programmes, targeting depression in the elderly.

Some interventions address empowerment and social participation with a focus on prevention of loneliness

Some health promotion programs for elderly have been developed that address empowerment as well as social participation. These programs especially address prevention of loneliness among older people.

In the Netherlands health promotion activities for elderly addressing social participation are especially directed to prevention of loneliness. We included these in the category social support/ networks. Many projects to prevent loneliness have been developed. However, many are rather limited, for example in size and location, have limited results, or are not evaluated (well). Two well developed and evaluated programs are a friendship enrichment programme for older women (Stevens, 2001) and a loneliness intervention program called In Good Company (IGC) aimed at older adults (Kocken, 2000, 2001).

Promotion of physical activity and fall prevention are important lifestyle issues

With regard to lifestyle issues in the Netherlands most attention has been dedicated to the promotion of physical activity among the elderly. In the last decennia three main programs were developed and evaluated: The Groningen Active Living Model (GALM), More Exercise for Seniors (MBvO in Dutch), and Healthy and Vital (formerly known as 'Ageing well and healthy'.

Another important issue with regard to lifestyle is fall prevention. In the Netherlands, a large number of organisations are occupied with falling prevention for the elderly (de Boer, 2006). On different locations throughout the Netherlands, fall clinics have been established. These are specialised outpatients' clinics, treating elderly people who have fallen more than once during the past year in a multidisciplinary way (Emmelot-Vonk 2005). Little is known, however, about the effectiveness of these falling clinics, and the number of patients referred by regular health authorities is as of yet still marginal.

A lot of effort is done to develop evidence based interventions, but less to implementation and sustainability of health promotion activities

In general, a lot of effort is done to develop evidence based interventions. Health promotion activities are based on results of studies on health determinants, and the effectiveness of most interventions is studied by means of a (quasi-)experimental design. However, the impression is that less effort is dedicated to implementation and sustainability of health promotion activities for elderly. Tailoring interventions and addressing diversity deserve more attention, for example, as Stevens (2006) recommends, development of individualized trajectories that include a series of interventions on different levels. More attention could be payed to create support among stakeholders, including older people themselves by means of explorative research, action research and process evaluation to optimize the conditions for good implementation and sustainability.

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